

A Study on Impact of Skipping Breakfast on Nutritional Status and Academic Performance of Teenagers

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Abstract: A teenager, or teen, is someone who is between 13 and 19 years old. They are called teenagers because their age number ends with "teen". The word "teenager" is often associated with adolescence. There will be remarkable changes from childhood to adulthood. Breakfast is often called 'the most important meal of the day', and for good reason. As the name suggests, breakfast breaks the overnight fasting period. The Study Aimed to assess the impact of skipping breakfast on nutritional status and academic performance of teenagers. Total 100 samples were taken i.e. 50 from Islamia modern high school and 50 from another college of Hyderabad. An especially design questionnaire was developed and interview was done. The collected data was tabulated and graphs were design by comparing the students who skip breakfast and who consume breakfast. The collected data is statistically analysis using paired t-test. The result shows that the p value ($p < 0.100$) is not significant hence it is concluded that Null hypothesis is proved.

Keywords: Skipping breakfast, Teenagers, Nutritional status, Academic performance.

1. Introduction

A teenager, or teen, is someone who is between 13 and 19 years old. They are called teenagers because their age number ends with "teen". The word "teenager" is often associated with adolescence. There will be remarkable changes from childhood to adulthood. Adolescence is a stage of physical and psychological development that generally occurs during the period from puberty to legal adulthood. Teenager girls perceived their diet in the light of appearance and body shape while boys are more concerned by fitness and general wellbeing. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them. What changes will happen during puberty? Sexual and other physical maturation that happens during puberty is due to hormonal changes. Here's a look at the changes for boys and girls. In boys, it's hard to know exactly when puberty is coming. There are changes that occur, but they happen slowly and over a period of time. It's not just a single event. Each male teen is different and may go through these changes differently. Puberty is the time in life when a boy or girl becomes sexually mature. It is a process that usually happens between ages 10 and 14 for girls and ages 12 and 16 for boys. It causes physical changes, and affects boys and girls differently.

Breakfast: Breakfast kick-starts your metabolism, helping you burn calories throughout the day. It also gives you the energy you need to get things done and helps you focus at work or at school. Those are just a few reasons why it's the most important meal of the day. Breakfast is often called 'the most important meal of the day', and for good reason. As the name suggests, breakfast breaks the overnight fasting period. It replenishes your supply of glucose to boost energy level and alertness, while also providing other essential

nutrients required for good health. It improves your energy levels and ability to concentrate in the short term, and can help with better weight management, reduced risk of type 2 diabetes and heart disease in the long term. Children and adolescents who regularly eat breakfast also tend to perform better academically compared with those who skip breakfast. They also feel a greater level of connectedness with teachers and other adults at their school, which leads to further positive health and academic outcomes. Many studies have linked eating breakfast to good health, including better memory and concentration, lower levels of "bad" LDL cholesterol, and lower chances of getting diabetes, heart disease, and being overweight. It's hard to know, though, if breakfast causes these healthy habits or if people who eat it have healthier lifestyles.

Reasons Why You Should Never Skip Breakfast:

Lower The Risk of Diabetes: According to various studies, missing breakfast regularly can lead to the developing of type 2 diabetes as it may cause to chronic insulin resistance. Without having breakfast the insulin levels can drop and then spike after lunch, which might increase the risk of type 2 diabetes.

Improved Memory: Those who eat breakfast in the morning are mentally sharper than those who don't. Certain breakfast foods have been proven to give you a brain boost, enhance your short-term memory and make you stronger and sharper. Eating a healthy breakfast that mixes various fruits and vegetables, low-fat and protein food helps increase concentration levels, and allows you to stay productive.

Keep Your Heart Healthy: People who skip their morning meal are more likely to have clogged arteries. Skipping breakfast is linked to other harmful habits which can lead to hypertension, obesity, high blood pressure and high cholesterol which in turn increase the risk of heart attacks, strokes by 27%.

Improves Metabolism

When you wake up in the morning, your blood sugar level drops down, so you need a nutrient-dense breakfast that can provide you energy to get through the day and kick start your metabolism. To boost your metabolism, try to eat breakfast at least within 2 hours of waking up.

