

## **Implementation of The Halalan Thayyiban Principle in The Snack Consumption Behavior of Female Islamic Boarding School Students: A Qualitative Analysis of Nutritional Status Research Findings at Islamic Boarding School for Female Students**

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### **ABSTRACT**

Snack consumption behavior among female Islamic boarding school students has the potential to influence nutritional status, particularly when characterized by excessive energy-dense food intake and low physical activity. Previous quantitative research at Al-Asnawiyah Islamic Boarding School for Female Students in Kudus, Indonesia demonstrated significant associations between snack consumption, physical activity, and nutritional status, but did not examine these findings through the halalan thayyiban (lawful and good) principle. This qualitative document analysis aimed to analyze the implementation of halalan thayyiban in students' snack consumption behavior using data from an undergraduate thesis (Fauziyah, 2022) involving 74 female students aged 13-17 years. Thematic content analysis revealed four main themes: (1) consumption culture dominated by high-fat and high-sugar foods, with choices driven by taste, price, availability, and peer influence rather than nutritional value; (2) halal understood narrowly as ingredient permissibility, excluding health, safety, and hygiene; (3) poor thayyib implementation evidenced by 91.9% excessive snack energy contribution and 86.5% light physical activity; and (4) opportunities for integrating halal nutrition through Islamic value-based education, healthier snacks, improved meal services, and structured physical activity. This study concludes that a significant gap exists between conceptual understanding of halalan thayyiban and practical dietary implementation. The halalan thayyiban reanalysis generated novel insights unattainable quantitatively: it revealed that environmental factors (availability, peer influence, menu dissatisfaction) not religious knowledge primarily shape consumption behavior, and that poor thayyib implementation reflects systemic issues requiring institutional intervention beyond individual education. These insights transform statistical correlations into theoretically-grounded understanding, providing actionable frameworks for Islamic value-based nutrition interventions in boarding schools. Integrated educational and intervention strategies combining halal principles, food safety, hygiene, health, and balanced nutrition are needed to promote healthier dietary practices.

### **Keywords:**

*Halalan Thayyiban; Snack Consumption; Female Islamic Boarding School; Nutritional Status.*

### **Introduction**

Adolescence is a crucial phase in the human lifespan. This period is characterized by significant physical growth and psychosocial development, substantially increasing the need for nutrients (Almatsier, 2009). The 2018 Basic Health Research (Riskesdas) data revealed that the prevalence of overweight adolescents in Indonesia increased from 8.3 percent in 2013 to 11.2 percent in 2018. Meanwhile, the prevalence of obesity in the same age group also rose from 2.5

percent to 4.8 percent during the same period (Kementerian Kesehatan RI, 2019). Kudus Regency shows a similar trend, with overweight rates among adolescents reaching 17.08 percent and obesity at 6.14 percent in 2018. Why the quantitative research data from Fauziyah (2022) need to be reanalyzed through the perspective of *halalan thayyiban* and what new insights are expected to be gained from this analysis. Furthermore, since the study relies on secondary data and document analysis, the limitations of these data in describing the actual "implementation" of *halalan thayyiban* in the students' dietary behavior should be stated more explicitly, so that the claims of the study do not exceed the capabilities of its research design.

Al-Asnawiyah Islamic Boarding School for Female Students located in Kudus, Indonesia is an Islamic educational institution housing 218 female students aged 12 to 18 years. Initial observations indicated that students in this boarding school have a fairly high frequency of snacking, especially fried foods, packaged snacks, and sweetened beverages. Their physical activity is mostly static indoors, with a tendency for low participation in outdoor sports. Quantitative research by (Fauziyah, 2022) has proven a significant relationship between the frequency of snack consumption and physical activity levels with the nutritional status of the students (p-values of 0.008 and 0.001, respectively).

However, while these statistical associations establish that the problem exists, they cannot explain why students engage in such consumption patterns or how their food choices relate to Islamic dietary principles. Specifically, the quantitative approach could not reveal: (1) how students understand the concept of halal in their daily food choices; (2) whether the *thayyib* (goodness, healthfulness) dimension is considered in their snack selection; (3) what social and environmental factors shape their consumption behavior; and (4) how their practices align with or deviate from the *halalan thayyiban* injunctions in the Qur'an (Q.S. Al-Baqarah 2:168, Al-Maidah 5:88). These gaps necessitate reanalyzing the existing quantitative data through the *halalan thayyiban* lens to generate theoretically-grounded, contextually-relevant insights that can inform Islamic value-based nutrition interventions.

The reanalysis is expected to yield four novel insights: first, a typology of students' understanding of halal in the context of snack consumption; second, an assessment of whether current consumption practices satisfy the *thayyib* criteria of health, cleanliness, and proportionality; third, identification of environmental and social determinants of consumption behavior that statistical analysis alone cannot capture; and fourth, strategic opportunities for integrating *halalan thayyiban* principles into boarding school food services and nutrition education. These insights would transform statistical correlations (p-values) into actionable, theory-informed recommendations for improving dietary practices in Islamic educational institutions.

