DIETARY HABITS AND ACADEMIC PERFORMANCE AMONG THIRD YEAR NURSING STUDENTS IN THE UNIVERSITY OF BOHOL, TAGBILARAN CITY

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ABSTRACT

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This study investigated the correlation between the eating habits of third-year nursing students and their academic performance at the University of Bohol, Tagbilaran City. It specifically looked into the correlation between students' dietary habits and their grade point averages (GPAs). A descriptive-correlational quantitative research design was employed. The Pro-Healthy Diet Index (pHDI), Non-Healthy Diet Index (nHDI), and Composite Diet Quality Index (DQI) were developed using a modified KomPAN questionnaire, a validated instrument for monitoring dietary changes. The respondents' midterm GPA records were used to evaluate academic success. A total of 190

students were randomly chosen by stratified random sampling and completed the survey. While these data offer insight into this specific cohort, caution is warranted when generalizing to other student populations or academic disciplines. Descriptive data indicated that the majority of respondents (92.1%) exhibited low-intensity mixed eating behaviors, indicating neither notably beneficial nor harmful dietary practices. Academic performance was predominantly strong, with 95.3% of students achieving GPAs between 1.6 and 2.5. Inferential statistical analysis revealed no significant correlation between the dietary habit index and academic achievement ($p = 0.517$), indicating that food quality alone did not substantially predict GPA in this very homogeneous student population. The findings complement larger evidence that academic performance is complicated and may be more strongly influenced by lifestyle and contextual variables, such as stress, sleep quality, and the learning environment.

INTRODUCTION

Around the world, students' academic performance remains a significant focus of study in education and health, particularly in highly demanding disciplines, such as nursing and allied health. It is widely acknowledged that academic achievement is a multifaceted outcome shaped by cognitive capacity, study habits, socioeconomic status, and, increasingly, lifestyle choices, including diet, physical activity, and sleep. This is a well-accepted truth. Among them, dietary habits have received increased interest due to their impact on cognitive function, memory, attention span, and psychological well-being. Poor eating habits can lead to non-communicable diseases as well as fatigue and cognitive loss, especially in young adults trying to balance the demands of school.

A variety of observations on the extent of the diet's influence have been reported in research conducted across multiple continents. Cen, Zhao, Wang, and Tang (2025) found that the direct associations between food and grade point average were weak or inconsistent. This was despite the fact that socioeconomic variables were found to be connected with educational involvement. Similar findings were reported by Reuter et al. (2020), who found no statistically significant association between consumption of specific food groups and academic achievement. Although adequate nutrition positively affects overall well-being and long-term cognitive function, it is unlikely to directly predict short-term academic outcomes, such as grade point average.

These findings provide light on a complicated global trend.

This investigation is grounded in several distinct but complementary theories. According to Ajzen's Theory of Planned Behavior (1991), attitudes, perceived control, and subjective standards all play a role in shaping behavioral intentions. For example, healthy eating is one behavior influenced by these factors. Students' food choices may be influenced by a variety of factors, including cultural values, peer influence, and logistical considerations such

as availability and cost. The application of this idea helps explain why even students with strong aspirations to eat well may have difficulty maintaining consistent eating patterns. Pender's Health Promotion Model, initially developed in 1982 and later revised (Pender, 2011), emphasizes how individual perceptions of health advantages and barriers, as well as self-efficacy, influence engagement in health-promoting behaviors, such as balanced eating. For students, this may entail selecting nutritious meals during periods of low stress, whereas selecting fast food or skipping meals during periods of high stress, such as when taking exams. Considering that nursing students are often familiar with the fundamentals of healthy eating, this theory explains the gap between knowledge and practice. Maslow's Hierarchy of Needs, published in 1943, supports the contention that individuals must first satisfy fundamental physiological needs, such as the need for food, before they can focus on higher-order cognitive tasks, such as scholastic performance. Pupils' capacity to concentrate and retain knowledge may be hindered if they are unable to obtain adequate nutrition or skip meals (Maslow, 1963). The final theory is Bandura's Social Cognitive Theory (1991), which emphasizes the roles of social settings and observational learning in shaping behavior.

Within academic sections or friend groups, students may adopt similar dietary patterns due to shared schedules or communal dining habits. This theory also helps explain how certain groups of students within the same academic cohort exhibit identical eating habits and academic trends.

