



THE PROBLEM OF IMPROPER NUTRITION AMONG YOUTH AND ITS IMPACT ON ACADEMIC PERFORMANCE

Ibragimova Noila Umarovna

Musa-akhmatova Saidabonu Alisherovna

Haqberdiyeva Jasminabonu Mamatqulovna

Kimyo International University in Tashkent

Abstract

This scientific article provides an in-depth analysis of the development of improper eating habits among contemporary youth, particularly students, and its adverse effects on their health and academic performance. The research was carried out based on an experiment conducted among 100 students aged 18–22 who are studying at higher education institutions in Tashkent. Students were divided into two groups based on their eating habits, daily routine, and health status: those with healthy eating habits and those with improper eating habits.

During the research, their average grades, attention and memory tests, physical condition (BMI), and mental-emotional state were studied. According to the results, among students with improper eating habits, obesity, insomnia, rapid fatigue, stress conditions, and most importantly, a decline in academic performance were observed. Students in this group reported difficulties in concentrating, low retention levels, and experiencing failure in exams.

This article scientifically elucidates that improper nutrition directly impacts not only physical health but also cognitive (mental) functions and academic performance. Based on this, the authors propose practical recommendations for forming a culture of healthy eating, organizing educational events at universities, and limiting the consumption of harmful foods. The research results can serve to improve youth health and the quality of education in the future.

Introduction

In today's era of globalization and information, the lifestyle, consumption culture, and daily habits of youth are changing dramatically. Especially among students studying in urban environments, there is an increasing interest in fast food products, carbonated and sugary drinks, and light but unhealthy meals. Unfortunately, such



improper eating habits often arise due to time-saving, seeking convenience between classes, the influence of advertising, or the underdeveloped culture of nutrition. Healthy eating is one of the main criteria for the quality of human life and intellectual potential. However, imbalanced nutrition among youth negatively affects not only their physical health but also their mental state, concentration, memory power, and overall academic efficiency. International studies conducted in this regard show that among youth with improper eating habits, there is a decline in cognitive functions, fatigue, sleep disorders, mood swings, and consequently, a decrease in academic achievements, which are widespread problems.

In the education system of Uzbekistan, enhancing students' knowledge acquisition level and improving the quality of education is one of the priority tasks. However, to achieve this goal, attention must be paid not only to modern teaching methods but also to the daily healthy lifestyle of youth, particularly their nutrition culture. Therefore, through this article, the aim is to scientifically analyze the direct impact of improper nutrition among youth on their academic performance, identify the existing problem, and recommend ways to address it.

Research Methodology

The main objective of this research was to determine the relationship between improper eating habits among youth, particularly students, and their academic performance, attention level, and overall psychophysiological state. For this purpose, a thoroughly planned scientific approach was applied based on the following stages:

About the Participants

- Total number of participants: 100 students (males – 45, females – 55)
 - Age range: 18 to 22 years old
 - Selection method: Random selection from students studying in the same faculty and course
 - Research location: Higher education institution in Tashkent city
- Participants were divided into two groups based on their health, eating habits, and academic discipline:
- **Group 1 (healthy eaters):** 50 students who usually have breakfast, consume fruits, vegetables, and home-cooked meals, and avoid sugary carbonated drinks

- **Group 2 (unhealthy eaters):** 50 students who frequently consume fast food, carbonated drinks, chips, and energy drinks, and do not have regular breakfast

Research Period and Duration

- Period: April–May 2025
- Duration: 30 days (1 month)
- Observation method: Each participant recorded their daily eating and sleep patterns through a special form

Research Methods

A complex (multi-method) approach was used in the research:

A) Survey Method

Through specially designed anonymous questionnaires, participants' eating habits were determined, including whether they have breakfast, how many times a day they eat, and their dependence on fast food. Additionally, questions such as “How do you feel during classes?”, “Do you feel tired often?”, and “Can you concentrate?” were used to assess psychological and subjective states.

B) Analysis of Academic Performance

Each student's average grades from the past two months were requested and studied confidentially. Additionally, their exam attendance percentage and the number of submitted independent assignments were analyzed.

