ADVANCE SOCIAL SCIENCE ARCHIVE JOURNAL
Available Online: https://assajournal.com
Vol. 05 No. 01. Jan-March 2026.Page#.1967-1982
Print ISSN: 3006-2497 Online ISSN: 3006-2500
Platform & Workflow by: Open Journal Systems

Effects of Dietary Habits on Academic Performance among University Students

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We have no conflict of interest to disclose.

Abstract

This study investigated the connection between eating patterns and academic achievement among undergraduate students at GIFT University in Gujranwala, ages 18 to 24. Students at universities frequently work lengthy hours on university which affects their dietary preferences and general way of life. Examining whether better eating practices are linked to improved academic performance was the primary goal of this study. 50 students were chosen at random to participate in the study using a correlational research design. The Academic Performance Scale (APS) was used to evaluate academic performance, and the Self-Regulation of Eating Behavior Questionnaire (SREBQ) was used to analyze eating behaviors. Dietary habits and academic performance were shown to be significantly positively correlated (r =.346, p <.05). This suggests that adolescents who follow healthy eating habits typically do better in school. Roughly 12% of the variation in academic achievement was explained by dietary practices. Age and gender variations were also noted, with males and female students in the 18–21 age range exhibiting somewhat better performance levels. The SREBQ's reliability was comparatively low, whilst the APS's was moderate. Overall, the findings suggest that students' academic performance might be significantly enhanced by adopting good eating habits. But financial status, sleep habits, stress, and other factors can also affect academic achievement. Future research should cover a wider and more

expanded population in order to produce more broadly applicable conclusions, as the sample was restricted to a single university.

Chapter 1

Introduction

Students' eating habits play a significant role in their everyday lives and may have an impact on their capacity to learn and achieve academic success. Essential nutrients from wholesome, well-balanced meals can enhance focus, memory, and general energy levels, all of which can contribute to improved academic performance. Students at universities typically have to eat part of their meals on campus because they spend a lot of time there. Depending on their tastes and what's available, undergraduate may select different foods in these circumstances. As a result, it's critical to investigate students' eating patterns and determine whether they typically select healthier or less healthful meal selections, as well as how these decisions might affect their academic achievement.

Population/Sample

The population that is considered for this research is the student body. Students are an integral pillar of society upon which the future of a nation depends. Every student shoulder certain responsibility to serve humanity in unique and the best possible ways. They are the building blocks of nation and contribute to the wellness of mankind. They educate to spread knowledge and transfer wisdom to the upcoming generation. On the whole, students are significant in our society for the betterment of the world (Brodowicz, 2024). The students from undergraduate programs are a part of this research regardless of their departments. The age group of young adults is chosen ranging from 19 to 24 years.

Dietary Habits

Dietary habits are basically the long-term eating patterns that a person develops and upholds in their day-to-day existence. Dietary habits, which include internal, external, and conscious eating-related behaviors, are a vital and continuous activity in daily living (Li & Tang, 2023)

Based on a daily requirement of about 2100 calories, a balanced dietary pattern for young adults (18 to 24 years) in Pakistan stresses the proportionate intake of important food groups. Cereals represent the biggest part of calorie intake, followed by animal products, pulses, fruits, vegetables, and small amounts of fats and sweets. This distribution guarantees sufficient amounts of protein (about 71.5 g/day), vitamins, and minerals required for sustaining daily activity levels, preventing nutritional deficits, and maintaining health.

Table 1

Recommended Daily Food Intake for Pakistani Adults (2100 Calories)

Food Group	*% Share of Calories*	*Amount (grams)*
Cereals	40%	240 g
Pulses	6%	38 g
Animal Products	20%	200 g
Added Fats	10%	23 g
Sugar	10%	30 g
Fruits & Vegetables	10%	350 g
Total Daily Calories	2100 calories	-
Total Daily Protein	-	71.5 g

Healthy Food

Nutrient-dense, unprocessed foods that give the body the vital vitamins, minerals, and other nutrients it needs to function correctly are considered healthy. Here are some illustrations of nutritious foods. Fresh fruits and vegetables that are rich in vitamins, minerals, and dietary fiber, and incredibly low in calories. Include a range of colors and varieties of fruits and vegetables in your list of nutritious foods for optimal gut health and minimize risk of colon cancer (Shetty, 2023).

