JISTech (Journal of Islamic Science and Technology)

JISTech, 10(2), 154-161, July - December 2025

ISSN: 2528-5718

http://jurnal.uinsu.ac.id/index.php/jistech

Financial Constraints and Student Consumption: Prioritizing Economic Efficiency Over Nutritional Balance

Yuliadi Erdani[1], Alif Yasir Athoriq[2], Abrar Wahid Lubis[3], Anna Hanifah[4], Aqila Bihar Ijazilah[5]

[1,2,3,4,5]*Teknik Otomasi Manufaktur dan Mekatronika, Politeknik Manufaktur Bandung, Indonesia*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pola konsumsi makanan mahasiswa di bawah keterbatasan finansial. Survei kuantitatif dilakukan dengan menggunakan kuesioner berskala Likert yang dibagikan kepada 42 mahasiswa Politeknik Manufaktur Bandung. Data dianalisis dengan statistik deskriptif, termasuk distribusi frekuensi dan skor rata-rata, serta analisis inferensial (uji Kruskal–Wallis dan korelasi Pearson). Hasil penelitian menunjukkan bahwa faktor yang paling memengaruhi pemilihan makanan adalah ketersediaan promo (mean = 4,45) dan harga (mean = 4,38), diikuti oleh aksesibilitas dan kepraktisan. Sebaliknya, nilai gizi dan rasa menempati prioritas yang lebih rendah bagi responden. Selain itu, analisis inferensial menunjukkan tidak terdapat hubungan yang signifikan antara kebiasaan membawa bekal dari rumah dan tingkat energi yang dilaporkan (p = 0,789). Temuan ini menunjukkan bahwa mahasiswa cenderung memprioritaskan efisiensi ekonomi dibandingkan aspek gizi ketika menghadapi keterbatasan keuangan. Sosialisasi terkait pilihan makanan sehat dengan harga terjangkau direkomendasikan guna mendukung kebiasaan makan yang lebih baik di kalangan mahasiswa.

ABSTRACT

This study investigates students' food consumption patterns under financial constraints. A quantitative survey was conducted using a Likert-scale questionnaire distributed to 42 students of Politeknik Manufaktur Bandung. Data were examined using descriptive statistics, including frequency distribution and mean scores, complemented by inferential analysis (Kruskal–Wallis test and Pearson correlation). The findings indicate that promotional availability and price are the most influential factors in food selection, with mean scores of 4.45 and 4.38, respectively. Accessibility and practicality follow as important considerations. Conversely, nutritional value and taste rank lower in priority among the respondents. Furthermore, the inferential analysis shows no statistically significant relationship between bringing meals from home and self-reported energy levels (p = 0.789). These results suggest that students tend to prioritize economic efficiency over nutritional aspects when managing limited financial resources. Greater awareness and education regarding healthy and affordable food choices are recommended to support better dietary habits among students.

Keywords: Consumption pattern, students, financial constraints, frugality, economic factors.
Email Address: [1] yul_erdani@yahoo.com, [2] alifthoriq3105@gmail.com, [3] abrarrwahidd@gmail.com, [4] annahanifah577@gmail.com, [5] aqilabihar123@gmail.com

DOI: http://dx.doi.org/10.30829/jistech.v10i2.26721
Diterima 4 November 2025; Direvisi 14 Desember 2025; Disetujui 26 Desember 2025

Introduction

Financial management among university students has become a growing area of research in behavioral economics and education. The ability to allocate limited financial resources effectively determines not only students' academic productivity but also their long-term financial literacy. University students often face financial constraints that influence their daily consumption decisions, especially when managing expenses such as food, housing, education, and leisure under limited income sources [1].