It is important to acknowledge the limitations of this secondary data analysis. Since the study relies on document analysis of existing quantitative data, rather than primary qualitative data collection, it cannot directly observe students' actual food selection behavior, explore their lived experiences, or probe their understanding of *halalan thayyiban* through in-depth interviews. The available data primarily consist of frequency distributions, consumption patterns, and statistical associations, which limit the depth of qualitative interpretation. Consequently, this study's claims regarding the "implementation" of *halalan thayyiban* are inferential rather than directly observed; they represent an analytical interpretation of existing data through a new theoretical lens rather than empirical documentation of actual practices. This limitation is addressed by grounding all interpretations in the available quantitative evidence and

explicitly distinguishing between data-derived findings and theoretically-informed inferences, ensuring that the study's conclusions remain proportionate to the capabilities of its research design.

The concept of *halalan thayyiban* in the context of snacks is relevant because students, as a community living in a religious environment, should have greater awareness in choosing food that is not only *halal* according to Islamic law but also beneficial for health and not consumed excessively. This study aims to analyze the implementation of the *halalan thayyiban* principle in the snack consumption behavior of female students, based on available research data, using a document analysis approach.

Etymologically, *halal* means something permissible or not forbidden, while *thayyib* means good, pure, delicious, and healthy (Shihab, 2005). In Q.S. Al-Maidah, verse 88, Allah says: "And eat of what Allah has provided for you [which is] lawful and good. And fear Allah, in whom you are believers." According to M. Quraish Shihab in *Tafsir Al-Mishbah*, food that meets the *halalan thayyiban* criteria has several characteristics: first, it does not contain substances that are textually forbidden; second, it is obtained through a legally permissible method according to Islamic law; third, it is nutritious and beneficial for health; fourth, it is not consumed excessively; and fifth, its cleanliness and safety are maintained (Shihab, 2005:188). In the context of snacks, the *thayyib* dimension encompasses health, cleanliness, and food safety aspects, which go beyond the mere permissibility of ingredients (Setiawan, 2019).

The Qur'an explicitly forbids its followers from being excessive in consuming food. Surah Al-A'raf, verse 31, states: "...Eat and drink, but be not excessive. Indeed, He does not like those who commit excess." Consuming food beyond need, including excessive snacking, contradicts the principle of proportionality in Islam and can trigger various health problems such as overweight and obesity (Shihab, 2005)

Snack foods are defined as ready-to-eat foods and beverages produced by food vendors and sold in public places such as schools or streets (Persatuan Ahli Gizi Indonesia, 2009). Based on the School Children Snack Food Guidelines (Badan Pengawas Obat dan Makanan RI, 2013), snack foods can be classified into four categories: staple foods, side dishes, which consist of wet and dry snacks, beverages, and fruit treats. The contribution of snacks to total daily energy needs ranges from 10 to 20 percent (Febriani, 2013). Nutritional status is the condition of the body resulting from the balance between nutrient intake and utilization (Almatsier, 2009). Nutritional status in adolescents can be measured using Body Mass Index for Age (BMI/A). According to the Indonesian Minister of Health Decree Number 2 of 2020, nutritional status based on the BMI/A index is categorized into four levels: severe undernutrition, undernutrition, good, and overnutrition.

Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure (Kementerian Kesehatan RI, 2015). The World Health Organization (World Health Organization, 2020) classifies physical activity levels into three categories based on Physical Activity Level (PAL) values: light (1.40-1.69), moderate (1.70-1.99), and heavy (2.00-2.40). Regular physical activity provides various benefits, including weight control, prevention of non-communicable diseases, and improved mental health (Dwimaswati, 2015). In Islamic teachings, maintaining physical health receives serious attention. The Prophet Muhammad SAW said, as narrated by Muslim: "A strong believer is better and more beloved to Allah than a weak believer..." (Ash-Shan'ani, 2006). This hadith shows that maintaining physical fitness through physical activity is part of Islamic teachings that support optimal worship and obedience to Allah SWT.

## **Methods**

### *1. Type and Approach of Research*

This study uses a qualitative approach with a document analysis method. This approach was chosen because it allows the researcher to examine and interpret secondary data using a new conceptual framework, namely the halalan thayyiban principle. Document analysis is a systematic procedure for reviewing and evaluating documents containing information about the phenomenon under study (Bowen, 2009)

### *2. Data Source*

The primary data source for this research is the undergraduate thesis entitled "The Relationship between Snack Consumption Frequency and Physical Activity on the Nutritional Status of Adolescent Students at Al-Asnawiyah Female Islamic Boarding School" by Naili Fauziyah (Fauziyah, 2022). This thesis presents the results of a cross-sectional field study involving 74 female students at Al-Asnawiyah Female Islamic Boarding School. The data analyzed include several components. First, quantitative data comprising frequency distribution tables of snack consumption, physical activity levels, and nutritional status of the students. Second, qualitative data contained in the discussion section of the research results, including interpretations and analyses of the phenomena found. Third, contextual data in the form of a general description of the boarding school and the characteristics of the respondents forming the research background.