Unhealthy Food

Junk foods, also known as discretionary or ultra-processed foods have frequently lack of nutrients including fiber, vitamins, and minerals. Junk food tends to be high in kilojoules (energy), salts, sugars, fats etc. (Levy, 2025).

Academic Performance

A student's accomplishment and success in their academic pursuits are referred to as their academic performance. A student's grades, test results, and general academic achievements are usually used to gauge it. Academic performance is a measure of a student's level of engagement and effort in their studies, their understanding of the subject matter, and their capacity to apply information. Academic performance data is used by educators, parents, and educational institutions to pinpoint students' areas of strength and weakness, customize instructional support, and monitor their development over time (Hailu, 2014).

Theoretical Framework

Healthy and bad food habits strongly influence students' cognitive functioning and academic achievement. According to Cognitive Load Theory, the brain requires appropriate nutritional energy to process information efficiently; consequently, balanced meals rich in proteins, vitamins, and minerals boost concentration and working memory (Sweller, 1988). Studies demonstrate that pupils who consume nutrient-dense diets do better on memory and attention activities compared to those who commonly consume sugary or high-fat foods. In a similar vein, Self-Determination Theory emphasizes that healthy eating and physical well-being enhance intrinsic motivation, which has a favorable impact on academic engagement. Poor eating practices, including a dependence on junk food, diminish motivation and energy levels, which results in poorer academic performance (Adolphus, 2016).

Maslow's Hierarchy of Needs also highlights that good nutrition is a basic physiological demand that must be addressed before students can achieve higher-order learning and academic performance (Maslow, 1943). If children lack appropriate nutrients, their capacity to focus and engage in learning is impaired. Furthermore, Social Cognitive Theory says that eating behaviors are formed by environmental influences such as family, peers, and school food settings (Bandura, 1986). Students exhibit better academic achievement and stronger self-regulation when they are in supportive circumstances that encourage a healthy diet. Healthy school nutrition settings are linked to improved classroom behavior and test scores, according to research (Florence, 2008). Overall, the theoretical and empirical evidence suggests that healthy food habits promote cognitive performance, motivation, and overall academic achievement.

According to Bronfenbrenner's Bioecological Systems Theory, a student's eating patterns and academic achievement are influenced by a variety of interrelated environmental systems, such as their home, school, classmates, and community (Bronfenbrenner, 1979). Children who are raised in settings that promote and provide access to healthful foods have better eating habits, which enhance their cognitive development and academic performance. On the other hand, conditions where fast food is readily available and nutritional awareness is low lead to unhealthy eating habits that hinder learning

and focus. According to research, pupils from nutritionally supportive homes outperform those from unhealthy or food-insecure environments in terms of academic achievement (Basch, 2011).

Another relevant theory is the Behavioral Economics Theory, which focuses on how food decisions are influenced by psychological, social, and environmental factors (Thaler, 2008). This hypothesis implies that tiny "nudges," such as presenting healthier meals at the front of the cafeteria or offering nutrition labels, might positively affect students' dietary decisions. Stronger academic performance, better emotional control, and increased energy levels are all correlated with healthier eating choices. Studies utilizing behavioral economics interventions have demonstrated that when children are urged toward healthier diets, their academic performance and classroom behavior increase due to enhanced cognitive functioning and stability in energy levels (Just, 2015).

Rationale

By giving students access to healthy food options on campus and teaching them the value of proper nutrition, universities can play a significant role in encouraging healthy eating habits. Implementing nutritional education programs is one strategy that has been effective in changing university students' eating habits. The adoption of nutritional education programs is crucial for public health, despite the difficulties in tailoring and modifying them to the unique requirements of young adults. Students can learn how to make better food choices and gain knowledge about healthy eating practices through these programs. Furthermore, the success of nutritional education programs and their broader adoption among young people may be greatly impacted by the incorporation of modern technology. To find the best delivery strategies, more investigation is necessary. Thus, the purpose of this review was to investigate the different nutritional issues and eating habits of college students. The results could be useful in pinpointing areas where interventions could be made to encourage positive change and enhance general health and wellness (Almoraie, 2024).

