

## **Students Awareness of Healthy Eating Amid Budget Constraints: A Study of Students in Bandung**

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### **ABSTRACT**

Growing awareness of healthy eating among university students has not always been accompanied by healthy food selection behavior. Although many students understand the importance of nutrition, food choices are often influenced by economic considerations and the perceived affordability of healthy food. This study aims to examine the influence of concern for healthy food on healthy food selection and to investigate the moderating role of perceived affordable prices among university students in Bandung City. A quantitative approach was employed using survey data collected from active university students. The findings indicate that concern for healthy food plays an important role in encouraging students to choose healthier food options. Perceived affordable prices were also found to influence healthy food selection directly. However, price affordability did not strengthen or weaken the relationship between concern for healthy food and healthy food selection. These findings suggest that health concerns and price affordability operate independently in shaping students' food choices. This study contributes to the growing literature on healthy food consumption behavior by providing evidence from the context of university students in Indonesia and highlighting the importance of both health awareness and food affordability in promoting healthier dietary choices.

**Keywords:** Concern for Healthy Food; Perceived Affordable Prices; Healthy Food Selection; Students; Bandung City



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## INTRODUCTION

Awareness of healthy food consumption has grown considerably among different groups in society, including university students. As students begin living more independently, they are increasingly responsible for making their own everyday decisions, particularly regarding food choices. Unlike earlier stages of life where eating habits were largely shaped by family routines, university students are now required to select foods based on their personal preferences, nutritional considerations, and financial capabilities. In this context, concern for healthy food becomes an internal factor that theoretically plays a role in driving better consumption behavior.

However, various empirical studies reveal a considerable gap between the level of concern for healthy food and students' actual behavior in selecting food. Environmental and economic conditions often prevent students from consistently applying healthy eating habits in their daily lives. Research on university food environments indicates that even when healthy food options are available, students with limited financial resources are more likely to choose cheaper alternatives over healthier ones (Li et al., 2022). This suggests that awareness of healthy eating alone may not be enough unless it is supported by sufficient economic accessibility.

In Indonesia, food choice motives among adolescents and students have been extensively studied. Research by Maulida et al. (2016) revealed that price, taste, and ease of access are the primary considerations in food selection decisions, even above health aspects. Meanwhile, Setiawan et al. (2024) reported that price has a significant influence on students' food consumption behavior. This finding highlights the important role of price considerations in shaping food-related decisions among university students.

Bandung City provides an appropriate context for examining this issue. As one of Indonesia's major educational hubs, the city is home to a large student population from diverse socioeconomic backgrounds. Bandung is also widely recognized for its vibrant culinary scene, offering a broad range of food options, from inexpensive street food around campuses to modern cafés serving healthy meals. This situation creates a challenge for students who aim to maintain healthy eating habits while also managing limited daily expenses. Sakai et al. (2022) further noted that university canteen menus in Indonesia generally do not fully meet balanced nutritional standards, thereby narrowing students' available healthy food options.

Although various studies have examined students' food consumption behavior, research that specifically positions price perception as a moderating variable in the relationship between concern and healthy food selection remains very limited, particularly in Indonesia. Yet international studies affirm that price affordability is one of the strongest determinants in the successful adoption of healthy eating patterns across various population groups (Mishra et al., 2025). This research gap is the basis for conducting the present study.

This research offers three primary novelties compared to previous studies. First, it positions perceived affordable prices as a moderating variable, not merely a direct predictor. Second, testing is conducted quantitatively using PLS-SEM to measure how much price can alter the strength of the relationship between concern and healthy food selection behavior. Third, this study focuses specifically on university students in Bandung City, which has rarely been the focus of similar studies.

Based on this background, the objectives of this research are: (1) to analyze the effect of concern for healthy food on healthy food selection behavior among university students in Bandung City; (2) to examine the role of perceived affordable prices in moderating the relationship between concern and healthy food selection; and (3) to

identify the independent contribution of each variable toward healthy food selection behavior.

The significance of this research also lies in its practical relevance to ongoing efforts in Indonesia to improve public health outcomes through behavioral interventions at the community level. University students represent a strategically important target group not only because they are developing habits that will persist into adulthood, but also because they are a population with relatively high exposure to health information through academic and digital channels. Understanding the specific psychological and economic factors that drive or inhibit healthy food choices among this group can therefore inform the design of campus health programs, food subsidy policies, and nutrition communication campaigns that are both evidence-based and contextually appropriate for the Indonesian setting.

## LITERATURE REVIEW

Based on Table 1 below, previous studies related to this research are summarized as follows.