A growing body of international research attempts to quantify the relationship between nutrition and academic performance; however, findings remain mixed and inconclusive. Several studies have reported no statistically significant association between dietary habits and students' academic performance, although stronger associations have been observed with standardized test scores than with self-reported GPA (Obeidat et al., 2020). Academic outcomes are more strongly predicted by non-dietary factors, including academic motivation and sleep quality; goal orientation and time management; and social support, peer interaction, and mental health (Reuter et al., 2020; Cohen et al., 2016). Additionally, alcohol intake, physical activity, screen time, and sleep habits have been found to be more strongly associated with academic performance than dietary intake alone (Al-Haifi et al., 2023).

Collectively, these findings support a broader consensus that while diet plays an important role in long-term health and overall well-being, it is not a standalone or consistent predictor of academic performance, particularly when it is minimal, indirect, or context-dependent, especially within academically structured and relatively homogeneous student populations. Despite the growing body of research, several gaps remain. Limited attention has been paid to nursing students, who are subjected to unique academic pressures, clinical responsibilities, irregular schedules, and elevated stress levels that may influence both dietary behaviors and academic performance. Most studies to date have focused on the general university population across a range of

academic disciplines. Furthermore, there is a dearth of local or context-specific research that uses standardized nutritional assessment instruments, such as the modified Kompan questionnaire, to investigate the relationship between diet quality and nursing students' grade point average. As a consequence, there remains insufficient empirical evidence to determine whether eating habits are significantly associated with academic achievement in this particular group and context.

In light of this gap, the present study examines the correlation between dietary habits and the academic performance of nursing students. Specifically, the study aims to describe the demographic profile of the respondents, determine their Dietary Habit Index using the modified KomPAN questionnaire, and assess their academic performance using GPA as an indicator. Furthermore, it aims to identify significant associations between demographic variables (e.g., age, sex, and section) and both dietary habits and GPA, and to assess the direct association, if any, between food quality and academic achievement. Also, it seeks to determine whether those relationships are significant. The findings will contribute to the existing body of research on this investigation. They may serve as a source of information for institutional policies or interventions that, through evidence-based methods, increase students' well-being and educational achievement.

RESEARCH METHODOLOGY

This study examined the relationship between dietary practices and academic achievement among University of Bohol third-year nursing students using a quantitative correlational research method. The technique was established to enable statistical investigation of the association between academic success and food quality within a certain academic cohort. The University of Bohol, a private, non-sectarian institution in Tagbilaran City, Bohol, Philippines, served as the study site. The target respondents were all third-year nursing students registered for the second semester of the 2024–2025 academic year. Using stratified random selection, a sample of 190 respondents was chosen from a population of 363 students. Stratification was accomplished by section, gender, socioeconomic status, and residential status to ensure the representativeness of subgroups. The qualifying criteria were students who were formally enrolled in the third year of the Bachelor of Science in Nursing program for the specified semester and who freely participated. Students who did not register for the second semester or chose not to participate were excluded. Data were obtained using a modified version of the KomPAN Questionnaire produced by the Committee on Human Nutrition of the Polish Academy of Sciences (Kowalkowska et al., 2019).

The instrument was divided into two parts. The first part collected demographic data (age, sex, and section), whereas the second focused on food habits and meal frequency. Food frequency responses were converted to

numeric scores and reported as the number of times per day. Based on these data, three indices were built to assess diet quality:

1. Pro-Healthy Diet Index (pHDI) — including ten food items helpful to health.
2. Non-Healthy Diet Index (nHDI) — including fourteen dietary items potentially damaging to health.
3. Diet Quality Index (DQI) - a composite score combining both pHDI and nHDI values.

Higher pHDI and DQI scores indicated healthier dietary patterns, while higher nHDI scores indicated a tendency toward poor dietary practices. Academic performance was measured using each respondent's midterm grade point average (GPA). These records were retrieved through proper institutional channels and with the respondents' informed consent.

Formal approval was obtained by the Office of the Vice President for Academic Affairs as well as the Dean of the College of Nursing. The questionnaire was administered to participants in person by the researchers after obtaining informed consent, and participants were provided with information on the study's objectives and the ethical protections in place. Participants in the survey were informed that their responses would be kept confidential and that participation was entirely voluntary. In preparation for the analysis, the completed questionnaires were gathered, coded, and securely stored. The study is conducted in accordance with the ethical standards that are outlined in the Declaration of Helsinki. It was determined that the university's institutional review board had provided the necessary ethical clearance. All participants were informed of their rights, including the freedom to withdraw from the study at any time without incurring any penalties. To maintain confidentiality and protect respondents' identities, the data were anonymized and stored in a secure location. No invasive or sensitive procedures were performed on participants in the trial; the risk was very low. Descriptive statistics, such as percentages and frequencies, were used to summarize academic achievement, nutritional indices, and demographic characteristics. Inferential statistics were used to assess correlations among the variables.