Young adult dietary habits have a significant impact on both immediate and long-term health effects. Young adults frequently experience a time when they have more control over what they eat, which can result in the development of either unhealthy or healthful eating habits. A balanced diet, characterized by a balance of fruits, vegetables, whole grains, lean proteins, and healthy fats, is related with better physical health, improved cognitive function, and reduced chances of chronic diseases such as obesity, heart disease, and diabetes (Gibson, 2018). In contrast, unhealthy eating habits, generally typified by heavy intake of processed foods, sugary snacks, and fast food, contribute to negative health consequences, including weight gain, nutritional deficiencies, and the development of metabolic diseases (Lachat, 2017). Young adults frequently choose convenience meals over healthier options when they move to adulthood, which exacerbates the prevalence of bad dietary patterns among this population. Other contributing variables include peer pressure, stress, and time restrictions. Therefore, educating young adults on the long-term health effects of these dietary decisions is essential to changing their eating patterns.

Chapter 2

Literature Review

The purpose of this study was to investigate the connection between dietary dissatisfaction, nutritional status, and food choice availability among university students in Lahore, Pakistan. In particular, research evaluated the impact on nutritional outcomes of the differences in food access between day students and hostel residents. A non-probability purposive sampling technique was used in a correlational survey design. 201 university students from different Lahore universities, ages 18 to 27 (M = 23.18, SD = 0.50), made up the sample (98 men, 103 females). A Nutritional Assessment

Questionnaire (NAQ), Dietary Dissatisfaction Scale (DDSS), Healthy Food Accessibility Scale (HFAS), and Demographic Information Sheet were used to gather data. Independent sample t-tests, linear regression, and Pearson Product-Moment Correlation were among the statistical studies.

The results showed that poor nutritional status and food dissatisfaction were significantly positively correlated. Malnutrition and dietary dissatisfaction were found to be negatively correlated with the availability of healthful foods. Meal skipping, poor eating habits, lack of nutritional understanding, and budgetary limitations were important contributing causes. Higher levels of dietary discontent and less access to wholesome food options were reported by female students, hostel residents, and students attending government universities. The report emphasises how urgently nutritious food options must be made more readily available on college campuses. To encourage healthier eating habits and improve students' wellbeing, interventions like nutrition education campaigns and reasonably priced healthy meal plans are advised (Azhar, 2025).

This study looked into the eating patterns of 1201 St. Paul University Surigao students and how they might affect their academic achievement. In order to investigate the concrete impacts of eating habits on St. Paul University College students' academic performance, this study uses a descriptive-quantitative research approach. It includes about 70% of the university's undergraduate students from different academic fields. A questionnaire created by the researcher was used to collect data, and techniques including frequency count and percentage, mean and standard deviation, analysis of variance, and Pearson r were used in the analysis that followed. The most noteworthy discovery is the inverse relationship between different eating behaviours and academic achievement, suggesting that kids who engage in fuel, fun, fog, and storm eating behaviours typically perform worse academically.

This emphasises how food decisions may affect academic results. Since it directly addresses the negative correlation between eating habits and academic performance, which affects both students' well-being and their educational outcomes, the most pertinent recommendation is to encourage healthier eating habits among college students through comprehensive approaches that include nutrition education, increased availability of nutritious food options, and stress management resources.

This study emphasises how important nutrition is for improving St. Paul University Surigao students' general well-being and academic performance (Resimo, 2024).

The goal of this study is to thoroughly evaluate medical undergraduates' eating patterns and how they relate to their academic achievement. Over the course of one month, 110 medical undergraduates participated in a cross-sectional study that collected data using a pre-tested questionnaire that included questions about socio-demographics, eating habits, and test scores. Students were assigned a dietary habit score and classified as having good, moderate, or bad eating habits based on their responses. The relationships between survey factors such as gender, accommodation, dietary habit score, and academic performance were examined using statistical tests.

High academic achievement was correlated with a high dietary habit score. On the other hand, poor academic achievement was linked to a low dietary habit score, (p-value = 0.0351). The average score for students with healthy eating habits was 583 out of 900. The average score for students with moderate eating habits was 550 out of 900. The average score for students with poor eating habits was 520 out of 900. Our result data support earlier research on eating habits and academic achievement that found a negative correlation with fast food and a positive correlation with regular breakfast and frequent ingestion of fruits, vegetables, and pulses (Chandravanshi, 2024).