Previous studies have identified that financial awareness is crucial in shaping budgeting behavior. However, the financial management context faced by modern students is far more complex. Perceived financial constraints are not solely determined by income but also by an individual's ability to manage resources—strongly influenced by factors such as financial literacy [2]. Moreover, the growing accessibility of online loans may exacerbate poor financial management, while lifestyle-oriented priority scales often divert funds from essential needs such as

nutritious food [3]. Beyond financial knowledge, psychological aspects such as self-discipline and behavioral restraint play a vital role in enabling students to control impulsive spending tendencies and remain consistent with their financial plans [4]. Conversely, students with higher financial awareness tend to exhibit more rational budgeting behavior and a greater tendency to save and plan their expenditures [2].

However, most existing studies have focused on financial literacy or general spending behavior, with limited attention given to consumption behavior under actual financial constraints [5]. The majority of prior research has not examined how students adjust their consumption priorities and coping strategies when facing economic limitations. Understanding this aspect is essential to bridge the gap between theoretical financial literacy and real-world financial management.

Furthermore, the relationship between diet, nutrition, and academic performance remains contested. Some studies have linked irregular eating habits and meal skipping to decreased energy and concentration [6], while others found no direct association between nutritional status (objective nutrition variables) and academic performance indices [7]. This gap highlights the need to investigate how financial constraints specifically mediate nutritional behaviors—such as bringing meals from home—and their impact on students' perceived energy (Q15 vs Q19), which forms one of the key focuses of this research.

Therefore, this study aims to analyze students' consumption patterns under financial constraints by identifying the dominant types of expenditure, behavioral factors influencing their spending decisions, and the strategies they adopt to manage limited budgets. Using a quantitative descriptive approach, this research provides an empirical overview of how students allocate their income when faced with financial limitations. The findings are expected to contribute to the understanding of students' financial behavior and to support educational initiatives that promote responsible spending among university students.

Research Methodology

This study employs a quantitative approach with a survey research design. This design is used to analyze and describe students' consumption patterns as well as to examine the relationships among variables influencing these behaviors. The population consists of active students at Politeknik Manufaktur Bandung. A total of 42 respondents were selected using the convenience sampling technique, in which participants are chosen based on availability and willingness to participate. Although practical and efficient, convenience sampling has limitations, such as reduced generalizability, potential sampling bias, and limited representation of the broader population.

Research Instrument

The primary research instrument was a structured questionnaire distributed online through Google Forms. The questionnaire consisted of two main sections: (1) demographic information such as department, and (2) twenty-two statement items measuring factors influencing food choices, frugality behavior, and consumption patterns. All items used a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Instrument Reliability Analysis

To ensure the reliability of the questionnaire, a reliability test using Cronbach's Alpha (α) was conducted. A threshold of $\alpha > 0.70$ was used as the criterion for acceptable internal consistency. The analysis yielded a Cronbach's Alpha coefficient of 0.750, confirming that the questionnaire items were reliable and suitable for further statistical analysis.

Data Analysis Procedures

The collected data were processed using Jamovi statistical software and analyzed in two stages: descriptive statistical analysis and inferential statistical analysis.

Frequency Distribution

The first stage, descriptive statistical analysis, was used to provide a general overview and summary of the research data. This analysis included the calculation of frequency distributions to observe the distribution of respondents' answers, in which the relative frequency (in percentage) was computed using Equation (1).

$$fr_i = \frac{f_i}{N} \times 100\% \quad (1)$$

where fr_i is the relative frequency, f_i is the absolute frequency of the i-th category, and N is the total number of respondents.

Measures of Central Tendency (MOCT)

The second stage involved calculating the Measures of Central Tendency (MOCT) to identify the "typical" or central value within the data distribution. This analysis included the computation of the median (the middle value) and mode (the most frequently occurring value). In addition, the mean (average value) was calculated to determine the general tendency of respondents' answers to each statement, using Equation (2).

$$\bar{x} = \frac{\sum_{i=1}^{k} f_i x_i}{\sum_{i=1}^{k} f_i} \quad (2)$$

where $\bar{x}$ represents the mean value, f_i denotes the frequency of respondents selecting score x_i and k is the total

number of score categories (i.e., 5).