Table 1. Summary of Previous Research

| No. | Researcher & Year                | Title & Location                                                              | Method & Results                                                                                                                       | Similarity                                                                 | Difference                                                                                                            |
|-----|----------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 1.  | Salsabilia & Wahyuningsih (2023) | Frequency of Online Food Purchases & Nutritional Status of Students, Jakarta  | Quantitative cross-sectional; Chi-Square; online purchase frequency is associated with nutritional status                              | Both examine students' food consumption behavior.                          | The dependent variable is nutritional status; it does not examine the concern or price role.                          |
| 2.  | Natasya et al. (2025)            | Overview of Dietary Patterns and Student Health at UIN North Sumatra, Medan   | Quantitative survey; Chi-Square; majority eat irregularly, and fast food consumption is significantly associated with health disorders | Both examine students' dietary patterns.                                   | Focus on the health impact of eating patterns; it does not test concern or price moderation.                          |
| 3.  | Aminuddin & Wijaya (2025)        | Perceptions and Practices of Healthy Lifestyle among UNNES Students, Semarang | Qualitative phenomenology: the gap between awareness and practice due to economic constraints and prices                               | Identifies price as a barrier to realizing health concerns.                | Qualitative approach; does not test moderating effect; focuses on a general healthy lifestyle, not food specifically. |
| 4.  | Costlow et al. (2025)            | Healthy Diets are Affordable but Often Displaced, Indonesia                   | Quantitative cost analysis & household survey; >98% can afford healthy food but still choose unhealthy options                         | Supports the importance of studying factors beyond price in food behavior. | The unit of analysis is national households; it does not test price moderation on individual concern                  |

|    |                     |                                                                                                        |                                                   |                                                                |                                                                                                                                    |
|----|---------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 5. | A'ini & Alfy (2019) | Food Consumption Patterns and Nutritional Status of Students at Universitas Indraprasta PGRI, Jakarta. | Quantitative cross-sectional, Kruskal-Wallis test | Both analyze food consumption patterns in Indonesian students. | Focuses on nutritional status, not on psychological (concern) and economic (price) factors as main determinants of food selection. |
|----|---------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

Source: Primary Data Processed (2026)

## Concern for Healthy Food

Concern for healthy food reflects the extent to which individuals pay attention to, understand, and prioritize the nutritional value and health effects of the food they consume in everyday life. This concern goes beyond basic knowledge of nutrients, as it also involves personal attitudes and values related to maintaining health through balanced eating habits. Among university students, concern for healthy food becomes particularly important because they are entering a stage of greater independence, where food choices are largely determined by their own awareness and preferences. Previous research has shown that nutritional knowledge plays an important role in shaping students' dietary behavior, as individuals with better understanding of nutrition tend to adopt healthier eating patterns and more balanced food consumption (Pavithra, 2025).

Beyond the cognitive aspect, concern for healthy food also involves affective and behavioral dimensions that are reflected in positive attitudes toward nutritious eating habits. Students who demonstrate greater concern for their health are generally more careful in selecting food, paying closer attention to nutritional content while limiting the consumption of foods high in sugar, salt, and fat. Previous studies have shown that positive attitudes toward balanced nutrition are associated with higher consumption of fruits and vegetables, which are key indicators of healthy eating behavior (Küçük et al., 2023). This indicates that concern for healthy food is not limited to understanding nutritional information, but also includes the personal motivation to consistently apply healthy eating principles in everyday life.

However, a high level of concern for healthy food does not always translate into actual healthy food choices. Previous studies have shown that although students may understand the importance of proper nutrition, their eating behavior is often shaped by external factors such as financial limitations, limited time, and the accessibility and affordability of healthy food options (Verulava & Papiashvili, 2025). In addition, campus environments and fast-paced student lifestyles frequently encourage the consumption of inexpensive and convenient foods, even when they provide lower nutritional value. Therefore, concern for healthy food can be viewed as an internal factor that may encourage healthy eating behavior, although its influence is strongly affected by the external conditions surrounding students' daily lives.

From a theoretical standpoint, concern for healthy food is rooted in the broader framework of health-conscious consumer behavior, which describes how individuals integrate health values into their everyday consumption decisions. This framework posits that concern acts as a motivational driver that orients individuals toward information seeking, label reading, and deliberate food selection (Paolassini-Guesnier et al., 2023). Among university students specifically, this construct becomes particularly relevant given the transitional nature of student life, where individuals are forming long-term dietary habits for the first time without direct parental guidance. Research conducted in diverse cultural contexts consistently supports the idea that students who internalize health values as personally meaningful tend to maintain more nutritionally adequate diets

over time, underscoring the importance of cultivating concern for healthy food not only as a momentary attitude but as a stable personal value (Pavithra, 2025). This theoretical grounding is important for understanding why concern for healthy food was positioned as the primary independent variable in the present study.

### **Healthy Food Selection**

Healthy food selection refers to the process by which individuals choose the foods they consume based on considerations such as nutritional value, health benefits, and the body's dietary needs. This concept not only relates to choosing foods that are generally considered healthy but also reflects an individual's consistency in maintaining balanced eating habits in daily life. Among university students, healthy food selection becomes particularly important because they often experience lifestyle changes, demanding academic activities, and financial limitations that may influence the quality of their dietary intake. Previous research indicates that students' diet quality is closely associated with their motives for choosing certain foods, where individuals who prioritize health considerations tend to demonstrate healthier and more balanced eating patterns compared to those who mainly prioritize taste or convenience (Yugharyanti et al., 2024).

In practice, students' healthy food choices are shaped by both internal and external factors. Internal factors include nutritional knowledge, health awareness, and personal motivation to maintain physical well-being. Meanwhile, external factors involve the availability of healthy food options within the campus environment, food affordability, peer influence, and the accessibility of fast-food products. Beyond health considerations, price and convenience also become dominant reasons in determining daily food choices (Drewnowski & Monsivais, 2020). These findings indicate that although students understand the importance of healthy food, actual decisions are often the result of a compromise between the intention to maintain health and the reality of environmental conditions.