Adolescent obesity rates reported in various urban and rural regions are not uniform. We looked at markers of good and unhealthy eating habits in 1863 teenagers, ages 13 to 18, who attended 23 secondary schools in four different settlement types in the Otago region of New Zealand and had either

a healthy or excess body weight. Dietary habits and demographics were included in an online survey. Body mass index was computed after measurements of height and weight were made. Urban and rural settlement types as defined by New Zealand were used. A modest area-level deprivation index was determined by home addresses. Chi-square tests and ANOVA were used to evaluate the data. The adjusted odds ratios of extra weight were estimated by fitting a logistic model.

The percentage of teenagers with a healthy weight varied ($p < 0.001$) across neighborhoods with the highest level of deprivation (64.9%) and the lowest level (76.4%). Differences across settlement types were only marginally evident ($p = 0.087$). Fast food and sugar-sweetened beverages were more common in urban vs rural towns ($p < 0.001$) and in the most impoverished areas ($p < 0.001$). Area-level deprivation and ethnicity were the most significant correlates with excess weight, although settlement type was not. Developing treatments to improve food patterns and body weight status among teenagers requires giving priority to socioeconomic variables regardless of the kind of settlement (Coppell, Keall, & Mandic, 2023).

This study was required because the majority of graduating students' lives change when they enroll in undergraduate studies. Diet is important since it can help children perform better academically. The goal of the current study is to investigate how a healthy diet affects Indian graduating students' overall academic performance. 279 RTM Nagpur University students were chosen at random to serve as the study's sample size. The participants' answers were gathered using a standardized questionnaire. Grade point averages for each semester were used to assess students' academic performance. The findings indicate a robust and favorable correlation between academic achievement and a nutritious diet. The findings supported the theory that students' academic performance would increase if they started eating a healthy diet on a daily basis. This university has a large number of students that either skip breakfast or eat it occasionally but not every day. Additionally, they typically struggle to eat a nutritious diet. Their academic performance is directly impacted by this. Parents are therefore urged to closely monitor these behaviours (Khan & Zada, 2022).

Due to their impact on students' learning processes and academic performance, there has been an increase in scientific interest in students' mental health experiences in recent years. Recently, the suicidal news of a student at a private university in Lahore, Punjab, Pakistan, due to her mental health condition, attracted public attention. Researchers and academics' focus was also drawn to the taboo and understudied area of the larger field of public health as a result of that incident. Therefore, the purpose of the current study was to investigate the connection between mental health issues and academic achievement among Pakistani university students. 540 senior semester students between the ages of 20 and 35 were selected from public and private schools in Pakistan's largest cities, including Lahore, Islamabad, and Peshawar.

Data analysis was done using both descriptive and inferential statistics. Inferential statistics employed the independent sample t-test, hierarchical regression analysis, and Pearson Product Moment Correlation to analyse the data. The study's findings show a substantial positive correlation between improved academic achievement and mental health. University students' academic performance is adversely affected by mental health issues. The current study's findings were helpful in illuminating the area of ignorance within the larger field of public health; they also helped raise awareness among students, parents, and university administration to plan and design effective intervention strategies to provide proper mental health, which in turn promotes academic excellence (Wang & Gul, 2021).

The World Health Organisation (WHO) reports that 51% of young girls in Pakistan are malnourished, whereas the National Nutrition Survey of Pakistan (2011) found that 35–39% of teenage girls have nutritional deficiencies. This study aims to investigate the variables associated with female

adolescent students' eating habits and how they affect their overall health and academic achievement. A focus group discussion using a semi-structured questionnaire was used as part of a qualitative method. A deliberate selection of ten participants was made. The results indicate that female teenagers' general health is severely compromised. The primary concerns are anaemia, headaches, poor focus, inattention, inactivity, frequent illness, most joint problems in early life, aggressive behavior, and short fuse. The main issues were the availability and choice of unhealthy food at canteens, the influence of peers on dietary decisions, missing breakfast, the prevalence of fast food or junk food, and the excessive use of soft drinks and energy drinks. Participants indicated that in order to solve the enormous issue, cooperation is required (Fazal, 2019).