Measures of Variability/Dispersion (MOVD)

To complement the MOCT analysis, the third stage calculated the Measures of Variability or Dispersion (MOVD) to understand the degree of variation or spread within the data. This analysis is essential to identify the diversity of respondents' responses. The primary measures used were the range and the sample standard deviation. The standard deviation (s) was used to assess the average distance of data points from the mean value, as shown in Equation (3).

$$s = \sqrt{\frac{\sum_{i=1}^{k}(X_i - \bar{X})}{N-1}} \quad (3)$$

where s represents the standard deviation, x_i is the individual score, $\bar{x}$ is the sample mean, and N is the total number of samples.

Inferential Statistical Analysis

The final phase involved inferential statistical techniques to examine hypotheses and uncover deeper associations among variables. Initially, a one-way ANOVA was designed to determine if there were statistically significant differences in the mean values (for instance, in saving strategies) among distinct demographic categories (e.g., students from various departments). However, when the assumptions of normality and homogeneity were not met, the Kruskal–Wallis test, a non-parametric and more robust alternative to one-way ANOVA, was applied to handle data with non-normal distributions.

Subsequently, Pearson's correlation analysis was utilized to identify the direction and magnitude of linear relationships between two quantitative variables, such as between "Promotion Utilization" (Q12) and "Frequency of Eating Out" (Q2). The correlation coefficient (r) was calculated using Equation (4).

$$r = \frac{N(\sum xy) - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}} \quad (4)$$

where r denotes the correlation coefficient, N is the number of paired observations, x represents the first variable score, and y represents the second variable score.

Research Ethics

This research adheres to standard ethical principles in survey-based studies. Participation was voluntary, informed consent was obtained, and all data were collected anonymously. No identifying information was recorded, and respondents retained the right to withdraw at any time.

Result and Discussion

Respondent Characteristics

This study involved 42 respondents, consisting of active students from various departments at Politeknik Manufaktur Bandung. The composition of respondents by department is presented in Table 1.

Table 1. Frequency Distribution of Respondents' Characteristics

Jurusan	Counts	% of Total	Cumulative %
AE	18	42.9%	42.9%
DE	8	19.0%	61.9%
FE	7	16.7%	78.6%
Others	2	4.8%	83.3%
ME	7	16.7%	100.0%

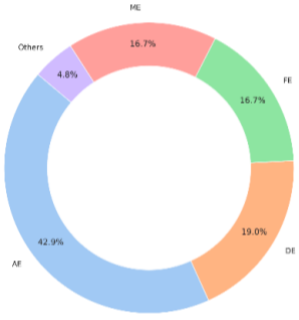

Figure 1. Distribution of respondents by department

Based on the data presented in Table 1, it can be observed that the majority of respondents come from the AE Department (42.9%, N = 18), followed by the DE Department (19.0%, N = 8). The FE and ME Departments have an equal proportion of respondents (16.7%, N = 7), while the remaining respondents are from other departments (4.8%, N = 2).

Descriptive Analysis of Consumption Patterns (MOCT & MOVD)

Descriptive analysis was conducted on 22 statement items. To facilitate data presentation in the table, each statement item was assigned a code (Q1 to Q22) as described in Table 2.