Furthermore, research on student eating behavior at various Indonesian universities found that some students, despite academic exposure, exhibit suboptimal dietary behaviors, indicating a disconnect between knowledge and practice (Paramastuti et al., 2025). This knowledge-practice gap can be influenced by price perceptions, time limitations, and taste preferences. Thus, healthy food selection cannot be understood merely as a rational act based on knowledge, but as behavior influenced by the interaction between individual concern, economic conditions, and social environmental context.

The concept of healthy food selection is also closely connected to the Theory of Planned Behavior, which suggests that behavioral intention is shaped by attitudes toward the behavior, subjective norms, and perceived behavioral control. In the context of healthy eating, students who hold positive attitudes toward nutritious food, feel social support from peers or family, and perceive themselves as capable of choosing healthy options are more likely to translate that intention into consistent behavior. This perspective helps explain why some students with adequate nutritional knowledge still fail to select healthy food in practice, since barriers in the form of limited control over their food environment or negative social influences can suppress behavioral follow-through. A study conducted among Indonesian university students highlighted that the eating environment on campus, including the types of food vendors available and the social norms surrounding food choices among peers, significantly influences what students ultimately consume each day (Paramastuti et al., 2025). These contextual findings support the inclusion of healthy food selection as the dependent variable in this study, as it captures the behavioral outcome most directly relevant to students' daily nutritional reality.

## **Perceived Affordable Prices**

Perceived affordable prices refer to an individual's subjective assessment of the extent to which the price of a product, in this case, healthy food, is considered consistent with their financial capacity. This perception is not solely determined by the nominal price but also by the consumer's evaluation of the correspondence between the price paid and the benefits received. In the context of students, price perception is a critical factor because this group generally has limited income and is highly sensitive to price changes in daily consumption decisions. Research on healthy food consumption decisions shows that price perception significantly influences purchase decisions, where consumers tend to consider affordability when deciding to buy healthy food products such as vegetables and fruits (Aprilia & Marhamah, 2024).

In practice, price is often a dominant factor in students' food selection compared to nutritional quality considerations. Studies on food selection motives among students show that price is among the main factors influencing consumption decisions alongside taste and habits, so students with limited budgets tend to choose economically perceived foods even when less healthy (Dianat, 2025). Other research found that the perception of expensive healthy food becomes a barrier to implementing a nutritious diet, even when students possess sufficient knowledge of the benefits of healthy food (Antwi et al., 2024). This shows that there is a gap between nutritional awareness and actual action, influenced by economic factors.

Beyond directly influencing decisions, price affordability perception also plays a role in shaping intentions and the consistency of healthy consumption behavior. If students assess that healthy food is priced within their purchasing power, the likelihood of actually choosing healthy food increases significantly. Conversely, if prices are perceived as too high, the intention to consume healthy food may weaken even when health concern levels are sufficiently high. In this study, perceived affordable prices are therefore positioned as a moderating variable, potentially moderating the relationship between students' concern for healthy food and healthy food selection in Bandung City.

The concept of perceived affordable prices is particularly relevant within the framework of value-based purchasing, which holds that consumers evaluate a product not only based on its absolute cost but also in relation to the perceived value it provides. For students with constrained budgets, this means that healthy food is considered affordable when its price is consistent with both their financial capacity and their perception of the benefit they will receive in terms of health, taste, and satiety. Research in the area of food economics has shown that consumers in lower-income brackets often apply stricter value assessments when purchasing food, making them more sensitive to price signals and more likely to substitute toward cheaper alternatives when the perceived price-value ratio of healthier options falls below their threshold (Kabisch et al., 2021). In the Indonesian university context, this dynamic is further complicated by the abundance of inexpensive street food and campus-adjacent food stalls that offer highly palatable but nutritionally imbalanced options at very low prices, creating strong competition against more nutritious alternatives. Understanding price affordability as a perception rather than an objective economic condition allows researchers and practitioners to design communication strategies that reframe the value proposition of healthy food in ways that resonate with students' financial realities.

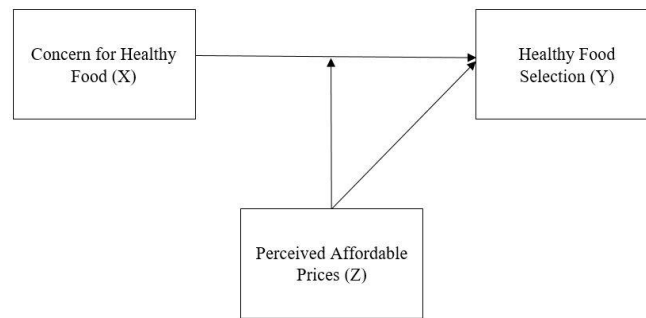


Figure 1. Conceptual Research Framework Model  
Source: Own Compilation (2026)

H1: Concern for healthy food has a positive effect on healthy food selection among university students in Bandung City.