The goal is to investigate undergraduate medical students' eating patterns and evaluate how they affect their academic achievement. 289 young medical college students, both male and female, between the ages of 17 and 25 participated in a cross-sectional study. A self-administered questionnaire was used to gather data on academic performance, food habits, and demographic profile after ethical clearance and permission. The majority of the 289 medical students were on a mixed diet, with 42.9% of them being male and 57.1% being female. Participants in the study were divided into two groups: high (≥60%) and low (<60%) performers based on the proportion of their prior university test performance. In conclusion, eating fast food on a daily basis increases the likelihood of performing worse academically. The educational institutions should implement programs and policies that encourage medical students to eat healthily (Arasegowda, 2016).

Chapter 3

Methodology

Study Design

The study to understand the relationship between the dietary habits and academic performance utilized a correlational study design which investigates relationship between variables. Without manipulating them, the study will focus on how changes in one variable relate to changes in another.

Research Questions

What is the relationship between dietary habits and academic performance among the undergraduate students of GIFT university, Gujranwala?

Will the students with healthy dietary habits and the ones with unhealthy dietary habits differ in their academic performance?

Is there any impact of dietary habits on academic performance among the students ranging from the age of 18 to 24 years?

Main Hypothesis

There is a relationship between dietary habits and academic performance among the undergraduate students.

Sub Hypotheses

Students with healthy dietary habits and students with unhealthy dietary habits will differ in their academic performance.

The impact of dietary habits on academic performance among the students ranging from the age of 18 to 24 years.

Objectives

- Investigation of relationship between dietary habits and academic performance among the undergraduate students.

- Comparison between the students with healthy dietary habits and students with unhealthy dietary habits with respect to the difference in their academic performance.
- The study aims to identify the difference in academic performance for those students who prefer healthy diet pattern to unhealthy diet pattern.

Sample

The study will constitute the undergraduate students ranging in age from 18 to 24 years. These students will belong to GIFT university Gujranwala. A sample of 50 students will be chosen for the research. Random sampling technique will be used for selecting the sample.

Inclusion Criteria

- Students in the age group from 18 to 24 will be included.
- Muslim students will be the participants.
- Students belonging to nuclear family will be part of the research.
- Undergraduate students will be included.
- Both genders (male and female) will participate.

Exclusion Criteria

- Differently abled or physically unfit students will not be chosen.
- Married individuals will be excluded.
- Foreign students belonging to any country except Pakistan will not be a part of the study.
- Hostelites will not be a part of study.

Operational Definitions

Self-Regulation of Eating Behavior Questionnaire

The five-item Self-Regulation of Eating Behavior Questionnaire is a novel measure of eating self-regulatory capacity. This measure is likely to be useful for the assessment of the effectiveness of dietary and weight control interventions and particularly for assessing the effectiveness of interventions which aim to improve dietary self-regulation (Kliemann, 2016).

Academic Performance Scale

An Academic Performance Scale (APS) is a structured instrument, typically a questionnaire or rating system, that measures aspects of a student's academic performance, such as study habits, effort, class participation, and problem-solving abilities (Verner-Filion, 2016).

Demographics

Age _____
Gender _____
Education _____
Marital Status _____
Nationality _____
Family System _____Research Instruments

Self-Regulation of Eating Behavior Questionnaire

The Self-Regulation of Eating Behaviour Questionnaire (SREBQ) was developed by Kliemann, Beeken, Wardle, and colleagues and published in 2016 in the International Journal of Behavioral Nutrition and Physical Activity to assess adults' ability to self-regulate their eating behaviour. The questionnaire consists of 5 items measuring key self-regulatory processes such as monitoring eating, evaluating progress, persisting with intentions, and overcoming barriers, and uses a 5-point Likert scale ranging from 1 (Never) to 5 (Always).

Scores are calculated by summing the item responses (after reverse-scoring negatively worded items where applicable), yielding a total score range of 5–2, with higher scores indicating greater self-

regulatory capacity in eating. The SREBQ demonstrates a unidimensional factor structure and good construct and discriminant validity, showing positive associations with general self-regulation and healthy eating behaviours and negative associations with maladaptive eating traits such as emotional overeating. In terms of reliability, it shows acceptable internal consistency with a Cronbach's alpha of approximately 0.7 and good test–retest reliability with an intraclass correlation coefficient of about 0.77, supporting its use as a brief and psychometrically sound measure of eating self-regulation (Kliemann, 2016).