### *3. Nature and Availability of Data in the Source Document*

It is important to clarify the nature of data available in the source document (Fauziyah, 2022) to ensure transparency regarding the study's analytical capabilities. The original thesis is a quantitative cross-sectional study that did not employ in-depth interviews or focus group discussions with students. Consequently, primary qualitative data such as direct quotes from students about their understanding of halal, their reasons for choosing specific snacks, or their perceptions of boarding school food services are not available in the source document. The available data consist of: a) Quantitative data in the form of frequency distribution tables (snack consumption patterns, physical activity levels, nutritional status); b) Descriptive statistics (percentages, means, p-values); c) Qualitative narrative in the discussion section where the original author interpreted the quantitative findings; 4) Contextual descriptions of the boarding school environment and respondent characteristics.

Therefore, all interpretations in the present study regarding students' "understanding" of halal, "reasons" for snack choices, and "implementation" of halalan thayyiban are analytical inferences derived from the available quantitative data and contextual information, interpreted through the halalan thayyiban theoretical framework. These inferences are grounded in evidence from the data (e.g., if 90.5% consumed sweet iced tea >2 times/week, this is interpreted as reflecting a consumption pattern that deviates from the thayyib principle of proportionality) but remain inferential rather than directly observed or reported by students themselves. This distinction is maintained throughout the discussion to ensure that the study's claims remain proportionate to the capabilities of its research design.

#### 4. Data Collection Instruments and Procedures

The original thesis from which data were sourced employed three primary instruments for data collection, as documented in its methodology section (Fauziyah, 2022):

##### 4.1 Snack Consumption Data Collection

Data on snack consumption frequency were collected using a Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ) adapted from the Indonesian Ministry of Health's food frequency assessment guidelines. The questionnaire consisted of 25 types of snacks and beverages commonly identified during preliminary observations and interviews with canteen vendors at the boarding school. The 25 items were categorized into four groups: (1) packaged snacks (e.g., biscuits, crackers, chips); (2) fried snacks (e.g., bakwan, mendoan, fried sausages, fried tofu, fried tempeh); (3) traditional snacks (e.g., klepon, getuk, lupis); and (4) beverages (e.g., sweet iced tea, syrup drinks, packaged fruit drinks).

The SQ-FFQ was administered through face-to-face interviews by trained enumerators to ensure accurate recall and minimize misunderstanding. Respondents were asked to report the frequency of consuming each snack item over the past 30 days (1 month), with response options including: "never," "1-2 times/week," "3-4 times/week," "5-6 times/week," and "daily." For the purpose of analysis, consumption frequency was dichotomized into "rare" ( $\leq 2$  times/week) and "frequent" ( $> 2$  times/week) based on the median distribution of consumption patterns in the study population, following the categorization method used in the original thesis (Fauziyah, 2022).

##### 4.2 Physical Activity Data Collection

Physical activity data were collected using a 3-day Physical Activity Recall questionnaire. Respondents recorded all activities performed over three consecutive days (two weekdays and one weekend day) in 15-minute intervals. Physical activity levels were calculated as Physical Activity Level (PAL) values by dividing total daily energy expenditure by basal metabolic rate. PAL values were categorized according to World Health Organization (2020) classification: light (1.40-1.69), moderate (1.70-1.99), and heavy (2.00-2.40).

##### 4.3 Nutritional Status Data Collection

Nutritional status data were obtained through anthropometric measurements. Body weight was measured using a digital bathroom scale with an accuracy of 0.1 kg. Height was measured using a microtoise with an accuracy of 0.1 cm. Measurements were taken in the morning before breakfast, with respondents wearing light clothing and no footwear.

Body Mass Index (BMI) was calculated as weight (kg) divided by height squared ( $m^2$ ). BMI-for-age (BMI/A) z-scores were calculated using WHO AnthroPlus software (version 1.0.4). Nutritional status was categorized according to the Indonesian Minister of Health Decree Number 2 of 2020 into four categories: severe undernutrition (z-score  $< -3$  SD), undernutrition ( $-3$  SD  $\leq$  z-score  $< -2$  SD), good ( $-2$  SD  $\leq$  z-score  $\leq +1$  SD), overnutrition ( $+1$  SD  $<$  z-score  $\leq +2$  SD), and obesity (z-score  $> +2$  SD).

## 5. Document Analysis Procedure

The document analysis procedure followed Bowen's (2009) systematic framework for reviewing and evaluating documents, adapted to the specific context of this study. The procedure comprised five sequential phases:

Phase 1: Document Selection and Preparation. The thesis document was obtained in its complete form, including all tables, narratives, and appendices. The document was reviewed in its entirety to understand the overall research context, methodology, findings, and discussion. Key sections relevant to the halalan thayyiban analysis were identified: frequency distribution tables (Chapter 4), discussion of findings (Chapter 5), and the general description of the boarding school (Chapters 1-2).

Phase 2: Data Extraction and Organization. All relevant data were systematically extracted and organized into a structured matrix. Quantitative data (tables showing frequencies, percentages, and statistical associations) were transferred into a separate worksheet. Qualitative data (narrative descriptions, interpretations, and contextual information) were transcribed verbatim from the discussion section. Contextual data (boarding school characteristics, respondent profiles) were summarized. This extraction process ensured that all data available for analysis were captured and organized for systematic review.