Previous studies have consistently suggested that individuals who place greater importance on health and nutrition are more likely to engage in healthier eating behaviors. Pavithra (2025) reported that students with stronger nutritional knowledge generally demonstrate better dietary practices, indicating that awareness can influence actual food consumption decisions. Similarly, Paolassini-Guesnier et al. (2023) explained that concern for healthy food encourages individuals to become more attentive when evaluating food options, including checking nutritional information and considering potential health consequences before making a purchase. Research conducted by Küçük et al. (2023) also showed that positive attitudes toward nutrition are associated with higher consumption of fruits and vegetables, which are commonly regarded as indicators of healthy eating habits. In addition, Verulava and Papiashvili (2025) found that university students who place greater value on personal health are more likely to maintain healthier eating patterns despite facing various daily challenges. Evidence from Indonesia further supports this argument. Yugharyanti et al. (2024) observed that students who prioritize health considerations when choosing food tend to have better diet quality, while Paramastuti et al. (2025) highlighted that stronger health awareness can help bridge the gap between nutritional knowledge and actual behavior. Collectively, these findings provide a strong theoretical foundation for expecting a positive relationship between concern for healthy food and healthy food selection.

H2: Perceived affordable prices moderate the effect of concern for healthy food on healthy food selection among university students.

The second hypothesis is based on the assumption that affordability perceptions influence the extent to which health concerns can be translated into actual food choices. Students may recognize the importance of consuming healthy food, but their ability to act on that awareness can be affected by whether healthy food is perceived as financially attainable. Kabisch et al. (2021) emphasized that consumers often evaluate food choices not only according to nutritional benefits but also according to affordability relative to their available resources. Similarly, Aprilia and Marhamah (2024) found that perceived affordability significantly influences decisions to purchase healthy food products, particularly among consumers with limited budgets. Antwi et al. (2024) identified high perceived prices as one of the main obstacles preventing students from adopting healthier eating habits, even when they possess adequate nutritional knowledge. Dianat (2025) also noted that the affordability of food options within campus environments frequently

affects the extent to which students can follow their dietary preferences. In the Indonesian context, Costlow et al. (2025) reported that although healthy food is generally affordable in objective terms, subjective perceptions regarding food prices continue to influence consumption behavior. Similar conclusions were reached by Mishra et al. (2025), who identified affordability as a key factor affecting the adoption of healthy diets across different countries. Based on these findings, perceived affordable prices are expected to influence how strongly concern for healthy food is reflected in healthy food selection behavior.

The research model consists of three main constructs. Concern for healthy food (CFH) serves as the independent variable and refers to the degree of attention, awareness, and commitment students demonstrate toward the nutritional value and health consequences of the food they consume (Paolassini-Guesnier et al., 2023). Healthy food selection (HFS) functions as the dependent variable and represents an individual's tendency to choose food based on nutritional quality, dietary balance, and healthy eating practices (Ilham, 2024). Perceived affordable prices (PAP) act as the moderating variable and reflect students' subjective evaluation of whether healthy food prices are consistent with their financial capacity and purchasing ability (Kabisch et al., 2021).

## RESEARCH METHOD

This research employed a quantitative approach with an explanatory research design, which is a type of research that aims to explain causal relationships between variables through statistical hypothesis testing (Sainani, 2014). The quantitative approach was chosen because this study seeks to test the relationships between variables empirically through numerical measurement and statistical analysis (Dźwigoł, 2021). Data collection was conducted through an online survey using Google Forms distributed to active university students at various higher education institutions in Bandung City. The study was conducted between March 31, 2026, and May 4, 2026, at Bandung City, West Java, Indonesia, which was selected as the research location because of its status as one of Indonesia's major educational centers with a large and socioeconomically diverse student population.

Table 2. Operationalization of Variables

| Variable                     | Concept                                                                                                                                                                    | Dimension                               | Indicator                                                                                                      | Source                                             |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Concern for Healthy Food (X) | The degree of attention, awareness, and commitment an individual has in considering the nutritional and health aspects of food consumed (Paolassini-Guesnier et al., 2023) | Health Awareness                        | 1. Awareness of the importance of healthy food for long-term health                                            | Paolassini-Guesnier et al. (2023); Pavithra (2025) |
|                              |                                                                                                                                                                            |                                         | 2. Concern about the health impact of daily food consumption                                                   |                                                    |
|                              |                                                                                                                                                                            | Attention to Nutritional Content        | 3. Attention to nutrient content in food                                                                       | Küçük et al. (2023)                                |
|                              |                                                                                                                                                                            |                                         | 4. Consideration of nutritional balance in food selection                                                      |                                                    |
|                              |                                                                                                                                                                            | Attitude toward Healthy Eating Patterns | 5. Desire to consume healthy food regularly                                                                    | Verulava & Papiashvili (2025)                      |
|                              |                                                                                                                                                                            |                                         | 6. Tendency to avoid foods considered unhealthy                                                                |                                                    |
| Healthy Food Selection (Y)   | An individual's decision to choose food based on nutritional                                                                                                               | Healthy Food Preference                 | 1. Choosing foods considered healthy when purchasing<br>2. Prioritizing nutritious food in consumption choices | Ilham (2024); Yugharyanti et al. (2024)            |