Academic Performance Scale

The Academic Performance Scale (APS) is a self-report instrument created by Verner-Filion, J., & Vallerand, R. J. in (2016) to evaluate a student's general academic functioning and preparedness. Its goal is to offer a rapid and useful assessment of students' motivation, study habits, involvement in class, readiness, and engagement with academic assignments. Eight items on a 5-point Likert scale, ranging from strongly agree to strongly disagree, make up the scale, which enables students to consider actions that support their academic achievement. The tool is helpful in identifying both strengths and areas that need improvement because scores range from 0 to 40 and are divided into five interpretation levels: 33 to 40 indicates excellent performance, 25 to 32 good performance, 17 to 24 moderate performance, 9 to16 poor performance, and 0 to 8 failing performances (Jabir, 2022).

Procedure

Students take the Academic Performance Scale one-on-one in a quiet setting. After attentively reading each of the eight statements, participants score their answers on a 5-point Likert scale that goes from Strongly Disagree (1) to Strongly Agree (5). Based on their usual academic behaviors, they are urged to provide honest answers. The scoring criteria (33 to 40 = Excellent, 25 to 32 = Good, 17 to 24 = Moderate Performance) are used to interpret the final result, which is calculated by adding the scores of all the items.

Participants are given the Self-Regulation of Eating Behaviour Questionnaire (SREBQ) to determine their average food intake for the previous month. After reading each item in the questionnaire, participants mark (✓) the column that most accurately reflects how much they agree to the very option. They solve the questionnaire on a 5-point Likert scale ranging from strongly disagree to strongly agree. They are required to answer each line without omitting any information. To ascertain the dietary patterns of participants, the completed questionnaires are gathered and assessed.

Chapter 4

Results

In order to achieve the objectives of the study, the results section consisted of a number of statistical analyses. Descriptive statistics were used to summarize the characteristics of the sample and the measurements used in the study. Using alpha reliabilities, the instruments' internal consistencies were estimated. The relationships between the research variables were examined using correlations. Regression analysis was used to investigate the study variables' prediction. All of the above-mentioned statistics were computed using SPSS-27 edition in different age groups of Pakistani population.

Demographic Variables

Table 1

Frequencies and Percentage of sample of the study (N=50)

Variables	*f*	*%*
Age		
18-21	37	74
22-24	13	26
Gender		
Male	25	50
Female	25	50
Marital Status		
Unmarried	50	100
Education		
Undergraduate	50	100

Note. f= Frequency, %= Percentage

Table 1 indicates the sample characteristics of sample. Frequencies and percentage of age, gender, marital status, and education. Sample consisted of 25 males and 25 females, 50% each. 74% were 18-21 years, and 26% were 22-24 years. 100% were unmarried and none of them was married or divorced. In terms of education, 100% were undergraduates.

Psychometric Properties of Scales used for Study Variable

The psychometric properties of study variables are presented in the table below.

Table 2

Descriptive Statistics of the study variables

Scales	*K*	*M*	*S. D*	*α*	*Range*
Academic Performance Scale	8	19.78	4.077	.565	12-31
Self-regulation of eating behavior Questionnaire	7	16.53	2.770	.209	9-22

Note. K= Total Items, M= Mean, S. D= Standard Deviation

Table 2 shows the mean, standard deviations, and reliability measured by Cronbach's alpha for the research instruments and the total no. of items along with ranges of each scale. The Academic Performance Scale is moderately reliable (α=.565) while the Self-regulation of eating behavior questionnaire is weakly reliable (α=.209).

Relationship between the study variables

Table 3

Correlation analysis between dietary habits and academic performance (N=50)

Variables	1	2
Dietary Habits	-	.346*
Academic Performance	-	-

Note. *p<0.05

The table shows correlation between dietary habits and academic performance. The results show that dietary habits have a positive, weak and significant correlation with academic performance (r=.346, p<0.05).

Regression Analysis

It is used to investigate the prediction of study variables and the results are shown below in Table 4.

Table 4

Linear Regression Analysis of dietary habits and academic performance (N=50)

Variable	*R*	R^2	*P*	*B*	*SE*	*Confidence Interval*	
						Lower	*Upper*
Constant			.002	11.253	3.408	4.398	18.109
Academic Performance	.346	.120	.015	.514	.203	.105	.923

P<0.005*=95% confidence interval

The table shows the linear regression analysis between dietary habits and academic performance. The result shows a statistically significant relationship (r=.346, p<0.005) between the IV and the DV. Moreover, the independent variable creates a change of 12% in the dependent variable.

