



The Effect of Health Education on Knowledge of Junk Food among Elementary School Students

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Abstract

Introduction: The high consumption of junk food among children is a serious issue due to its negative health impacts, such as obesity, diabetes, and metabolic disorders from an early age. Fast food is popular for its convenience and taste, but it is low in nutrition. National and international data, including from the WHO and Riskesdas, show that junk food consumption among schoolchildren continues to increase, including in Bangka Belitung. Children's low knowledge about healthy food requires intervention in the form of health education.

Objective: This study aims to determine the effect of health education on knowledge about junk food among fifth-grade students at Madrasah Ibtidaiyah Al Islam Kemuja in 2025.

Method: This study used a quantitative pre-experimental research design with a one-group pretest-posttest approach, involving 70 students through total sampling. The instrument was a closed-ended questionnaire with indicators for the definition, types, dangers, selection factors, and prevention of the impacts of junk food. Analysis used a paired t-test.

Result: The results showed a significant increase in students' knowledge, from an average of 56.89 before the intervention to 76.27 after the intervention, with a significance value of 0.000 (<0.05).

Conclusion: This study concludes that health education significantly improves students' knowledge regarding junk food. These findings highlight the important role of structured educational interventions in promoting healthy dietary awareness among school-aged children. Therefore, healthcare institutions may use these results as a reference for developing and implementing regular school-based health promotion programs. Educational institutions can also utilize this study as supplementary learning material and as a reference in academic resources.

Keywords: elementary school students, health education, junk food, knowledge

Introduction

The high rate of junk food consumption among children continues to increase over time. Junk food has become very popular due to its fast preparation, delicious taste, and easy availability (Romadona et al., 2021). Junk food is instant food that is popular with children because of its savory and delicious taste. Nuggets or sausages, for example, come in various shapes and sizes, attracting children's attention. While junk food tastes good, it is unhealthy and can be harmful to children's health. Children can grow and develop well if they are given proper attention to their nutritional needs.

According to the World Health Organization (WHO) in 2022, junk food is defined as food high in sugar, fat, salt, vitamins, and calories, and low in nutrients, minerals, and fiber. These foods include canned foods, fast food, fried foods, soft drinks, sweets, pickles, and snacks. A Global Web Index survey shows that up to 41% of consumers in North America consume fast food, categorized as junk food, weekly. This percentage is the highest compared to other regions. Global Web Index surveyed 35,367 respondents who consumed fast food in 47 countries. The survey was conducted in the first quarter of 2021 (Juansyah, 2023).

According to the World Health Organization (WHO), in 2022, more than 390 million children and adolescents aged 5-19 worldwide were overweight or obese. This number represents a sharp increase compared to 1990, when the prevalence was only around 8%, and in 2022, it increased to 20%. The main factor contributing to this surge is unhealthy eating habits, particularly the consumption of junk food such as fast food, high in sugar, saturated fat, and salt, which is widely sold and consumed by children.

Data from the Basic Health Research (2018) explains that the consumption of unhealthy foods, or junk food, among children in Indonesia is relatively high. As many as 61.27% of children aged 5-12 years consume sweet drinks at least once a day, 40.1% consume sweet foods, 43% consume salty foods, and 45% consume fatty foods with the same frequency. Consumption of foods high in sugar, salt, and fat is a hallmark of junk food, which can increase the risk of obesity, type 2 diabetes mellitus, hypertension, and other metabolic disorders from an early age. This phenomenon is exacerbated by high exposure to unhealthy food advertisements in the media, as well as a modern lifestyle that tends to be practical and pays little attention to the nutritional value of food. This situation highlights the importance of paying attention to children's consumption behavior, particularly in limiting junk food intake as a preventative measure against non-communicable diseases in the future.

The consumption rate of junk food in Indonesia has reportedly increased over time, as it is easily accessible and highly popular (Siregar & Siagian, 2023). Junk food consumption in Indonesia, specifically in the city of Bandung, shows that 52.6% of elementary school students consume junk food more than five times per day. Meanwhile, 47.4% consume junk food more than twice per day (Romadona et al., 2021).

According to the Population and Family Planning Agency in the Bangka Belitung Islands Province, the average healthy eating habit among children remains low due to the prevalence of instant foods or fast food, which are considered junk food, with 32% consuming them. The 2021 Indonesian Nutritional Status Study reported that the prevalence of malnutrition in the Bangka Belitung Islands Province was 19.93% in 2019, increasing to 21.6% in 2020 and decreasing to 18.16% in 2021. Of the seven regencies in the Bangka Belitung Islands Province, the highest prevalence of malnutrition is in West Bangka Regency, at 23.5% (YNA, 2022).

Based on initial observations conducted at the Al Islam Kernuja Elementary School on December 14, 2024, the snacks sold in the school canteen were junk food. The results of interviews with 10 children showed that children often consumed junk food snacks such as

fried foods, nuggets, sausages, chicken and fish meatballs, grilled meatballs, rolled eggs, fried liver and chips along with other foods. The children said they did not know what junk food was, the most important thing was that they liked the taste and said they often consumed the food more than 2 times a day.

Objective

This study aims to determine the effect of health education on knowledge about junk food among fifth-grade students at Madrasah Ibtidaiyah Al Islam Kemuja in 2025.

Method

This study employed a quantitative research method, which focuses on measuring phenomena using numerical data and statistical analysis. This approach was chosen to objectively assess changes in students' knowledge levels before and after receiving health education about junk food. By using quantitative methods, the effect of the educational intervention could be clearly measured and statistically tested.

