

## **CORRELATION OF ACADEMIC PERFORMANCE AND DIETARY HABITS IN SCHOOL CHILDREN**

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### **Abstract:**

Adolescence is always an interesting phase for doing research as they themselves is in search of new things as well as self-identity. This study aims to study the correlation between academic performance and dietary habits on school children. A sample size of 201 (60 girls and 141 boys) of age ranging from 15-19 years was taken for the study. Adolescent Food Habit Checklist by Johnson F et al which contains 23 items was the tool used for the study. The Academic performance was taken from the previous year records of the students. The result ended up that there exist no significant correlation between the two variables but there exist significant gender differences on the variable food habits but no gender difference was found in academic performances of the adolescents.

**Keywords:** Dietary habits, Academic performance, Gender.

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## **Introduction**

In the initial years, our personality is heavily influenced by the home and school environment. Adolescence has a different world of its own in which its social relationship will shape its further development. As they are more like to find the new things and relationships, adolescence is always an interesting subject for research studies and the life of an adolescent is both stressful and exciting because they are no longer children but an adult due to both the physiological and psychological changes taking place in them. Teenage is predominantly between 12 or 13 of age and 18 years of age. If the family does not provide support, care, love, and guidance, they may be confused about what is going on, why this is happening and what to do next. Another fact is that, it can occur during adolescence, due to the absence of guidance and care is that the children will seek out advice and information from their peers.

## **Dietary Habits**

Child must have an interest, concentrations, hardworking, systematic studying habit, suitable environment, good health and many more factors are concerned for excelling in the academics. The period of storm and stress in school life is like; children at this age need to focus on their education more than anything else. Being healthy doesn't mean to be strong by body or merely the absence of disease, it is defined as the complete physical and mental and social well-being. For this physical and mental health a good diet can surely be helpful. A good and healthy diet is essential for our brain. Not only must one be interested in being active in class, but one must also be mindful, and for this healthy diet really helps, for good memory, focus on studies, active in- and out-of-class participation. Physical activities and healthy diet gives a positive academic performance (Busch et al. 2014). A good healthy diet can provide our body with the right amount of nutrition to help us in doing so, and one the study reveals that about 37% used to skip their breakfast, nineteen percent of adolescents showed an intake of ready-to-eat cereals for breakfast and about 44% used to intake other types of breakfast. Williams et al. (2009), and girls tend to skip their breakfast more often when compared to boys (Abdulrahman O. Musaiger, 2014). For this the parental care matters more; but in this busy lifestyle, junk foods, fried food, or fast foods are more widely used, resulting in health problems in the present and future as well. In this matter the student's health locus of control also has an influence which means the adolescents who were having high level of Health Locus of Control has a risky dietary behavior was the

outcome of the study (Tabaka et al. (2015). One of the result due to these unhealthy dietary habits s obesity which further leads to many other diseases like heart problems, sleep apnea, body pains and so many health issues, along with psychological issues like inferiority complex, fear of being judged of taunt by other peers, which will leads to missing the schools and eventually ends up in low academics (Dianne Yow Daniels, 2014). Having a healthy physic is one physical part of personality, strong physic, will gives a confidence in the person and thus the academic will be influenced positively. Adolescents will have good self-esteem and higher chance of performing well in their academics if their body mass index is low, physical activity and good dietary habits are maintained. And the opposite was the result of adolescents whose has poor dietary foods affected their self-esteem negatively and academic performance, and self-esteem was negatively influenced with increased body mass index level (Kristjánsson et al. 2010).

### **Academic Performance**

Our academic achievement also matters other than personality. Academic performance is the result of what we learn. It can be also termed as academic achievement. A good academic performance shows that the student has achieved good learning. There are other factors that promote good academic achievements, other factors contributing to good academics accomplishments are hunger, physical and emotional abuse, environment, intelligence and so on are other factors contributing to academic performance. Nowadays, everybody are busy to have a healthy lifestyle which actually has an impact on academic performance (Faught et al. 2011), a student does not have healthy food with sufficient nutritional requirement for their body and brain needs, it will affect his/her learning. For our brain to perform the cognitive functions such as memory, concentration, language, and thinking one has to consume food that contains glucose and other nutrients (Dr. Paul J. Veugelers, 2005). Among all the other meals, breakfast is the most important and essential meal an individual should take daily for our daily energy. There are some schools which provide breakfasts; this is a best thing a school can do for their students. All these cognitive function will help us to gain information and knowledge. Students who are fit, takes sufficient amount of nutrition, does regular physical activities and takes enough relaxation will have a good cognitive abilities like memory, learning and so on. All these clearly state that healthier students are better learners (if all the other factors are also favorable) than unhealthy

students. Therefore a good healthy diet is very essential especially during the stage of education for good academic performances.

### **Scope of the Study**

Support and guidance from parents and teachers are very important in this stage. These physical changes create changes in their mental aspects as well. Lack of these support, guidance and care has an impact on today's adolescents. Academic performance is the level to which a student has achieved his/her goal in education. Dietary habits had changed a lot from earlier times. In this busy life where there is no time to spent even among family members there will be a change in the food intake. Fast foods are emerging its value. Considering all this, the present study is to find out the relationship between academic performance, dietary habits in school children of rural and urban areas on Jalandhar sample.