|                                 |                                                                                                                                               |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                          |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|                                 | content, nutritional balance, and the body's dietary needs (Ilham, 2024)                                                                      | Healthy Consumption Pattern<br>Consistency of Healthy Eating Behavior      | 3. Sufficient consumption of vegetables and fruits<br>4. Limiting fast food intake<br>5. Maintaining a healthy diet in daily life<br>6. Actively choosing healthier options when available                                                                                                                                                                                                                                        | Drewnowski & Monsivais (2020)<br>Paramastuti et al. (2025)                               |
| Perceived Affordable Prices (Z) | An individual's subjective assessment of the affordability of healthy food prices relative to their financial capacity (Kabisch et al., 2021) | Price Affordability<br><br>Price-Value Perception<br><br>Price Sensitivity | 1. Perceiving healthy food prices as consistent with financial capacity<br>2. Viewing healthy food as affordable for students<br>3. Believing healthy food prices are proportional to health benefits received<br>4. Willingness to pay for healthy food when benefits are clear<br>5. Price as an important factor in food selection decisions<br>6. Tendency to choose cheaper food when healthy food is perceived as expensive | Aprilia & Marhamah (2024)<br>Kabisch et al. (2021)<br>Dianat (2025); Antwi et al. (2024) |

Source: Own Compilation (2026)

The research population comprises all active students enrolled in higher education institutions in Bandung City. Given that this number is unlimited and cannot be precisely determined, sampling was conducted using non-probability sampling with a purposive sampling technique. Respondent criteria included: (a) active students at higher education institutions in Bandung City; (b) aged at least 17 years; (c) having purchased or consumed food on campus or in its surroundings; and (d) willing to complete the questionnaire in full. The sample size was set at 202 respondents, meeting the minimum requirement of Hair et al. (2019) of 5 times the number of indicators ( $18 \text{ indicators} \times 5 = 90$  minimum).

All variables were measured using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The research instrument consisted of 36 statement items that were pre-tested on 30 respondents. Validity testing using Pearson Product-Moment correlation showed that 34 of 36 items were declared valid ( $r \geq 0.30$ ), while two items with correlation values below the threshold were removed from the instrument. Reliability testing using Cronbach's Alpha yielded values of 0.815 for variable X, 0.897 for variable Y, and 0.890 for variable Z, all above the critical value of 0.70.

Data analysis was conducted in two stages. First, factor analysis using Principal Component Analysis (PCA) in SPSS was performed to confirm the dimensionality of the instrument. Second, hypothesis testing using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS was conducted, encompassing evaluation of the measurement model (outer model) and structural model (inner model) through bootstrapping with 500 subsamples. PLS-SEM was selected because it does not require data normality and is effective for predictive models with moderating variables (Hair et al., 2019).

## RESEARCH RESULTS

### Respondent Characteristics

Table 3. Respondent Characteristics by Gender

| No. | Gender | Frequency | Percentage |
|-----|--------|-----------|------------|
| 1.  | Male   | 108       | 53.47%     |
| 2.  | Female | 94        | 46.53%     |
|     | Total  | 202       | 100%       |

Source: Own Compilation (2026)

Based on Table 3, the majority of respondents were male, accounting for 108 students (53.47%), while female respondents totaled 94 students (46.53%). The distribution indicates a relatively balanced representation of both genders within the sample. Such a composition enhances the diversity of perspectives captured in the study and reduces the likelihood of gender-related bias in the findings.

Table 4. Respondent Characteristics by Age

| No. | Age Group      | Frequency | Percentage |
|-----|----------------|-----------|------------|
| 1.  | 18-19 years    | 70        | 34.65%     |
| 2.  | 20-21 years    | 91        | 45.05%     |
| 3.  | Above 22 years | 41        | 20.3%      |
|     | Total          | 202       | 100%       |

Source: Own Compilation (2026)

Based on Table 4, most respondents were between 20 and 21 years old, representing 91 students (45.05%) of the total sample. Respondents aged 18–19 years accounted for 70 students (34.65%), while those above 22 years old comprised 41 students (20.30%). These findings indicate that the sample was dominated by students in early adulthood, a stage characterized by increasing independence in lifestyle and consumption decisions. As a result, this age group is particularly relevant for examining factors related to dietary behavior and nutritional choices among university students.

### Factor Analysis and Data Adequacy

Data adequacy testing through factor analysis produced KMO values of 0.841 for variable X, 0.925 for variable Y, and 0.915 for variable Z, all above 0.50. The significance value of Bartlett's Test for all three variables was 0.000, indicating data adequacy for analysis. All items had factor loading values above 0.50 in the component matrix, confirming that each construct is unidimensional.

### Measurement Model Evaluation (Outer Model)

Table 5 presents the full validity and reliability output from SmartPLS. Cronbach's Alpha values for all constructs exceeded the 0.70 minimum: CFH = 0.818, HFS = 0.897, PAP = 0.893. Composite reliability (rho\_c) values were 0.863, 0.916, and 0.919, respectively, all well above 0.70. For convergent validity, the AVE of HFS (0.549) and PAP (0.560) both met the 0.50 threshold. The AVE for CFH (0.459) fell slightly below 0.50; however, Hair et al. (2019) note that AVE values close to the threshold remain acceptable when composite reliability is strong, as is the case here. Discriminant validity was further evaluated using HTMT (Table 6) and the Fornell-Larcker criterion (Table 7), and model

fit was assessed using SRMR and NFI indices (Table 8). Figure 2 shows the outer model path diagram.