Phase 3: Initial Coding. The extracted data were read multiple times to achieve familiarization. Initial coding was conducted using a combination of deductive and inductive approaches: a) Deductive codes were derived from the halalan thayyiban theoretical framework, including: halal (ingredient permissibility, production process, halal certification), thayyib (healthfulness, cleanliness, proportionality, nutritional value, safety), consumption patterns (frequency, types, energy contribution), environmental factors (availability, accessibility, peer influence), and physical activity (level, type, frequency); b) Inductive codes emerged from the data itself, including: "menu dissatisfaction," "limited exercise facilities," "canteen availability," and "static indoor activities." Coding was performed manually using highlighters and margin notes, with codes recorded in a coding log to maintain transparency.

Phase 4: Categorization and Theme Development. Codes with similar meanings were grouped into broader categories. For example, codes related to "fried foods," "sweetened beverages," "biscuits," and "high energy contribution" were categorized under "consumption patterns." Codes such as "no pork," "halal label," and "school canteen assumed halal" were grouped under "understanding of halal." Through iterative discussion and refinement, these categories were synthesized into the four main themes presented in the findings. This process involved moving between the coded data, the categories, and the halalan thayyiban theoretical framework to ensure coherence and theoretical grounding.

Phase 5: Interpretation and Writing. The final phase involved interpreting the themes within the halalan thayyiban conceptual framework. Each theme was analyzed by examining: (a) what the data revealed about current practices; (b) how these practices aligned with or deviated from halalan thayyiban principles; (c) the implications for students' nutritional status and health; and (d) opportunities for intervention. Interpretations were grounded in the available evidence and explicitly distinguished between findings directly supported by data and theoretically-informed inferences.

## 6. Data Analysis Technique.

Data analysis was performed using thematic content analysis, which includes several stages: Stage 1: Data Organization. Collecting and organizing all data from the thesis, including tables, narratives, and discussions. Stage 2: Coding. Assigning codes to parts of the data relevant to the halalan thayyiban principle. Stage 3: Categorization. Grouping codes with similar meanings into broader categories. Stage 4: Theme Identification. Discovering main themes emerging from the data categorization. Stage 5: Interpretation. Interpreting the themes found within the halalan thayyiban conceptual framework.

## 7. Data Validity

To ensure the validity and trustworthiness of interpretations derived from secondary data, this study employed multiple strategies adapted from Lincoln and Guba's (1985) criteria for qualitative research:

7.1 Credibility (Internal Validity). Several techniques were applied to enhance credibility: a) Prolonged Engagement. Prolonged engagement with the document was maintained through multiple readings over several weeks, allowing deep familiarization with the data and its context; b) Persistent Observation. Persistent observation was conducted by systematically examining all relevant sections of the thesis, ensuring no relevant data were overlooked; c) Triangulation. Triangulation was achieved by comparing and cross-referencing multiple data sources within the thesis: quantitative tables were compared with narrative discussions, and statistical findings were examined alongside qualitative interpretations provided by the original researcher. This cross-comparison helped verify consistency and identify patterns across different data types. d) Member Checking. Member checking was performed by consulting with the original thesis author (Fauziyah, 2022) to confirm the accuracy of extracted data and to clarify any ambiguities in the original interpretations. e) Peer Debriefing. Peer debriefing involved regular discussions with academic colleagues familiar with qualitative research and the halalan thayyiban concept, who provided critical feedback on emerging themes and interpretations.

7.2 Dependability (Reliability). Dependability was ensured through an audit trail that systematically documented the entire analysis process, including: (a) the raw data extracted from the thesis; (b) the coding framework with definitions of each code; (c) the categorization process showing how codes were grouped into themes; (d) memos recording analytical decisions and rationale; and (e) versions of the analysis showing how themes evolved through refinement. All documents were dated and stored systematically, allowing the research process to be traced and verified.

7.3 Confirmability (Objectivity). Confirmability was achieved by maintaining reflexivity throughout the analysis. The researcher kept a reflexive journal documenting personal assumptions, biases, and potential influences on interpretation, particularly regarding the researcher's own understanding of Islamic dietary principles. Additionally, findings were grounded in data by ensuring that every interpretation was supported by specific evidence from the thesis, with direct quotes and tables cited to substantiate claims. Interpretations that extended beyond the available data were explicitly identified as theoretical inferences rather than empirical findings.

7.4 Transferability (External Validity). While findings from a single document analysis cannot be statistically generalized, thick description of the research context, the boarding school characteristics, and the respondent profiles was provided to enable readers to assess the applicability of findings to similar contexts. Detailed descriptions of the boarding school environment, student characteristics, and consumption patterns allow readers to make judgments about transferability to other Islamic boarding school settings.

7.5 Authenticity. The study maintained authenticity by presenting findings in a balanced manner that fairly represented the data, acknowledging both the strengths and limitations of the secondary data source. All interpretations were presented with appropriate caution, and the distinction between data-derived findings and theoretical inferences was clearly maintained throughout the discussion.