Role of Demographic Variables

Independent samples t-test was used to estimate the impact of gender and age on academic performance (if any). The tables 5 and 6 below are representative of these results.

Table 5

Mean, standard deviation and t-test statistics of study variables (N=50)

	Males		*Females*				
	M	*SD*	*M*	*SD*	*t(df)*	*p*	*Cohen's d*
Dietary Habits	17.04	3.221	16	2.147	1.324(47)	.020	-
Academic performance	20.36	4.202	19.20	3.948	1.006(48)	.961	4.077

Note. M=Mean, SD=Standard deviation

The table represents that there is a significant gender difference in the academic performances of males and females. Males have higher level of academic performance (M=20.36) as compared to females (M=19.20).

Table 6

Mean, standard deviation and t-test statistics of study variables (N=50)

	18-21 years		*22-24 years*				
	M	*SD*	*M*	*SD*	*t(df)*	*p*	*Cohen's d*
Dietary Habits	16.92	2.335	15.46	3.620	3.202(48)	.604	-
Academic performance	20.78	3.931	16.92	3.095	1.653(47)	.044	4.284

Note. M=Mean, SD=Standard deviation

The table represents that there is a significant gender difference in the academic performances of students ranging from 18-21 years and the ones of age 22-24 years. Students who are 18-21 years old have higher level of academic performance (M=20.78) as compared to the ones who are 22-24 years (M=16.92).

Summary of the Results

The results were obtained through a number of statistical analyses using SPSS-27 edition. Table 1 indicates the sample frequencies and percentages of gender (male=50%, female=50%), age (18-21=74%, 22-24=26%), education (100%=undergraduate), and marital status (100%=unmarried). The results of the analysis showed that the study variables are positively, weakly and significantly related to each other (r=.346). The scales were reliable such as APS is moderately reliable (α=.565) while the Self-regulation of eating behavior questionnaire is weakly reliable (α=.209).

Chapter 5

Discussion

The current study's demographic profile, which included only single college students between the ages of 18 and 24, represents a group that is especially susceptible to irregular eating patterns and nutritional difficulties. This age group frequently goes through changes toward independence, scholastic pressure, and limited financial means, all of which can have a detrimental impact on food choices and eating habit self-regulation. These traits align with the findings of Azhar (2025), who found that meal skipping, low nutritional knowledge, and food dissatisfaction are common among university students, particularly undergraduates. While underscoring the developmental hazards associated with early adulthood, the sample's homogeneity in terms of education and marital status improves the validity of comparing eating habits and academic performance without any confounding demographic variables.

The Academic Performance Scale had intermediate reliability, whereas the Self-Regulation of Eating Behavior Questionnaire had inadequate reliability, according to the psychometric examination of the tools. Significant correlations were nevertheless found in spite of this restriction, indicating that eating habits may have a significant impact on academic results even in situations where measurement consistency is not ideal. This result is consistent with the findings of Resimo (2024), who showed that a number of maladaptive eating habits, such as fuel, fun, fog, and storm eating, were strongly linked to lower academic achievement among college students. Even when evaluated using various tools and methodological techniques, the consistency of findings across studies suggests that eating habits are important indicators of academic functioning.

Regression analysis revealed that 12% of the variance was explained by eating habits, which substantially predicted academic achievement. Despite the small effect size, it is statistically significant and lends credence to the idea that kids' academic achievement is influenced by their diet. Chandravanshi (2024), who found that pupils with good eating habits performed better academically and those with poor eating habits performed significantly worse, provides strong support for these findings. The current study's positive regression coefficient supports previous research showing that while bad eating habits impair cognitive function, frequent meals, balanced diets, and healthy food choices increase focus, memory, and academic accomplishment.