Table 2. List of Codes and Statement Items for Each Variable

Code	Item Statement
Q1	I tend to choose fast food or practical meals (e.g., instant noodles, canned food) when I am busy.
Q2	I eat out (restaurant, cafe, or warteg) more often than cooking at home/my boarding house.
Q3	I more often choose cheap food (e.g., instant noodles, *warteg*, street food) when my financial situation is limited.
Q4	Cheap food with small portions over expensive food with large portions.
Q5	I still try to consume nutritious food even when my finances are limited.
Q6	Practicality and speed of service are primary factors in my food choices.
Q7	The location of the eatery (being close and easily accessible) influences my choice when money is tight.
Q8	I consider the taste of the food when my finances are limited.
Q9	The price of food is the main factor in determining my choice when finances are limited.
Q10	The variety of the food menu is another main factor in determining my choice when finances are limited.
Q11	Even with limited finances, I still prioritize nutritional value over other factors.
Q12	The availability of promos or discounts strongly influences my food choices.
Q13	I often use promos or discounts from online food applications to save money.
Q14	When finances are limited, I rarely buy groceries in large quantities; I prefer to buy as needed.
Q15	I more often bring meals from home/my boarding house to save on food expenses.
Q16	I often limit eating out (at restaurants/cafes) to save money.
Q17	I sometimes share or split the cost of food with friends when finances are limited.
Q18	My current eating patterns often make me feel bloated or cause digestive issues.
Q19	I feel low on energy and sometimes find it hard to focus after lunch.

Q20	My consumption pattern during limited finances makes me feel hungry more quickly.
Q21	Limited financial conditions often cause me to skip meals.
Q22	Frugal consumption patterns affect my energy and academic concentration.

A summary of the descriptive statistical results, including the Measures of Central Tendency (MOCT) and Measures of Variability/Dispersion (MOVD) for each statement item, is presented in Table 3.

Table 3. Descriptive Statistics of Consumption Pattern Items (Q1-Q22)

	N	Mean	Median	Mode	SD	Min	Max
Q1	42	3.88	5.00	5.00	1.38	1	5
Q2	42	3.21	3.00	3.00[a]	1.44	1	5
Q3	42	4.24	5.00	5.00	1.14	1	5
Q4	42	3.83	4.00	5.00	1.19	1	5
Q5	42	3.69	4.00	5.00	1.42	1	5
Q6	42	3.76	4.00	5.00	1.28	1	5
Q7	42	4.33	5.00	5.00	1.05	2	5
Q8	42	3.40	3.50	3.00[a]	1.27	1	5
Q9	42	4.38	5.00	5.00	0.854	2	5
Q10	42	3.55	4.00	5.00	1.27	1	5
Q11	42	3.64	4.00	5.00	1.36	1	5
Q12	42	4.45	5.00	5.00	0.916	2	5
Q13	42	4.26	5.00	5.00	1.06	1	5
Q14	42	4.19	5.00	5.00	1.21	1	5
Q15	42	3.36	3.00	5.00	1.38	1	5
Q16	42	4.07	5.00	5.00	1.18	1	5
Q17	42	3.02	3.00	1.00	1.51	1	5
Q18	42	2.79	3.00	1.00	1.55	1	5
Q19	42	2.90	3.00	1.00[a]	1.46	1	5
Q20	42	3.12	3.00	3.00	1.45	1	5
Q21	42	2.95	3.00	1.00	1.65	1	5
Q22	42	3.43	3.50	5.00	1.45	1	5

[a] More than one mode exists, only the first is reported

Referring to Table 3, the highest mean score was found in Q12 (“Promotions”; M = 4.45, SD = 0.916), followed by Q9 (“Price”; M = 4.38, SD = 0.854) and Q7 (“Location”; M = 4.33, SD = 1.05). A similarly high mean score was also observed in Q3 (“Cheap Food”; M = 4.24, SD = 1.14). In contrast, more neutral mean scores were found in Q8 (“Taste”; M = 3.40, SD = 1.27) and Q11 (“Nutrition”; M = 3.64, SD = 1.36).