## Results and Discussions

### General Overview of Research Data

The quantitative research serving as the data source was conducted at Al-Asnawiyah Female Islamic Boarding School with the participation of 74 female students aged between 13 and 17 years. The results showed the distribution of snack consumption frequency, types of snacks and beverages, physical activity, and nutritional status as follows:

**Table 1. Distribution of Snack Consumption Frequency, Physical Activity, and Nutritional Status**

| Variable                    | Category       | Frequency (n) | Percentage (%) | Data Acquisition Method / Description                                                                                                                                                                                                                                          |
|-----------------------------|----------------|---------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Snack Consumption Frequency | Rare           | 36            | 48,6           | SQ-FFQ (Semi-Quantitative Food Frequency Questionnaire): Respondents were asked to recall the frequency of snack consumption over the past month, categorized as "rare" ( $\leq 2$ times/week) or "frequent" ( $> 2$ times/week)                                               |
|                             | Frequent       | 38            | 51,4           |                                                                                                                                                                                                                                                                                |
| Physical Activity           | Light          | 64            | 86,5           | Physical Activity Recall Questionnaire: Respondents recorded daily activities over 3 consecutive days (2 weekdays + 1 weekend). PAL values were calculated and categorized as light (1.40-1.69), moderate (1.70-1.99), or heavy (2.00-2.40) based on WHO (2020) classification |
|                             | Moderate       | 10            | 13,5           |                                                                                                                                                                                                                                                                                |
| Nutritional Status          | Undernutrition | 3             | 4,1            | Anthropometric Measurement: Body weight measured using                                                                                                                                                                                                                         |

|  |            |    |                                                                                                                                                                                                                                                 |
|--|------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |            |    | digital scale (accuracy 0.1 kg) and height measured using microtoise (accuracy 0.1 cm). BMI-for-age (BMI/A) z-scores were calculated using WHO AnthroPlus software and categorized according to Indonesian Minister of Health Decree No. 2/2020 |
|  | Good       | 55 | 74,3                                                                                                                                                                                                                                            |
|  | Overweight | 14 | 18,9                                                                                                                                                                                                                                            |
|  | Obesity    | 2  | 2,7                                                                                                                                                                                                                                             |

Source: Fauziyah (Fauziyah, 2022)

**Table 2. Types of Snacks and Beverages Most Frequently Consumed by Respondents**

| Type of Snack               | Category      | Frequency (n) | Percentage (%) | Data Acquisition Method / Description                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|---------------|---------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biscuits                    | ≤2 times/week | 33            | 44,6           | SQ-FFQ (Semi-Quantitative Food Frequency Questionnaire): Respondents were asked to recall the frequency of consuming each listed snack item over the past month. The questionnaire included 25 types of snacks commonly available at the boarding school canteen and surrounding area. Frequency was categorized as "rare" (≤2 times/week) or "frequent" (>2 times/week) based on the distribution of consumption patterns |
|                             | ≤2 times/week | 41            | 55,4           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Vegetable Fritters (Bakwan) | ≤2 times/week | 34            | 45.9           | SQ-FFQ: Same instrument as above. Respondents reported frequency of consuming fried vegetable fritters, a popular snack sold at the school canteen during break times and after school hours                                                                                                                                                                                                                               |
|                             | 2 times/week  | 40            | 54.1           |                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Tempeh Fritters (Mendoan)   | 2 times/week  | 31            | 41.9           | SQ-FFQ: Frequency of consuming tempeh fritters (mendoan), a traditional fried snack made from fermented soybean cake, widely available at the                                                                                                                                                                                                                                                                              |

|                |               |    |      |                                                                                                                                                                                                                                                     |
|----------------|---------------|----|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |               |    |      | canteen and frequently chosen due to affordable price (IDR 2,000-3,000 per portion)                                                                                                                                                                 |
|                | 2 times/week  | 43 | 58.1 |                                                                                                                                                                                                                                                     |
| Fried Sausages | ≤2 times/week | 31 | 41.9 | SQ-FFQ: Frequency of consuming processed meat snacks (fried sausages), a packaged food item commonly sold by canteen vendors and street food sellers around the boarding school                                                                     |
|                | ≤2 times/week | 43 | 58.1 |                                                                                                                                                                                                                                                     |
| Sweet Iced Tea | ≤2 times/week | 7  | 9.5  | SQ-FFQ: Frequency of consuming sweetened iced tea, the most frequently consumed beverage. Respondents reported consumption of sweet iced tea, often purchased during free time (after Dhuhr prayer, after school, before evening Qur'an recitation) |
|                | ≤2 times/week | 67 | 90.5 |                                                                                                                                                                                                                                                     |
| Syrup Drink    | ≤2 times/week | 39 | 52.7 | SQ-FFQ: Frequency of consuming commercial syrup drinks (sweetened flavored beverages). These drinks are readily available at the canteen and are chosen for their sweet taste and affordability                                                     |
|                | ≤2 times/week | 35 | 47.3 |                                                                                                                                                                                                                                                     |

Source: Fauziyah (Fauziyah, 2022)

**Table 3. Distribution of Respondents by Energy Contribution from Snacks**

| Energy Contribution of Snack Foods | Frequency (n) | Percentage (%) |
|------------------------------------|---------------|----------------|
| Good                               | 6             | 8,1            |
| More                               | 68            | 91,9           |
| Total                              | 74            | 100,0          |

Source: Fauziyah (Fauziyah, 2022)

Based on Table 1, the research results indicate that the majority of students have good nutritional status, at 74.3 percent of the total respondents. However, there are still nutritional problems, with 18.9 percent of students experiencing overweight and 2.7 percent experiencing

obesity. A total of 51.4 percent of students are in the frequent snack consumption category, while 86.5 percent have a light physical activity level.