### **Objectives**

1. To investigate the relationship between academic performance and dietary habits in school children.
2. To compare the gender differences in academic performance in school children.
3. To compare the gender differences in dietary habits in school children.

### **Hypotheses**

1. Dietary habit has no influence on the academic performance in school children.
2. There are no significant differences in gender and academic performance in school children.
3. There are no significant differences in gender with dietary habits in school children.

### **Research Methodology**

**Sample:** Total 201 school children were selected aging from 15 to 19 years from Jalandhar, Punjab was the sample. Random sampling method was used to decide the final sample for the study.

## Tools

1. Adolescent Food Habit Checklist by Johnson F et al. was used to collect the data to know their dietary habits. This checklist consists of 23 items to check the dietary fat and fiber intake, fruit and vegetable consumption, dietary restraint, nutrition knowledge and a measure of family income.
2. Academic performance of the students was collected from the previous year records.

## Statistical Analysis

1. Pearson Product Moment Correlation
2. t-test

## Results and Discussion

**Table 1: Demographic details of the sample (N = 201)**

Gender	No	Average age	Total
Male	141	17 years	
Female	60		
Locality		Percentage	
Rural	110	55.1%	201
Semi-urban	12	5.9%	
Urban	78	39%	
Family type		Percentage	
Nuclear family	121	60.1%	
Joint family	80	39.9%	

Table 1 explains the demographic details of the sample of the study (N = 201). The sample is divided into three as gender, locality and family type. The age group of the sample of study is from 15 to 19, therefore the average age for the total sample is 17 years for both gender. Almost 55.1% of the sample is from rural places, 39% from urban area and few people of 5.9% are from semi-urban area. More than half of the total about 60.1% sample belongs to nuclear family and around 39.9% from joint family. The current data collection from both the genders and gives

**Table 2:** t-test to find the gender difference of Academic performance and Food habits with respect to Gender.

	Gender	N	Mean	t-value	p-value
<b>Academic performance</b>	Males	141	64.00	1.284	.201
	Females	60	61.93		
<b>Food habits</b>	Males	141	15.25	2.84	.005
	Females	60	13.66		

Table 2 presents the ‘t’ test results for the independent mean. In this, the gender differences are significant at 0.01 level as the p-value is 0.05 for the variable food habits. The mean difference of males and females in food habits found out to be 1.59 which means that males tend to eat more of healthy food than females. From this it is clear that the null hypothesis that is “There are no significant differences in gender with dietary habits in school children”, is rejected. When we take into account the next variable which is academic performance, the t-value is 1.284 with a p-value of 0.20, which mean that gender differences on academic performance has no significant influence or relationships. In case of the hypotheses related to gender difference, the result came out to be that there exist no gender differences on academic achievement as the result shows the t-value is 1.284 and p-value is 0.201 which is not significant at 0.05 level, which means that the null hypothesis that “There are no significant differences in gender and academic performance in school children”, is accepted.

**Table 3:** Correlations among the variables Academic performance and Food habits.

		Academic Performance	Food Habit
Academic Performance	Pearson Correlation	1	.136
	Sig. (2-tailed)		.054
	N	201	201
Food Habit	Pearson Correlation	.136	1
	Sig. (2-tailed)	.054	
	N	201	201

The below table-3 includes the result of correlation of the variables Academic performance and Food habits. Dietary habit has no influence on the academic performance in school children as the level of significance is 0.054 which is more than 0.05. These findings were contradicting the

studies which found that healthy lifestyle has a positive impact on academic achievement (Faught et al. 2011), poor dietary habits affects the self-esteem and academic performance (Kristjánsson et al. 2010), nutrition has an important role in cognitive development (Dr. Paul J. Veugelers 2005), health and health related behaviors have an effect of academic performance (Busch et al. 2014), unhealthy dietary habits leads to obesity and this creates an inferiority complex and thus absentism which automatically affects their academics as well(Dianne Yow Daniels, 2014), and healthy body can create a healthy mind which will result in good academic performance as well (Raine et al.2017).

### **Conclusion**

A study will not be completed without a conclusion. It is the final and main part of any study. This part of the study gives a whole total of the research work. Result of the study reveals whether to accept or reject the hypotheses. Conclusion of the study is that males tend to eat more of healthy food than females and the null hypothesis is rejected and alternate hypothesis is accepted.

### **Limitations**

1. Samples were taken only from schools in Jalandhar for the study.
2. Due to duration of time, detailed study on the subjects was not possible.
3. As the board exam of students were going on, only government school students were available for the sample collection.
4. Certain social and psychological factors might also have affected the results.

### **Suggestions and Recommendations**

1. The study can be conducted on school as well as university students as well.
2. The locality of the subjects' whether rural or urban can also be added for the study.
3. Family type of the subjects' should have been also included.

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