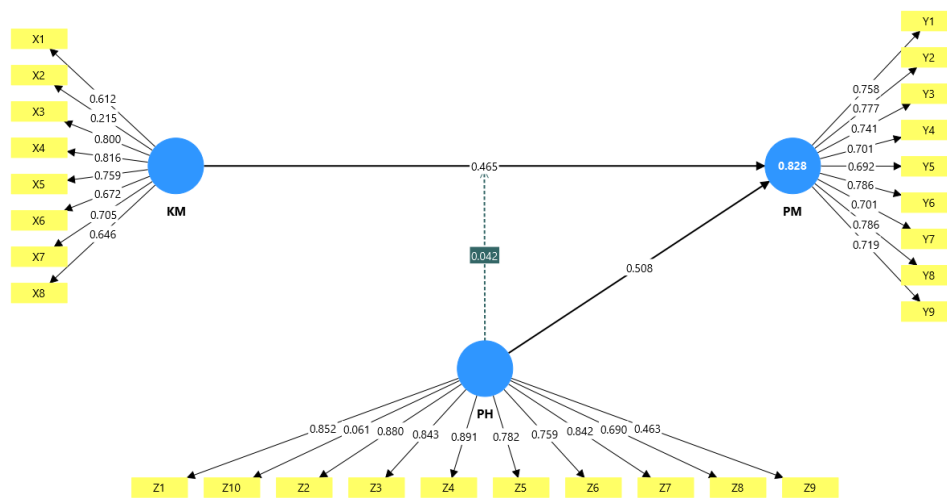


Figure 2. Outer Model Diagram  
 Source: SmartPLS Data Processing (2026)

### Structural Model Evaluation (Inner Model)

Structural model evaluation produced an R-square value of 0.828 (R-square adjusted = 0.825), meaning that 82.8% of the variation in healthy food selection behavior among Bandung City university students can be explained by this research model. This indicates a very strong predictive power. Figure 3 below presents the inner model (bootstrapping results) of the research.

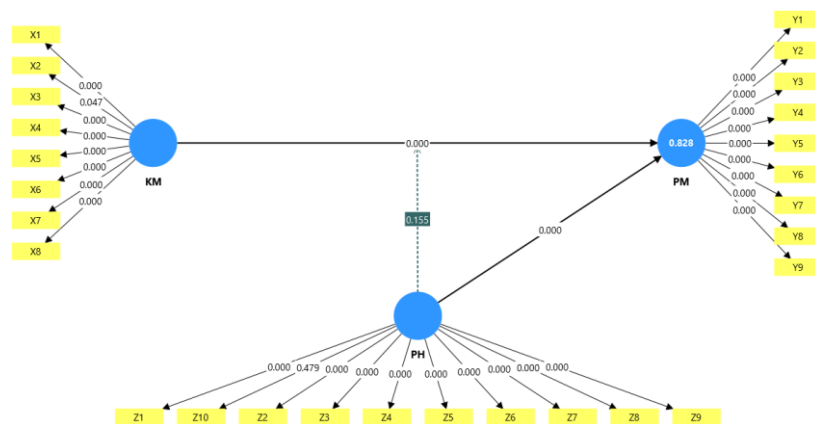


Figure 3. Inner Model Diagram  
 Source: SmartPLS Data Processing (2026)

Table 5. Construct Validity and Reliability

| Construct | Cronbach's Alpha | CR (rho_a) | CR (rho_c) | AVE    |
|-----------|------------------|------------|------------|--------|
| CFH       | 0.818            | 0.860      | 0.863      | 0.459* |
| HFS       | 0.897            | 0.899      | 0.916      | 0.549  |
| PAP       | 0.893            | 0.931      | 0.919      | 0.560  |

\*AVE for CFH is 0.459, marginally below the 0.50 threshold; accepted given  $CR(\rho_c) = 0.863 > 0.70$  (Hair et al., 2019). CR = Composite Reliability; AVE = Average Variance Extracted; CFH = Concern for Healthy Food; HFS = Healthy Food Selection; PAP = Perceived Affordable Prices.

Source: SmartPLS Output (2026)

Table 6. HTMT (Heterotrait-Monotrait Ratio) Matrix

|           | CFH   | HFS   | PAP   | PAP × CFH |
|-----------|-------|-------|-------|-----------|
| CFH       | —     |       |       |           |
| HFS       | 0.968 | —     |       |           |
| PAP       | 0.938 | 0.970 | —     |           |
| PAP × CFH | 0.538 | 0.369 | 0.416 | —         |

HTMT values for HFS↔CFH (0.968) and PAP↔HFS (0.970) exceed the 0.90 threshold, indicating that these constructs share high conceptual overlap. This is acknowledged as a limitation and discussed further in the conclusions. The interaction term PAP × CFH shows substantially lower HTMT values (0.369–0.538), confirming its distinctiveness.

Source: SmartPLS Output (2026)

Table 7. Discriminant Validity — Fornell-Larcker Criterion

| Construct | CFH   | HFS   | PAP   |
|-----------|-------|-------|-------|
| CFH       | 0.677 |       |       |
| HFS       | 0.862 | 0.741 |       |
| PAP       | 0.827 | 0.874 | 0.748 |

Diagonal values are the square roots of AVE. For discriminant validity to hold, diagonal values should exceed all off-diagonal values in the same row and column. The diagonal for CFH (0.677) is lower than its correlations with HFS (0.862) and PAP (0.827), suggesting limited discriminant separation between the three substantive constructs—consistent with the HTMT findings above and noted as a limitation.