C) Attention and Memory Tests

Students underwent psychological tests:

- **Attention Test:** Task to quickly and accurately identify consecutive symbols on a screen
- **Memory Test:** After showing a list of 20 words for 1 minute, the number of words recalled was evaluated

D) Assessment of Physiological Indicators

Each participant's weight and height were measured, and their BMI (Body Mass Index) was calculated. Through medical examination, signs of anemia (low blood count) and insomnia were noted in some cases.

Data Analysis

- Statistical analysis: Data were processed using Excel and SPSS programs, and average indicators between groups were compared.
- Reliability of differences (significance) was assessed using t-tests.



- Results were visualized in the form of graphs and tables.

Research Limitations

- The research was based solely on students from one university (caution is needed in generalization).
- Academic grades may be subjective (some students did not accurately report their grades).
- Eating habits were studied reliably only through questionnaires, with no laboratory tests available.

Research Results

Based on the data collected during the research, significant differences were identified between the groups of students with healthy and improper eating habits in terms of academic performance, attention, memory, and overall psychophysiological state. Below is a comparative analysis of the main indicators:

Academic Indicators

Indicator	Group 1 (Healthy Eating)	Group 2 (Improper Eating)
Average Rating Scores	86.4%	72.1%
Independent Assignment Submission Rate	93%	68%
Regular Attendance at Lectures	88%	62%
Active Participation in Class (Self-Assessed)	70% rated "High"	60% rated "Low"

Note: Students with healthy eating habits felt more active, alert, and prepared in classes, while those with improper eating habits exhibited more apathy, fatigue, and lower results.

Attention and Memory Test Results

Test Type	Group 1	Group 2
Attention Test (Reaction Time, seconds)	4.2 seconds	6.8 seconds
Memory Test (Words Recalled out of 20)	17/20	11/20

Note: Students with healthy eating habits achieved higher results in attention and memory tests. Notably, the 6-word difference in the memory test indicates a significant cognitive disparity.



Mental-Emotional and Physical Conditions

Among students with improper eating habits:

- 42% reported not having breakfast in the morning
- 58% felt tired or “distracted” during classes
- 36% showed sleep problems (late sleep, difficulty waking up)
- 30% reported stress and headaches

Among students with healthy eating habits:

- 85% have breakfast daily
- 90% felt alert and prepared during classes
- 76% reported sleeping 7–8 hours per night

Physiological Indicators

Indicator	Group 1	Group 2
Average BMI (Body Mass Index)	22.5 (normal)	27.1 (overweight)
Average Blood Pressure	120/80 mmHg	134/88 mmHg
Anemia (Low Blood Count)	4% of cases	18% of cases

General Observations

During the research, it was found that students with healthy eating habits felt better mentally and physically, actively participated in classes, and achieved higher grades. Conversely, students with improper eating habits showed a noticeable decline in academic discipline, concentration, and comprehension levels.

Analysis and Discussion

Improper eating habits among youth significantly negatively impact their academic performance. In an experiment involving 100 students, groups with healthy and improper eating habits were compared. The results showed that students with improper eating habits scored lower in attention and memory tests, had lower academic performance, and exhibited more fatigue, sleep disturbances, and stress. These conditions affect overall health and mental-emotional states, complicating the learning process. The research results confirm the critical importance of healthy eating in maintaining academic efficiency and psychophysiological well-being, highlighting the need for measures to improve youth nutrition culture.



Conclusion and Recommendations

The research results clearly prove that improper nutrition among youth negatively affects their academic performance. Improper eating leads to reduced attention and memory, fatigue, sleep disturbances, and worsening mental states, significantly lowering academic efficiency. Therefore, it is necessary to organize seminars and training sessions in higher education institutions to promote healthy eating among students. Increasing healthy food options and reducing harmful fast food in university cafeterias are vital for student health. Particularly, medical students should play a leading role as health advocates, sharing knowledge, providing advice, and promoting a healthy lifestyle among youth. Additionally, introducing special subjects or modules on nutrition and healthy living can enhance students' knowledge, encouraging them to maintain and promote health in the future. The research outcomes underscore once again the importance of healthy eating in improving youth health and academic success.

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