Specifically, Pearson correlation, Spearman's rank correlation, and the Chi-square test were used to examine the strength and significance of associations between dietary habits, demographic variables, and academic outcomes. Statistical significance was set at $p < 0.05$.

RESULTS AND DISCUSSION

Profile of Respondents. In terms of age, the data show that a majority of the respondents (96.3%) were aged 20–24, the majority (80%) were female, while only (20%) are male. This is consistent with the expected range for third-year college students and aligns with previous findings (Alghamdi et al., 2020),

which noted that students in this age group are vulnerable to poor lifestyle habits due to increased academic pressure and independence. There are 190 third-year nursing respondents; each section accounts for between 11.6% and 13.2% of the total population. Ranging from 22 to 25 students per section.

Dietary Habit Index of Respondents. Results revealed that the majority (92.1%) fell into the low-intensity category for both unhealthy and healthy dietary habits, indicating a mix of food choices rather than a strong leaning toward either extreme. This suggests that many students make food decisions primarily on the basis of convenience and current circumstances rather than nutritional value. University students often prioritize time, stress relief, and social settings over health when choosing what to eat (Alghamdi et al., 2018; Sogari et al., 2018). Given the fast-paced nature of nursing programs—especially those involving clinical duties—students may struggle to maintain consistent healthy eating habits due to limited time, easy access to fast food, and academic pressures.

Academic Performance of Respondents. According to the findings, the majority of respondents reported grade point averages within the ranges 1.6–2.0 (53.7%) and 2.1–2.5 (41.6%). This suggests that the majority of third-year nursing students performed at the good-to-excellent level academically.

A small proportion of respondents (3.7%) achieved excellent academic standing (GPA 1.0–1.5), while only 2 students (1.1%) were in the satisfactory range (2.6–3.0). This result aligns with the findings of Alhurishi et al. (2021), who emphasized that in health-related courses, factors such as effective study habits, personal motivation, and good time management tend to have a greater impact on academic success than diet alone. Multiple factors shape it and are rarely determined solely by diet.

Relationship Between Demographic Profile and Dietary Habits. Table 1 illustrates the correlation between an individual's demographic profile and their typical eating behaviors. Only one showed a significant correlation with students' eating habits: academic achievement. According to this study ($p = 0.010$), the social and intellectual environment to which children are exposed within their class group may have something to do with the eating habits they develop. According to Bandura's Social Cognitive Theory (1986), which posits that people tend to imitate others' conduct, particularly within intimate social networks, this conclusion is consistent with the theory. In accordance with the hypothesis, this outcome is consistent.

Mollaei et al. (2023) found that students enrolled in the same classes or class blocks tend to follow similar eating patterns. The study's outcomes are consistent with this synthesis.

Several factors may be responsible for this, including shared schedules, peer pressure, and collective habits. When it comes to eating and studying routines, it is essential to recognize that academic environments significantly affect students' time availability. It explains how people learn and acquire habits by studying others in their environment and relying on the experiences

gained from those observations. Within this sector, which served as both a peer group and a platform for information sharing, there was discussion, dissemination, and enforcement of academic norms and eating habits. These activities took place. The existence of this pattern is one possible explanation for the significant relationships among sections, DQI, and GPA. At the same time, a different perspective emphasized that learning does not occur in a vacuum.

This finding demonstrates that the norms and behaviors peers' model, such as skipping meals or developing study habits, have long-lasting implications. A p-value of 0.663 indicates that there is no significant association between age group and participants' eating habits. Age groups aged 20-24 years had the highest DQI scores for low-intensity unhealthy and pro-healthy dietary components, according to a survey of 190 participants. The findings of this study indicate that people in this age group consume a wide variety of meals, some of which are beneficial for their health and others are detrimental. Given that the p-value for gender is 0.648, it can be concluded that there is no statistically significant association between eating practises and sex. Accordingly, male and female students exhibit comparable eating behaviors, particularly when in the same academic and environmental contexts.

Women may prefer fruits or lighter meals, whereas men may prefer protein-rich diets more than women. However, these differences frequently fade away in a collegiate context. The social environment and food access were identified as greater determinants than biological sex; thus, while male and female students may differ slightly in their preferences, their overall dietary patterns remain similar (Wardle et al., 2004).