Source: SmartPLS Output (2026)

Table 8. Model Fit Indices

| Index            | Saturated Model | Estimated Model |
|------------------|-----------------|-----------------|
| SRMR             | 0.068           | 0.068           |
| d <sub>ULS</sub> | 1.756           | 1.772           |
| d <sub>G</sub>   | 0.699           | 0.699           |
| Chi-Square       | 762.988         | 764.014         |
| NFI              | 0.793           | 0.793           |

SRMR = 0.068 < 0.08 indicates acceptable model fit (Hu & Bentler, 1999). NFI = 0.793 is below the conventional 0.90 benchmark; however, NFI tends to be underestimated in PLS-SEM models with interaction terms and larger indicator sets (Hair et al., 2019). The consistency of SRMR values between saturated and estimated models supports model stability.

Source: SmartPLS Output (2026)

## Hypothesis Testing

Hypothesis testing was performed through bootstrapping in SmartPLS with 500 subsamples. The results are presented in Table 9 below.

Table 9. Hypothesis Testing Results (Bootstrapping PLS-SEM)

| Path            | Original Sample (O) | Sample Mean (M) | Std. Dev. (STDEV) | T Statistics | P Values |
|-----------------|---------------------|-----------------|-------------------|--------------|----------|
| CFH → HFS       | 0.465               | 0.467           | 0.070             | 6.633        | 0.000    |
| PAP → HFS       | 0.508               | 0.507           | 0.061             | 8.389        | 0.000    |
| PAP × CFH → HFS | 0.042               | 0.042           | 0.029             | 1.421        | 0.155    |

Notes: CFH = Concern for Healthy Food; HFS = Healthy Food Selection; PAP = Perceived Affordable Prices.

Source: SmartPLS Data Processing (2026)

Based on Table 9, concern for healthy food (CFH) had a positive and significant effect on healthy food selection (HFS) with a path coefficient of 0.465, T-statistics = 6.633, and

P value = 0.000, thus H1 is accepted. Perceived affordable prices (PAP) also had a direct and significant effect on HFS with a coefficient of 0.508,  $T = 8.389$ , and  $P = 0.000$ . However, the interaction effect  $PAP \times CFH$  on HFS was not proven significant ( $T = 1.421$ ;  $P = 0.155$ ), thus H2 is rejected. The R-square value of 0.828 indicates a very strong predictive power of the model.

## DISCUSSION

This study examined the relationships between concern for healthy food, perceived affordable prices, and healthy food selection among university students in Bandung City. Two hypotheses were tested. The first hypothesis proposed that concern for healthy food positively influences healthy food selection, while the second hypothesis proposed that perceived affordable prices strengthen or weaken this relationship.

The results provide strong support for the first hypothesis. Concern for healthy food was found to have a positive and significant effect on healthy food selection ( $\beta = 0.465$ ;  $T = 6.633$ ;  $p = 0.000$ ). This finding indicates that students who are more aware of nutritional issues and who pay greater attention to the health consequences of their food consumption tend to make healthier food choices. In other words, health concerns appear to translate into actual behavior rather than remaining merely a personal attitude or belief. Students with stronger concern for healthy eating are more likely to evaluate food alternatives carefully, consider nutritional content, and prioritize foods that contribute positively to their well-being. This finding is consistent with the work of Paolassini-Guesnier et al. (2023), who highlighted the role of health concern as a motivational factor underlying food-related decisions. Similar conclusions were reported by Pavithra (2025), who found that nutritional awareness contributes significantly to dietary quality among university students, and by Küçük et al. (2023), who observed a positive relationship between health-oriented attitudes and the consumption of fruits and vegetables. Taken together, these studies reinforce the view that concern for healthy food is an important driver of healthy eating behavior.

The second hypothesis was not supported by the data. The interaction between concern for healthy food and perceived affordable prices did not significantly influence healthy food selection ( $\beta = 0.042$ ;  $T = 1.421$ ;  $p = 0.155$ ). This result suggests that perceived affordability does not alter the strength of the relationship between health concern and food selection behavior. Although affordability was expected to strengthen the influence of health concerns, the statistical evidence indicates otherwise. Students who are concerned about healthy eating tend to make healthier choices regardless of whether affordable prices are perceived as high or low. Nevertheless, perceived affordable prices demonstrated a strong and significant direct effect on healthy food selection ( $\beta = 0.508$ ;  $T = 8.389$ ;  $p = 0.000$ ). This finding confirms that affordability remains an important consideration in food-related decisions, but its role is independent rather than moderating.

One possible explanation for the absence of a moderating effect is the relatively similar perception of healthy food prices among respondents. If most students share comparable views regarding affordability, the variation required to produce a significant interaction effect becomes limited. A similar perspective can be drawn from the findings of Costlow et al. (2025), who reported that healthy food is generally affordable for a large proportion of Indonesian consumers. Under such conditions, affordability may influence food selection directly without changing how health concerns affect behavior. Therefore, concern for healthy food and perceived affordable prices should be viewed as two separate determinants that operate simultaneously in shaping students' food choices.