Based on Table 2, it is known that respondents consumed more types of snacks consisting of various fried foods, packaged snacks, and beverages. The types of fried foods most consumed were mendoan, fried sausages, and bakwan, while the most frequently consumed packaged snack (>2 times a week) was biscuits. Regarding beverages, most respondents consumed sweet iced tea, with 67 respondents consuming it more than twice a week. Based on Table 3, it is known that the majority of respondents have a habit of consuming snacks. This can be seen from the energy contribution from snacks, with 91.9% falling into the 'more' category.

### **Thematic Analysis**

Based on thematic content analysis of the research data, four main themes emerged describing the implementation of the halalan thayyiban principle in the snack consumption behavior of female students.

#### **1. Snack Consumption Culture in the Boarding School Environment**

The analysis shows that the snack consumption culture at Al-Asnawiyah Female Islamic Boarding School is dominated by foods high in fat and sugar. Based on data on the types of snacks consumed, students consume more fried foods such as mendoan and fried sausages, as well as sweet beverages like sweet iced tea and syrup drinks, with a frequency of more than twice a week.

This consumption culture is shaped by several interrelated factors. The first factor is the availability and accessibility of snacks, which are easily found at the school canteen and in the surrounding environment. The second factor is peer influence, where adolescents tend not to choose food based on nutritional content but are more influenced by the social environment and group behavior (Faradila et al., 2019). The third factor is dissatisfaction with the food menu provided by the boarding school, which is considered monotonous and less varied. The fourth factor is the very high energy contribution from snacks, with 91.9 percent of students having an energy intake from snacks exceeding the recommended limit (more than 20 percent of total energy requirements), with an average consumption reaching 677.9 kcal per day.

From the perspective of halalan thayyiban, this consumption culture indicates a violation of the thayyib principle, particularly regarding health and proportionality. Excessive consumption of fried foods contains saturated and trans fats, increasing the risk of weight gain and degenerative diseases (Mukhlisa & Nugroho, 2021). Similarly, regular consumption of sweet beverages contributes to sugar intake exceeding recommended limits. This contradicts the Qur'anic message in Surah Al-A'raf, verse 31, which prohibits excess in eating and drinking. Frequent consumption of high-calorie snacks is a form of israf (wastefulness/extravagance) that is inconsistent with Islamic teachings (Mukhlisa & Nugroho, 2021).

#### **2. The Meaning of Halal in Food Selection Behavior**

Data analysis revealed that students' understanding of the halal concept is still limited to the basic aspect. Students understand halal as food that does not contain forbidden ingredients, especially pork, and food sold within the boarding school environment, which is assumed to have guaranteed halal status. Some students also consider the presence of a halal label on packaging sufficient to guarantee a product's permissibility.

This understanding does not yet encompass other important aspects such as the halal status of the production and storage processes, cleanliness and food safety, nutritional content and health benefits, and consumption proportionality. This indicates that students' knowledge of the halal concept is still partial and not comprehensive.

In the *halalan thayyiban* perspective, the halal concept is not only limited to the ingredient aspect but also encompasses the production, storage, and serving processes. Muzakki (Muzakki, 2021) identifies several requirements for the halal and *thayyib* concept, including being free from impurities, not mixed with forbidden substances during preparation and storage, not containing excessive chemicals, and not using harmful food preservatives.

The limited understanding of the *halalan thayyiban* concept among students indicates that education about halal and good food in the boarding school environment still needs to be improved. Students need to understand that *thayyib* food is healthy, proportional, safe, and halal (Setiawan, 2019). As explained by Risdiani, knowledge is needed on how to choose snacks that are fit for consumption and following Islamic religious teachings, so students not only fulfill the basic halal aspect but also pay attention to the quality and impact of food on health (Risdiani et al., 2022).

### **3. The *Thayyib* Dimension in Consumption Quality**

Data analysis shows that the *thayyib* or goodness dimension in the students' snack consumption has not been optimally implemented. This is reflected in several concerning indicators. The first indicator is the high energy contribution from snacks, where 91.9 percent of students have an energy intake from snacks exceeding the recommended limit (>20 percent of total energy requirements). This condition indicates that snack consumption has exceeded the proper proportion, potentially leading to overweight.