The research design used in this study was a pre-experimental design with a one-group pretest–posttest approach. This design involved only one group of participants without a comparison or control group. At the beginning of the study, all participants completed a pretest to measure their initial level of knowledge regarding junk food. After the pretest, the students were given health education related to junk food, including its definition, types, health risks, and prevention of its negative effects. Once the educational intervention was completed, a posttest was administered to evaluate changes in students' knowledge after receiving the health education.

The participants in this study were all fifth-grade students at Madrasah Ibtidaiyah Al Islam Kemuja, totaling 70 students. A total sampling technique was applied, meaning that the entire population was included as research participants. This technique was used to obtain comprehensive results and to avoid sampling bias, given the relatively small population size.

Data collection was carried out using a closed-ended questionnaire as the research instrument. The questionnaire consisted of structured questions with predetermined answer choices, making it easier for students to respond and for researchers to process the data. The questionnaire measured students' knowledge of junk food, covering aspects such as the definition of junk food, types of junk food, health dangers, factors influencing junk food selection, and ways to prevent the negative impacts of junk food consumption.

The data obtained from the pretest and posttest were analyzed using a paired t-test. This statistical test was selected because it compares two related sets of data from the same group of participants. The paired t-test was used to determine whether there was a statistically significant difference in students' knowledge levels before and after the health education intervention. A significance value of less than 0.05 indicated that the health education had a significant effect on improving students' knowledge about junk food.

Result

Table 1. Difference in Average Knowledge of School-Aged Children Before and After Health Education at Al Islam Kemuja Elementary School in 2025

Time	N	Mean ± Standar Deviation	SE	p value
<i>Pretest</i>	70	56.89 ± 17.592	2.103	0.000
<i>Posttest</i>	70	76.27 ± 12.245	1.464	

Table 1 shows that the frequency score of school-aged children's knowledge before health education was 56.89, with a standard deviation of 17.592, and a standard error of 2.103. The average score for school-aged children's knowledge after health education was 76.27, with a standard deviation of 12.245 and a standard error of 1.464. Meanwhile, statistical analysis using paired samples t-test shows that the p-value is $0.000 < 0.05$, so H_0 is rejected and H_a is accepted. So it can be concluded that there is a significant difference in the results of the frequency of knowledge of school-age children before (pretest) and after (posttest). So it can also be concluded that "there is an influence of education The Impact of Health on School-Aged Children's Knowledge of Junk Food at Al Islam Kemuja Elementary School in 2025.

Discussion

Changes or improvements in individual knowledge after receiving interventions in the form of structured information or education about fast food (junk food), including its nutritional content, health impacts, and healthy consumption patterns. Health education plays a crucial role in conveying information that can increase public awareness and understanding of the dangers of excessive junk food consumption (Utami & Dewi, 2022).

This health education can be provided in the form of visual media (posters, videos), educational games, stories, or direct counseling. It is expected to increase children's knowledge in recognizing and avoiding excessive consumption of unhealthy foods such as junk food. (Utami & Dewi, 2022).

Based on the results of a study conducted by researchers with 70 school-age children, it was found that before receiving health education, respondents had little knowledge or understanding of junk food. However, after receiving health education, there was a change, and respondents had a greater understanding and comprehension of junk food. The results of statistical data processing before receiving health education showed an average score of 56.89, while after receiving health education, the average score was 76.27. The statistical test showed a p-value of 0.000 ($p\text{-value} > 0.05$), indicating a highly significant difference in the average scores before and after health education on the level of knowledge of junk food among school-aged children at Madrasah Ibtidaiyah Al Islam Kemuja in 2025.

These results align with previous research conducted by Prasetyo & Sari (2022) entitled "The Effect of Health Education on School-Aged Children's Knowledge of the Dangers of Junk Food at SMA Negeri 1 Kediri." The study used a quasi-experimental approach with a one-group pretest-posttest approach, with a sample size of 82 school-aged children. The results demonstrate that health education can be used to increase the knowledge of school-aged children. Of the 82 respondents, 14 (30.4%) had a high level of knowledge in the pretest. Following health education therapy, 21 (45.7%) of the school-aged children experienced an

increase in their knowledge. This indicates that knowledge about junk food has increased through health education. This research is also in line with research conducted by Novi, (2023) entitled *The Effect of Junk Food Health Education on Knowledge, Attitudes, and Behavior in Elementary School Students of State Elementary School 01 Madegondo Grogol*. This study used a pre- and post-experimental design with a pre-test-post-test design approach. The results of the study showed a significant difference in the level of knowledge before and after health education, with a p-value of $0.000 < 0.05$ (a). The difference in the level of knowledge before and after health education was carried out, namely there was an average value before being given health education, namely 7.24, then the average value after being given health education increased to 12.36. The analysis results showed a p-value of $0.000 (< \alpha (0.05))$, indicating that health education has an effect on the knowledge level of students at State Elementary School 01 in Madegondo Grogol.

Based on theory and research results, the researcher believes that health education can influence knowledge levels and is therefore highly effective for school-age children. Providing health education in a structured, interactive manner tailored to children's cognitive development has been shown to improve their understanding of junk food, the harmful substances it often contains, and the short-term and long-term impacts of excessive junk food consumption.

Furthermore, health education also plays a role in developing children's critical attitudes toward their daily food choices. Children who receive health education tend to be better able to distinguish between healthy and unhealthy foods and demonstrate an intention to reduce their consumption of unhealthy foods.

Conclusion

This study concludes that health education significantly improves students' knowledge regarding junk food. These findings highlight the important role of structured educational interventions in promoting healthy dietary awareness among school-aged children. Therefore, healthcare institutions may use these results as a reference for developing and implementing regular school-based health promotion programs. Educational institutions can also utilize this study as supplementary learning material and as a reference in academic resources.

Conflict of Interest

No declare.

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