Another noteworthy finding is the high explanatory power of the model. The R-square value of 0.828 indicates that concern for healthy food and perceived affordable prices collectively explain 82.8 percent of the variation in healthy food selection. This suggests that the model captures a substantial portion of the factors influencing students' dietary decisions. Interestingly, the direct effect of perceived affordable prices was slightly stronger than that of concern for healthy food. This result highlights the importance of economic considerations in the daily lives of university students. While students may recognize the importance of healthy eating, their final decisions are still strongly influenced by whether healthy food is perceived as financially accessible. This finding supports the argument of Aprilia and Marhamah (2024), who identified affordability perception as one of the key factors affecting consumers' decisions to purchase healthy food products.

Overall, the findings demonstrate that promoting healthy eating among university students requires more than increasing awareness alone. Health concerns are clearly important, but affordability also plays a substantial role in determining actual behavior. Students are more likely to choose healthy food when they both value healthy eating and perceive healthy options as reasonably priced. Consequently, initiatives aimed at improving students' dietary habits should address these two aspects simultaneously. Efforts to strengthen nutritional awareness should be accompanied by strategies that improve access to affordable, healthy food options, thereby creating an environment that supports healthier food choices in everyday life.

## CONCLUSIONS

This study was conducted to achieve three main objectives. The first objective was to examine whether concern for healthy food influences healthy food selection among university students. The second objective was to determine whether perceived affordable prices strengthen or weaken that relationship. The third objective was to identify the individual contribution of each variable in explaining healthy food selection behavior. The findings revealed that concern for healthy food has a positive and significant influence on healthy food selection ( $\beta = 0.465$ ;  $T = 6.633$ ;  $p = 0.000$ ). This result indicates that students who pay greater attention to nutritional value and the health consequences of food consumption are more likely to make healthier dietary choices. Therefore, the first hypothesis was supported. In contrast, perceived affordable prices were not found to moderate the relationship between concern for healthy food and healthy food selection ( $\beta = 0.042$ ;  $T = 1.421$ ;  $p = 0.155$ ), leading to the rejection of the second hypothesis. Nevertheless, perceived affordable prices demonstrated a significant direct influence on healthy food selection ( $\beta = 0.508$ ;  $T = 8.389$ ;  $p = 0.000$ ), suggesting that affordability is an important factor in students' food decisions. Furthermore, the model explained 82.8 percent of the variance in healthy food selection ( $R^2 = 0.828$ ), indicating strong explanatory power.

From a theoretical perspective, the findings contribute to the literature on health-related consumer behavior by showing that concern for healthy food and perceived affordable prices function as separate determinants of healthy food selection. While previous studies generally considered price as a direct predictor or contextual factor, this study specifically tested its role as a moderator and found no evidence supporting such an effect. The results suggest that health concern can independently encourage healthy food choices without being influenced by perceptions of affordability. This finding supports the argument that concern for health serves as an internal motivational factor that guides consumption behavior. At the same time, the results indicate that future studies

should pay greater attention to population characteristics and economic diversity, as moderation effects may be more likely to emerge in contexts where purchasing power and food price perceptions vary considerably among respondents.

The practical implications are relevant for universities, food providers, and policymakers. Universities can encourage healthier eating habits by strengthening nutrition education, promoting awareness campaigns, and providing information about balanced diets. Food providers operating around campus areas may contribute by offering nutritious food options at prices that are accessible to students. Since affordability was found to be an important predictor of healthy food selection, efforts to improve access to reasonably priced healthy meals could have a meaningful impact on student dietary behavior. Local governments may also support these initiatives through programs and incentives aimed at increasing the availability of healthy food while maintaining affordability for young consumers.

Several limitations should be considered when interpreting the findings of this study. First, the research relied on self-reported responses, which may not always accurately reflect actual eating behavior. Respondents may have provided answers that represent their ideals rather than their daily practices. Second, the cross-sectional design limits the ability to observe changes in food-related attitudes and behavior over time. Third, the study did not differentiate respondents according to academic major, year of study, or source of income, which may have influenced their food choices and purchasing decisions. In addition, the measurement model showed several issues that warrant attention. The HTMT values between CFH and HFS (0.968) and between PAP and HFS (0.970) exceeded the commonly recommended threshold, indicating a high degree of similarity among these constructs. Likewise, the Fornell-Larcker criterion was not fully satisfied for the CFH construct because its correlations with other constructs were higher than the square root of its AVE value. Although these issues do not undermine the overall structural model, they suggest that improvements to the measurement instrument would strengthen future studies.

Future research is encouraged to incorporate additional variables that may influence healthy food selection, such as subjective norms, peer influence, campus food environments, and health self-efficacy. Longitudinal studies would provide a better understanding of how food-related attitudes and behaviors evolve throughout students' academic journeys. Researchers may also consider combining quantitative and qualitative methods to gain deeper insight into students' decision-making processes. Observational studies, food diaries, and in-depth interviews could complement survey findings and reduce the risk of social desirability bias. Finally, studies conducted in different regions of Indonesia or across international settings would help determine whether the patterns identified in this research are applicable to broader populations and contexts.

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