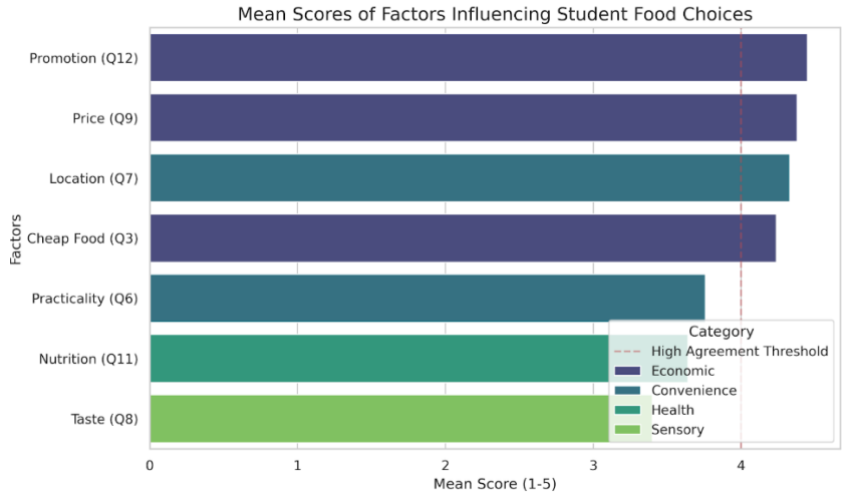

Figure 2. Mean scores of factors influencing food choices: Economic factors (Promotion, Price) vs. Nutritional considerations.

In terms of data dispersion (MOVD), the highest Standard Deviation (SD) was identified for Q21 (“Skipping Meals”; SD = 1.65), followed by Q18 (“Digestive Issues”; SD = 1.55) and Q17 (“Cost Sharing”; SD = 1.51), indicating that respondents’ answers for these items were highly varied (polarized). The high standard deviations for Q17 (Cost Sharing, SD = 1.51), Q18 (Digestive Issues, SD = 1.55), and Q21 (Skipping Meals, SD = 1.65) suggest significant heterogeneity in the student experience. This high variance implies that rather than a uniform behavior, the sample likely contains distinct sub-groups: for instance, students who never skip meals (scoring 1) and those who frequently do (scoring 5). This polarization presents a key area for future qualitative or cluster-analysis research to understand the specific factors driving these divergent behaviors.

Inferential Statistical Analysis

Table 4. Assumption Checks: Normality Test (Shapiro-Wilk)

	W	p
Q16	0.905	0.002

Note. A low p-value suggests a violation of the assumption of normality

Table 5. Assumption Checks: Homogeneity of Variances Test (Levene’s)

	F	df1	df2	p
Q16	4.51	4	37	0.005

Preliminary checks for parametric comparison of Q16 ("Limiting eating out") across departments revealed violations of the normality assumption (Shapiro-Wilk W = 0.905, p = 0.002) and the homogeneity of variances assumption (Levene's F(4, 37) = 4.51, p = 0.005). Additionally, the presence of zero variance (SD = 0.000) in the "Lainya" group (N=2) precluded the use of Welch's ANOVA.

Consequently, the non-parametric Kruskal-Wallis H test was employed to compare the distribution of scores for Q16 across departments. The results are presented in Table 6.

Table 6. Kruskal-Wallis H Test Results for Q16 by Department

	χ^2	df	p
Q16	3.26	4	0.515

Based on Table 6, the Kruskal-Wallis test yielded x2 (4) = 3.26, p = 0.515. Since the p-value is greater than the significance level of 0.05, it indicates no statistically significant difference in the distribution of scores for limiting eating out among students from different departments.

Correlation Analysis: Pearson correlation was used to assess the linear relationship between Q15 ("Bringing meals from home") and Q19 ("Low energy/focus"). The results are detailed in Table 7.

Table 7. Pearson Correlation Matrix for Q15 and Q19

		Q15	Q19
Q15	Pearson's r	1	-0.043
	p-value	—	0.7885
	N	42	42
Q19	Pearson's r	-0.043	1
	p-value	0.7885	—
	N	42	42

[a] Note.* p < .05, ** p < .01, *** p < .001

Pearson's correlation was used to assess the linear relationship between Q15 ("Bringing meals from home") and Q19 ("Low energy/focus"). As shown in Table 7, the correlation coefficient was r = -0.043 with p = 0.789 (N = 42). This indicates that bringing meals from home is not statistically associated with students' perceived energy or concentration levels, as the correlation was very weak. Although the coefficient was negative, its magnitude was too small to indicate any meaningful trend. The near-zero, non-significant correlation (r = -0.043, p = 0.785) indicates that, within this sample, simply bringing meals from home is not linearly associated with how energetic or focused students feel after lunch. Because this study did not measure other possible influences on energy levels, additional interpretation cannot be made. This implies that, in this sample, bringing meals from home does not produce a measurable effect on students' energy or concentration.