2. Literature Survey

A cross sectional study was conducted from November to December 2020. A total of 422 participants were selected randomly. Odds ratio with 95% Confidence interval was estimated to measure the strength of the association and level of statistical significance declared at p-value less than 0.05. The magnitude of breakfast skipping was 41.3%. Study was conducted by Kedir teji roba et al. in the year of (2020) on Adolescent Breakfast Skipping Is Associated with Poorer Academic Performance. This study explored the relationship between skipping breakfast and physical fitness in adolescents in China. Among boys, non-breakfast-skippers had good scores for 50-m sprints, 1,000-m run. Among girls, non-breakfast-skippers had good scores when compared with breakfast skippers. The results of this cross-sectional study revealed that skipping breakfast might be lower physical fitness in Chinese adolescents aged 13-18 years, especially boys. Study was conducted by Jingcen Hu et al. in the year of (2020) on Skipping breakfast and physical fitness among school-aged adolescents.

3. Methods/ Approach

Selection of area: The place of study has been done in different school and college zones of Hyderabad that is north, south, east, west and central zone.

Selection of sample: Through school and college 100 samples were selected between 13 to 19 years of age for survey.

Duration of study: 2 months.

Collection of Data

Questionnaire: The questionnaire contains Demographic information, anthropometric measurements, dietary information, questions regarding knowledge of cognitive skills and awareness of skipping breakfast, of all the subjects. The questionnaire contains both open ended and close ended questions.

Data analysis: The collected data has tabulated and calculated by using statistical formula,

Formula,

$$s_d = \sqrt{\frac{\sum(d - \bar{d})^2}{n - 1}}$$

Where,

d: difference per paired value

n: number of samples

4. Result and Discussion

Table 1: Distribution of Subjects Based on Nutritional Status of Teenager Who Skip Breakfast

| Category | Nutritional status (BMI) | | Skipping breakfast | |
|---------------|--------------------------|-------------|--------------------|-------------|
| | Frequency | Percentage% | Frequency | Percentage% |
| Underweight | 13 | 13 | 14 | 14 |
| Normal weight | 36 | 36 | 13 | 13 |
| Overweight | 3 | 3 | 13 | 13 |
| Obese | 2 | 2 | 14 | 14 |

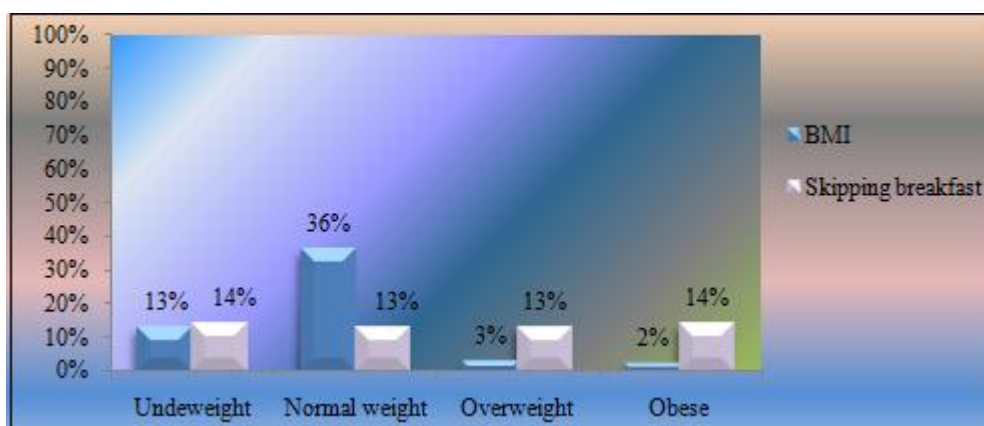


Table 2: Distribution of Subjects based on Nutritional Status of Teenager Who Skip Breakfast

| Category | Nutritional status (BMI) | | Consuming breakfast | |
|---------------|--------------------------|-------------|---------------------|-------------|
| | Frequency | Percentage% | Frequency | Percentage% |
| Underweight | 10 | 10 | 11 | 11 |
| Normal weight | 31 | 31 | 12 | 12 |
| Overweight | 3 | 3 | 12 | 12 |
| Obese | 2 | 2 | 11 | 11 |