Table 1. *Relationship between Demographic Profile and Dietary Habits (Chi-square Test)* (n = 190**)**

Variables	Test Values	p-value	Decision	Interpretation
Age and Dietary Habit Index	4.101	0.663	Failed to reject the null hypothesis	There is no significant relationship between the variables.
Gender and Dietary Habits Index	0.869	0.648	Failed to reject the null hypothesis	There is no significant relationship between the variables.
Section and Dietary Habit Index	29.063	0.010	Reject the null hypothesis.	There is a significant relationship between the variables.

Relationship Between Demographic Profile and Academic Performance. Table 2 presents associations between various aspects of a student's upbringing and academic success. There was a significant difference across age groups, suggesting that how pupils study and how focused they are on schoolwork may be linked to their maturity or life experience.

It shows that age has a stronger relationship with grade point average than other parameters. Recognition of these influences may motivate educators to modify their support and improve student outcomes.

Additionally, there was a strong association between sex and academic achievement, suggesting that male and female students may approach learning differently or encounter distinct challenges. It is important to note that the section or class group to which a student belonged showed the strongest association with grade point average. This finding sheds light on the relationship between classroom climate and academic outcomes. These findings highlight the significance of demographic factors in determining performance, an important discovery for educators and academics working to enhance educational practices.

A significant relationship was also found between students' class section and their GPA ($p < .001$). This result suggests that academic performance varies between sections.

Table 2. *Relationship Between Demographic Profile and Academic Performance (n = 190)*

Variables	Test value	p-value	Interpretation
Age and GPA	45.133	p < .001	There is a significant relationship between variables.
Gender and GPA	8.325	0.040	There is a significant relationship between variables.
Section and GPA	62.629	p < .001	There is a significant relationship between variables.

Correlation Between Dietary Habit Index and Academic Performance. The findings in Table 3 clearly demonstrate that there is no statistically significant correlation between the Dietary Habit Index (DQI) and the academic performance (GPA) of third-year nursing students (p-value = 0.517). This result means that variations in students' dietary quality, whether pro-healthy, mixed, or non-healthy, did not have a correlation with their academic performance. Alhurishi et al. (2021) emphasized that diet is only one of many variables contributing to educational outcomes. In their study, no direct relationship was found between dietary habits and GPA, except when other lifestyle changes accompanied these habits.

Most students in the sample (92.1%) exhibited similar dietary patterns that fell within the low-intensity range of unhealthy and pro-healthy nutritional characteristics, and academic scores clustered around a GPA of 1.6–2.5. When students in the same group have similar schedules and environments, lifestyle differences may not show strong statistical effects.

Table 3. *Correlation between Dietary Habit Index and Academic Performance (n = 190)*

Variables	P – value	Interpretation
DQI and GPA	0.517	There is no significant relationship between the variables.

CONCLUSIONS

The study's respondents were third-year nursing students at the University of Bohol. The study found no significant association between students' eating habits and their academic performance. Although the majority of respondents exhibited both healthy and unhealthy eating patterns, their academic performance ranged from good to outstanding grade point averages (1.6–2.5). Taking all of this into consideration, one could conclude that although consuming nutritious food may be beneficial to one's health, it does not necessarily serve as a reliable indicator of academic achievement, particularly among nursing students. This is especially true regarding nutritional intake. This is especially true for nursing students.

Although this was the case, there was a significant correlation between involvement in a section, a measure of peer and shared-environment effects, and both food habits and academic achievement. Consequently, this underscores the significance of social context, as supported by Bandura's social cognitive theory, in shaping behavior and educational attainment. Although it does not substantially affect grade point average, it is essential to emphasize that diet quality remains critical to students' overall health.

RECOMMENDATIONS

After evaluation of the methods used and the overall scope of this study, the researchers propose the following recommendations:

1. To enhance the generalizability of the findings, future studies should involve a larger number of respondents, potentially including students from other departments. This will enable comparisons across academic programs and facilitate more comprehensive conclusions.
2. Researchers are encouraged to utilize qualitative research methods such as interviews or focus group discussions. These approaches will provide deeper insights into students' eating behaviors, the underlying factors influencing their dietary choices, and how these choices may affect academic performance.
3. It is recommended that future studies adopt a longitudinal research design to observe and track changes in students' eating habits and academic outcomes over time. This will provide more reliable data on

trends and causal relationships.

4. For the University of Bohol, implementing programs that educate students on proper nutrition and effective time management is recommended. These programs can help develop healthier eating habits and potentially enhance students' academic performance.
5. Lastly, future researchers should explore the role of other lifestyle factors such as sleep patterns, physical activity, and stress levels. These elements may also significantly influence students' dietary behaviors and academic achievements, and should be considered in future studies.

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