Academic success is multifaceted, as evidenced by the small but favorable association between eating habits and academic performance. Even while diet plays a significant role, economic, environmental, and psychological factors all play a role. Coppell, Keall, and Mandic (2023), who highlighted that dietary habits and body weight status are strongly influenced by area-level unemployment and access to healthy food options, support this perspective. Their findings demonstrate that contextual factors like accessibility to food and socioeconomic circumstances must be taken into account in order to completely comprehend those nutritional practices. In order to assist students' academic and general well-being, the current study's findings highlight the necessity of institutional measures such the availability of reasonably priced, healthful foods and nutrition instruction.

The results of Khan and Zada (2022), who found a strong and positive correlation between a healthy diet and academic achievement among Indian undergraduate students, strongly support the significant positive relationship between dietary habits and academic performance found in the current study. Regression and correlation analyses support the current study's findings, which show that better eating practices are linked to better academic achievements. The constancy across cultural contexts underscores the global significance of regular and healthy eating patterns, even though the strength of the link in this study is weaker. The low academic performance seen among students with weaker dietary regulation in the current sample can be further explained by the prevalence of breakfast skipping and

poor dietary routines described by Khan and Zada (2022).

Although eating habits were the main focus of the current study, the results must also be evaluated in light of students' overall wellbeing, which includes their mental health. According to Wang and Gul (2021), mental health problems have a substantial negative impact on Pakistani university students' academic performance. Academic performance may be indirectly impacted by poor eating habits, which are strongly associated with mental health issues like stress, exhaustion, and diminished focus. The current study's weak but significant connection indicates that dietary practices interact with psychological factors to explain academic achievement. Therefore, the findings support the idea that bettering students' diet may lead to improved mental and physical health, which will ultimately help academic performance.

The results of this study are especially pertinent when taken into account in conjunction with data regarding nutritional deficits among young Pakistani women. According to Fazal (2019), adolescent girls suffer from pervasive malnutrition, which can cause symptoms like weariness, headaches, poor focus, and decreased academic interest. It is conceivable that nutritional deficiencies may have a disproportionately negative impact on female students' learning results given that the current sample comprised an equal number of male and female undergraduates and that eating habits were substantially associated to academic performance. The current study's findings about the relationship between dietary practices and academic achievement may therefore be a reflection of underlying health issues brought on by poor nutrition, underscoring the need for improved eating environments at educational institutions.

Lastly, the current results are consistent with those of Arasegowda (2016), who found that frequent consumption of fast food raises the risk of poor academic performance in medical students. The idea that poor eating patterns have a detrimental impact on cognitive and academic functioning is supported by the outcomes of regression of the current study, which demonstrate that dietary habits explain a significant percentage of variation in academic performance. The substantial predictive significance of dietary behaviors in the current study, despite its lower sample size, supports the body of proof of the institutional policies encouraging healthy eating are essential. In order to improve students' academic performance and general well-being, these findings highlight the necessity for colleges to establish nutrition education programs and expand access to healthy food options.

Conclusions

The study results indicate that the alternative hypothesis stating a positive relationship between dietary habits and academic performance is accepted ($r = .346$, $p < .05$). Dietary habits significantly predict academic performance, explaining 12% of the variance. Gender and age differences are partially supported, with males and students aged 18-21 performing better. The Academic Performance Scale showed moderate reliability ($\alpha = .565$), while the Self-Regulation of Eating Behavior Questionnaire was weakly reliable ($\alpha = .209$). The null hypothesis of no relationship between dietary habits and academic performance is rejected. Overall, healthier dietary habits are associated with better academic outcomes.

Limitations

- Some survey questions focused on specific foods, causing bias and making the results difficult to interpret.
- Other factors like stress, sleep, and socioeconomic status influenced academic performance**,** not diet alone.
- Findings from one university may not apply to all university students.

- It was difficult to find a suitable scale on dietary habits and academic performance due to cultural bias.

Recommendations

- Nutrition experts should conduct short awareness sessions about balance dietary habits
- Include differently-abled and physically challenged students in the study.
- Include students from diverse backgrounds without focusing on any specific religion.
- Develop effective and reliable scale items to measure the impact of dietary habits on students' academic performance.
- Conduct the study online to include foreign students and experts.

Implications

- Poor diet lowers concentration, memory, and problem-solving.
- Skipping meals or high-sugar foods cause fatigue and low alertness.
- Fruits, vegetables, and whole grains improve focus, cognition, and long-term success.
- Poor diet can lead to illness and reduced class participation.
- Healthy eating supports lasting academic success and well-being.

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