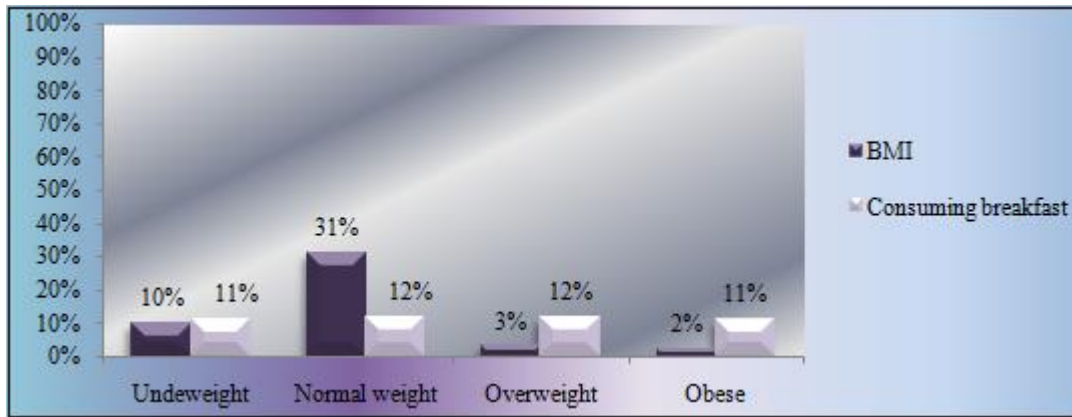


Table 3: Distribution of subjects based on the Academic Performance who Skip Breakfast

| Category | Academic Performance | | Skipping breakfast | |
|----------|----------------------|-------------|--------------------|-------------|
| | frequency | Percentage% | frequency | Percentage% |
| 50-79 | 35 | 35 | 27 | 27 |
| 80-100 | 19 | 19 | 27 | 27 |

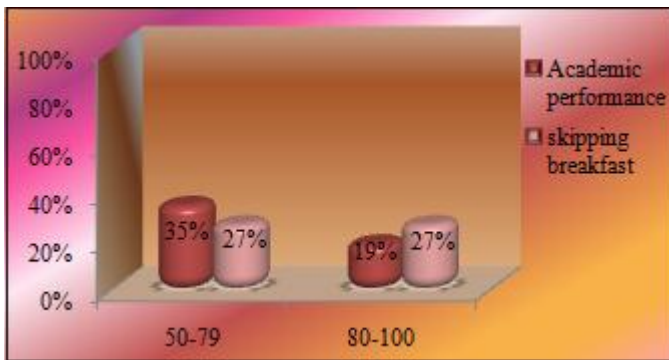
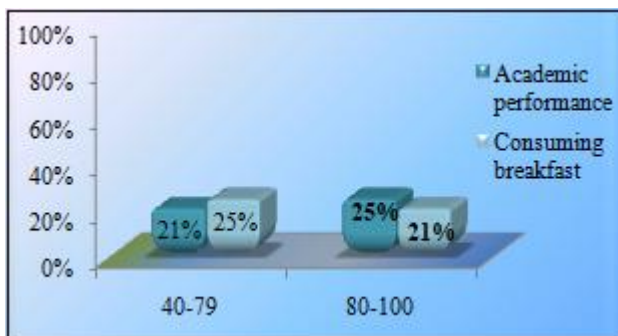


Table 4: Distribution of Subjects Based on the Academic Performance who Consume Breakfast

| Category | Academic Performance | | Consuming breakfast | |
|----------|----------------------|-------------|---------------------|-------------|
| | Frequency | Percentage% | Frequency | Percentage% |
| 40-79 | 21 | 21 | 25 | 25 |
| 80-100 | 25 | 25 | 21 | 21 |



5. Conclusion

The study concluded that the collected data was tabulated and analyses statically by using the formula paired t-test

$$s_d = \sqrt{\frac{\sum(d - \bar{d})^2}{n - 1}}$$

the result shows that the p values are (p<0.100) and it is not significant hence concluded that the null hypothesis is proved.

6. Future Scope

It is preferable to implement and work on children’s and education acts by raising awareness about the benefits of daily breakfast. Therefore, importance of having breakfast should be incorporated in the public health programs and school educational activities. Parents, teachers and health care professionals should be educated on the detrimental effects of breakfast skipping.

Limitations: The current study was limited to assessing a lack of food and a lack of time to eat, both of which could be modifiable determinants in the causative pathway of breakfast skipping.

Benefits: due to small sample data no negative results occurred who skips breakfast; however, which should be considered as unhealthy lifestyle in a long run. Large data sample needed for further conclusion.

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