The second indicator is the low level of physical activity, with 86.5 percent of students falling into the light activity category. Most activities are static indoors, such as reciting the Qur'an, studying, and light housework. Students rarely exercise due to limited time and facilities. The third indicator is the persistence of suboptimal nutritional status problems. Although the majority of students have good nutritional status (74.3 percent), there are still 18.9 percent with overweight and 2.7 percent with obesity. This overweight status is closely related to excessive snacking patterns and low physical activity levels, creating an imbalance between energy intake and expenditure.

The *thayyib* dimension in the *halalan thayyiban* concept encompasses aspects of health, cleanliness, proportionality, and benefit (Shihab, 2005). Consumed food should benefit the body and not cause harm. Excessive consumption of snacks without considering nutritional value and proportionality contradicts the *thayyib* principle. Similarly, low physical activity contradicts the *thayyib* concept in the context of maintaining body health. The Prophet Muhammad SAW encouraged his followers to have a strong physique, achievable through physical activity and exercise. Khasanah emphasized that female students tend to be reluctant to engage in outdoor activities like sports, which can lead to overweight (Khasanah & Rauf, 2016). This limited physical activity is also related to the lack of sports facilities in the boarding school (Hariati, 2021); (Hutajulu et al., 2022).

#### **4. Opportunities for Integrating Halal Nutrition in the Boarding School Environment**

Based on data analysis, several strategic opportunities exist to integrate the halalan thayyiban principle into nutrition education and food services at the boarding school. The first opportunity is Islamic value-based nutrition education. The boarding school can integrate material on halalan thayyiban food into the religious curriculum. Qur'anic verses such as Q.S. Al-Baqarah (2:168), Al-Maidah (5:88), An-Nahl (16:114), and Al-Anfal (8:69) provide a theological foundation for the importance of consuming halal and good food. This education can include understanding the criteria for halalan thayyiban food, how to choose healthy and halal snacks, the impact of excessive consumption on health, and the importance of physical activity for maintaining fitness.

The second opportunity is improving the quality of food service at the boarding school. Based on interviews with boarding school administrators, the menu served is still monotonous, such as fried tempeh, fried tofu, and crackers. Menu variety needs to be improved by applying the principles of balanced nutrition, including providing more varied vegetables and side dishes to meet the students' nutritional needs and reduce dependence on external snacks. The third opportunity is providing healthy snacks at the school canteen. The boarding school authorities can collaborate with canteen managers to provide healthy snack alternatives such as fresh fruits, vegetables, and low-fat and low-sugar foods. This step is important considering that students have a habit of buying snacks in their free time, so providing healthy options will facilitate better choices.

The fourth opportunity is structured physical activity programs. The boarding school can organize regular sports activities, such as morning exercises, fun walks, or various other physical activities involving all students. Khasanah emphasized the importance of physical activity in preventing overweight in female students (Khasanah & Rauf, 2016). The fifth opportunity is involving students as agents of change. Students can be involved as health cadres in the boarding school, tasked with educating their peers about the importance of healthy snacking and physical activity. This approach aligns with the principle of community empowerment in health promotion and will create a more sustainable impact.

Based on the document analysis of the available data, this study identifies that integrating halal nutrition in boarding schools represents a strategic opportunity to implement the halalan thayyiban principle in students' daily lives. As explained in Q.S. Al-Maidah (5:88), Allah commands His followers to eat food that is halal and good. Consuming halalan thayyiban food not only impacts physical health but also spiritual and mental health. However, the analysis of the available data reveals that while students demonstrated basic awareness of halal requirements (e.g., avoiding pork), this understanding had not translated into comprehensive consideration of the thayyib dimension, including nutritional quality, cleanliness, and proportionality in their snack choices.

The identification of these gaps is not based on direct interview data with students, as such data were not available in the source document. Rather, the findings are derived from analytical interpretation of quantitative data (frequency distributions, consumption patterns, energy contributions) and qualitative discussions contained in the original thesis, interpreted through the halalan thayyiban theoretical framework. This analytical approach reveals that the opportunity to integrate halal nutrition exists, but its realization requires educational

interventions that go beyond basic halal awareness to encompass the full halalan thayyiban concept, including the health and proportionality dimensions emphasized in the Qur'an (Q.S. Al-Maidah 5:88; Q.S. Al-A'raf 7:31).

### Synthesis of Findings

Based on the thematic analysis conducted, it can be synthesized that the implementation of the halalan thayyiban principle in the snack consumption behavior of female students at Al-Asnawiyah Female Islamic Boarding School, still faces various challenges. The snack consumption culture dominated by high-fat and high-sugar foods, the limited understanding of halal to its basic aspects, and low physical activity indicate that the thayyib dimension has not been optimally implemented.