The findings of this study, which position price (Q9; M = 4.38) and promotion (Q12; M = 4.45) as primary determinants, are highly consistent with other research conducted in the Indonesian student context. [8] also found that discounts and promotions significantly influenced food delivery service preferences among university students at Universitas Sam Ratulangi. Likewise, high mean scores in practicality (Q6; M = 3.76) and location (Q7; M = 4.33) align with studies on the lifestyles of boarding students, where "cheap" and "practical" considerations dominate daily consumption [9].

This study also identified active saving strategies such as utilizing promotional offers (Q13; M = 4.26) and limiting dining out (Q16; M = 4.07). These behaviors can be theoretically framed as coping strategies [10]. Facing the stressor of financial limitation, students in this sample employed problem-focused coping, adopting behaviors (Q13, Q16, and Q15—bringing meals) directly aimed at mitigating financial stress by reducing expenditures.

In contrast to these economic and behavioral trends, one key result diverged from the expected pattern. The most nuanced finding in this study is the lack of a statistically significant relationship between bringing meals from home (Q15) and perceived energy or focus levels (Q19) (r = -0.043, p = 0.789). Intuitively, bringing homemade meals—often assumed to be both economical and healthy—should correlate positively with energy. However, our data do not support this linear assumption.

This null result aligns with findings reported by [7], which observed no significant relationship between nutritional status and academic achievement among university students. Parallel observations have been noted by [11], reinforcing that the connection between general nutrition and cognitive performance is complex and likely moderated by multiple factors rather than a single behavioral indicator. Specifically, [12] found that macronutrient intake (i.e., food quality)—rather than just the source of food—is a stronger determinant of nutritional status. Similarly, supporting evidence from [7] suggests that specific micronutrients (e.g., iron intake) are significant predictors of vitality, even when overall status is not linked to performance. Because this study did not measure detailed nutritional composition, sleep quality, or workload, any further explanation regarding energy determinants would go beyond the available data and remains a subject for future research.

Overall, the study confirms that financial constraints redirect students' consumption priorities toward economic practicality, while the health-related consequences of these adjustments appear heterogeneous and not easily summarized in a single pattern. These findings underline the importance of campus-level initiatives that simultaneously acknowledge students' financial realities and promote accessible, affordable options that support balanced and sustainable eating habits.

Conclusion

This study analyzed the consumption patterns of students at Politeknik Manufaktur Bandung under financial constraints using a quantitative survey approach. The findings indicate that economic factors—primarily price (Q9) and promotions (Q12)—serve as the dominant drivers of food choices, overshadowing nutritional (Q11) and taste (Q8) considerations. Students commonly adopt cost-saving strategies such as utilizing online discounts (Q13) and limiting dining at expensive venues (Q16) to manage their limited budgets.

While most students did not strongly perceive direct negative physical impacts (Q18, Q19, Q21) from frugal eating, the correlation between bringing meals from home (Q15) and feeling low on energy (Q19) was weak and statistically insignificant (r = -0.043, p = 0.789). This suggests that bringing meals from home does not have a measurable

influence on students' energy or concentration levels within this sample.

No significant differences in saving behaviors were observed across academic departments (Q16, via Kruskal–Wallis test). Overall, financial constraints compel students to prioritize economic efficiency over nutritional balance. Nevertheless, these adaptive strategies reflect students' rational responses to limited financial resources. The findings highlight the importance of promoting awareness of maintaining a balanced and healthy diet even under financial pressure. Future research could involve larger and more diverse samples and further examine the moderating effects of psychological factors such as self-discipline and financial literacy on consumption behavior.

References

[1] A. Suyanto, Hafifuddin, D. Asiyah, W. Warsiati, and A. Kusumaningrum, "Pengaruh Gaya Hidup Mahasiswa Dan Literasi Keuangan Terhadap Perilaku Konsumtif (Kajian Studi Literatur)," *Indones. J. Econ. Bus.*, vol. 3, no. 1, pp. 53–61, 2025.

[2] A. Z. Abidin, K. P. M. P. Pratama, A. L. Kumarabuya, and A. F. R. Nuha, "Studi Pengaruh Literasi Keuangan terhadap Perilaku Konsumtif Mahasiswa," *Benefit J. Manaj. dan Bisnis*, vol. 10, no. 1, pp. 85–105, 2025.

[3] K. Arcana, F. Akbar, W. S. Barasa, and M. Fahmi, "The Influence Of Lifestyle, Financial Literacy, And Online Loans On The Financial Management Of Students In The City Of Medan," *Manag. Stud. Entrep. J.*, vol. 6, no. 5, pp. 175–187, 2025.

[4] N. A. Ananda, S. U. Ady, and N. Sayidah, "The Role of Financial Literacy and Self-Control in Managing Students' Consumptive Behavior with PayLater Usage Decisions as a Mediating Variable," *SINOMICS J.*, vol. 3, no. 5, pp. 1355–1366, 2024.

[5] Ristiliana, Salmiah, G. Farisa, I. Wati, and Y. Novita, "Gaya Hidup Mahasiswa dalam Pengaruh Penggunaan Media Sosial," *SJEE (Scientific J. Econ. Educ.)*, vol. 9, no. 2, pp. 252–257, 2025.

[6] M. Reza, D. Saputra, N. Humaira, and Muhammad, "Pengaruh Pola Makan dan Aktivitas Fisik terhadap Kondisi Kebugaran Mahasiswa Baru Pendidikan Jasmani di Masa Adaptasi Perkuliahan," *J. Innov. Creat.*, vol. 5, no. 2, pp. 9290–9300, 2025.

[7] R. Nurmadinisia and Y. A. Hidayat, "Hubungan Status Gizi dan Indeks Prestasi dengan Asupan Gizi sebagai Faktor Resiko," *J. Mitra Kesehat.*, vol. 3, no. 2, pp. 87–93, 2021.

[8] A. Rungkat, M. Pendong, M. Tumiwang, I. Mamuaya, and S. I. Asaloei, "Pengaruh Promosi dan Diskon Terhadap Kepuasan Pelanggan Grabfood dan Gofood: Studi Kasus Mahasiswa Universitas Sam Ratulangi," *J. Lentera Bisnis dan Kewirausahaan*, vol. 1, no. 1, 2024.

[9] A. N. Aminuddin and A. Wijaya, "Persepsi dan Praktik Gaya Hidup Sehat Pada Mahasiswa UNNES," in *Book Chapter Bahasa, Sastra dan Budaya Jilid 1*, 2024, pp. 164–202.

[10] R. P. Ferdiawan, S. T. Raharjo, and H. A. Rachim, "Coping Strategi Pada Mahasiswa Yang Bekerja," *Pros. Penelit. dan Pengabdi. Kpd. Masy.*, vol. 7, no. 1, pp. 199–207, 2020.

[11] F. D. Subakti, "Hubungan Antara Tingkat Stress Akademik Dengan Pola Makan Pada Mahasiswa Sarjana Keperawatan Tingkat 2 STIKes Dharma Husada Kota Bandung." STIKes Dharma Husada, 2024.

[12] A. Rahmiwati, M. M. S. Wulandari, I. P. Sari, and F. Etrawati, "Hubungan asupan zat gizi makro dan aktivitas fisik terhadap status gizi mahasiswa Universitas Sriwijaya: Studi cross-sectional," *SAGO Gizi dan Kesehat.*, vol. 6, no. 2, pp. 269–278, 2025.