**Table 4. Halalan Thayyiban Analysis Matrix in Student Snack Consumption Behavior**

| Dimension | Indicator          | Findings                            | Gap                                           |
|-----------|--------------------|-------------------------------------|-----------------------------------------------|
| Halal     | Materials          | No pork content                     | Understanding limited to basic permissibility |
|           | Production Process | Sold at school canteen              | Production process not yet considered         |
|           | Storage            | Unknown                             | Not yet a concern                             |
| Thayyib   | Health             | 91.9% excessive energy contribution | Unhealthy, excessive snack consumption        |
|           | Proportionality    | 51.4% frequent snack consumption    | Not proportional to needs                     |
|           | Physical Activity  | 86.5% light activity                | Imbalance with energy intake                  |
|           | Cleanliness        | Unknown                             | Not yet a primary consideration               |

Source: Data analysis (2024)

The gap between understanding and snack consumption practices indicates that nutrition education in the boarding school needs improvement, not only in terms of knowledge but also in behavior change. Islamic value-based nutrition education that integrates the halalan thayyiban concept has great potential to increase students' awareness of choosing healthy and proportional food. This study also shows that environmental and social factors strongly influence students' snacking behavior. The availability of snacks at the school canteen and around the school, peer influence, and the quality of the boarding school menu are factors affecting students' snack choices. Therefore, comprehensive interventions need to involve various parties, including the boarding school management, canteen administrators, teachers, and the students themselves.

The interpretations presented in this discussion should be understood within the context of the study's methodological approach. As this research relied on document analysis of existing quantitative data, the findings regarding students' "understanding" of halal, their "motivations"

for snack choices, and the "implementation" of halalan thayyiban are inferential interpretations rather than direct observations or verbatim accounts from students. The original source document (Fauziyah, 2022) did not contain interview data where students explicitly articulated their understanding of halal, their reasons for choosing specific snacks, or their awareness of the thayyib dimension.

Instead, these interpretations are derived from triangulation of available evidence: (1) consumption patterns reflected in frequency data (e.g., high consumption of fried foods and sweetened beverages); (2) statistical associations indicating relationships between variables; (3) the original author's qualitative discussion of findings; and (4) contextual information about the boarding school environment. These multiple data points were analyzed through the halalan thayyiban theoretical framework to generate coherent, evidence-grounded interpretations.

For example, the interpretation that students' understanding of halal is "limited to basic permissibility" is inferred from the combination of: (a) high consumption of snacks that are technically halal (no pork) but nutritionally poor; (b) absence in the original discussion of any mention of health or nutritional considerations in students' food choices; and (c) contextual evidence that halal certification or religious knowledge was not identified as a primary factor influencing food choice. While this interpretation is plausible and grounded in available evidence, it remains an analytical inference that would benefit from validation through primary qualitative research in future studies.

## **Conclusion**

Based on the document analysis of the quantitative research at Al-Asnawiyah Female Islamic Boarding School several conclusions can be drawn. First, the snack consumption culture in the boarding school environment is dominated by foods high in fat and sugar, such as fried foods, packaged snacks, and sweetened beverages, with an excessive energy contribution (91.9 percent). This consumption is driven by factors of availability, peer influence, and dissatisfaction with the food menu provided by the boarding school.

Second, the meaning of halal in food selection behavior is still limited to the basic aspect of permissibility (i.e., not containing forbidden ingredients like pork), without considering broader aspects of health, hygiene, and food safety. Third, the thayyib dimension in consumption quality has not been well implemented. This is reflected in the excessive snack consumption, low physical activity (86.5 percent), and the persistence of overweight (18.9 percent) and obesity (2.7 percent) problems among the students. Fourth, there are opportunities for integrating halal nutrition in the boarding school through Islamic value-based education, improving the quality of food service, providing healthy snacks at the canteen, structured physical activity programs, and involving students as agents of change.

## **Recommendations**

For the boarding school, it is recommended to: integrate material on halalan thayyiban food into the religious curriculum; improve the variety of the food menu by applying the principles of balanced nutrition; provide healthy snacks at the school canteen; organize regular sports programs for students; and involve students as health cadres. For future researchers, it is recommended to: conduct qualitative field research to explore students' understanding of halalan thayyiban in more depth; develop an Islamic value-based nutrition education intervention model;

study the effectiveness of halal nutrition integration programs in boarding schools; and examine other factors influencing the implementation of halalan thayyiban in the boarding school environment.

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### Conflicts of interest

The authors declare that there are no conflicts of interest.

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## APPENDIX

### Thematic Analysis Matrix

Table 5. Halalan Thayyiban Thematic Analysis Matrix

| Main Theme                | Sub-theme              | Code                                      | Data Quote                                                                                                              | Interpretation                                                 |
|---------------------------|------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Snack Consumption Culture | Dominant snack types   | Fried foods, sweet beverages              | Data shows 58.1% consume mendoan and fried sausages, 90.5% consume sweet iced tea                                       | Consumption culture dominated by high-fat and high-sugar foods |
|                           | Driving factors        | Availability, peers, boarding school menu | "Students buy snacks in their free time, such as after Dhuhr prayer, after school, or before evening Qur'an recitation" | Environment and social factors influence consumption behavior  |
|                           | Energy contribution    | Excessive                                 | 91.9% of students have energy contribution >20% of total requirements                                                   | Snack consumption exceeds proportional limits                  |
| Meaning of Halal          | Understanding of halal | Limited to basic permissibility           | Students understand halal as food sold that does not contain pork                                                       | Understanding is partial and not comprehensive                 |