Designing a Health Education Program for Elementary School Students: Promoting Clean and Healthy Living Habits

[1]Julian Yuda Wijaya, [2]Selvi meliyanti, [3]I Bagus Endrawan*, [4]Martinus, [5]Noviria Sukmawati, [6]Selvi Atesya kesumawati

[1,2,3,4,5,6]Universitas Bina Darma, Palembang, Indonesia

Abstract.

Background Healthy living behaviors are foundational for the development of physically and mentally fit individuals. Instilling these habits in elementary school students is essential, as early intervention can foster long-term public health benefits. However, many young students lack awareness and understanding of personal hygiene, nutrition, and general wellness.

Objectives This study aimed to design and implement a school-based health education program that promotes clean and healthy living habits among elementary students, with a focus on improving knowledge, behaviors, and engagement in health-related activities.

Methods The program was carried out at SDN 2 Sukanegara using a quantitative and educational approach. Interactive activities such as role-playing, poster-making, and group discussions were implemented over one month with fourth-grade students. The focus areas were "Personal Hygiene" and "Healthy Eating Habits." Pre- and post-tests were administered to measure improvements in students' understanding and behaviors.

Results Findings showed a 32% increase in students' health knowledge, especially on handwashing and the importance of breakfast. Over 70% of participants adopted healthier behaviors such as regular handwashing and bringing nutritious meals. Students demonstrated high enthusiasm during participatory activities, and collaborative routines like school clean-up became a habit.

Conclusion A structured and engaging health education program tailored to elementary students significantly improves awareness and promotes lasting healthy behaviors. Teacher and parent involvement was critical to sustaining the impact, and the model aligns well with curriculum-based and community-supported health initiatives.

Keywords: Health Education, Healthy Lifestyle, Elementary School Students, Personal Hygiene

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*Correspondence: bagus.endrawa@binadarma.ac.id
I Bagus Endrawan
Universitas Bina Darma, Palembang, Indonesia

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INTRODUCTION

Health education plays a crucial role in shaping the attitudes, knowledge, and behaviors of children regarding personal well-being and disease prevention (Ahad et al., 2023). Elementary school represents a critical period in which foundational health habits are formed, making this stage of development ideal for introducing clean and healthy living practices (Dewi, 2023). (Blüher, 2025) According to the World Health), health is not merely the absence of disease or infirmity but a state of complete physical, mental, and social well-being. Therefore, instilling the principles of healthy living in children from an early age is not only beneficial for individual health outcomes but also contributes to broader public health goals (Bayram & Shields, 2021).

Despite the importance of health education, many elementary students are still unaware of the impact of their daily habits on their overall health (Bhattad & Pacifico, 2022). Issues such as poor dietary practices, limited hygiene knowledge, and lack of physical activity are prevalent among children, often exacerbated by environmental and social factors such as easy access to unhealthy food, limited parental supervision, and inadequate school-based health programs (Blüher, 2025).

Schools serve as strategic venues for delivering health education, given the amount of time children spend there and the potential for structured learning (Adegbija & Fakomogbon, 2013). Research has shown that health promotion programs implemented within schools can significantly influence students' behaviors and attitudes toward health (Chavula et al., 2022). When such programs are engaging and contextually

relevant, they not only enhance students' understanding of health-related topics but also promote lasting behavioral change.

Furthermore, collaborative involvement from teachers, parents, and health professionals is essential to ensure the sustainability and effectiveness of health education efforts (Kuswoyo et al., 2020). Reahana Maulidiah (2021) emphasized that habit formation is one of the most effective instructional methods for building character and encouraging responsible health behavior in young learners. In addition, the integration of health education with character-building strategies, such as empathy, discipline, and responsibility, aligns with the goals of holistic education as advocated by Indonesia's national curriculum frameworks (Daniels et al., 2023).

Therefore, this study seeks to design and evaluate a structured, engaging, and age-appropriate health education program for elementary school students, with a focus on clean and healthy living. The program aims to address students' current knowledge gaps, encourage healthier behaviors, and foster long-term lifestyle changes through interactive and school-based interventions (Harahap et al., 2023).

METHOD

Participant

This study was conducted with fourth-grade students at SDN 2 Sukanegara, a public elementary school in Indonesia. A single class was selected as the sample group, consisting of 25 students aged between 9 and 10 years old. The participants were selected purposively based on their grade level and availability to participate in the full duration of the program. The homeroom teacher and school administrators provided consent and assisted with program coordination. Parental approval was also obtained for student participation.

Research Design

(Sugiyono, 2012) This study employed a quantitative descriptive design using a one-group pretest–posttest model to examine the changes in students' knowledge and behaviors regarding healthy living. The intervention was carried out over a four-week period and focused on two primary themes: personal hygiene and healthy eating habits. The program consisted of a series of interactive learning sessions covering hygiene and nutrition, integrated with engaging activities such as role-playing, poster-making, and group competitions. Throughout the program, students' behaviors were monitored daily, particularly in relation to handwashing routines and food choices brought from home. Teachers played an active role by consistently reinforcing key health messages during classroom activities. The educational model was intentionally designed to be age-appropriate and engaging, aligning with the national curriculum's emphasis on active learning and character development.

Data Analysis

Data were collected using a simple pretest and posttest questionnaire designed to measure students' knowledge and understanding of clean and healthy living practices. The questions assessed topics such as handwashing, balanced diet, importance of breakfast, and general hygiene behavior.

(Arikunto, 2010) Quantitative analysis involved calculating the mean scores of the pretest and posttest results to determine the percentage increase in knowledge. Additionally, behavioral observations and teacher reports were used to qualitatively assess changes in students' habits. These observations focused on indicators such as frequency of handwashing, food choices in lunchboxes, and participation in group activities. Descriptive statistics were used to summarize findings.

RESULTS AND DISCUSSION

Results

The participants in this study were 25 fourth-grade students at SDN 2 Sukanegara, aged between 9 and 10 years old. The class was selected purposively based on accessibility and relevance to the study objectives. Prior to the intervention, permission was obtained from the school principal, class teacher, and the students' parents to ensure ethical compliance and support for the program.

The study adopted a quantitative descriptive approach using a one-group pretest–posttest design to evaluate the impact of a structured health education program on students' knowledge and daily behaviors. Conducted over four weeks, the intervention focused on two key themes: personal hygiene and healthy eating habits. Learning sessions were delivered in an engaging and interactive format, including activities such as role-playing, poster-making, and group competitions. These sessions were supported by the

homeroom teacher, who reinforced the educational content through daily classroom routines. Students were actively involved in every stage of the program, and the materials were designed to align with their cognitive development, ensuring relevance and retention.

To assess program effectiveness, students were given a pretest before the intervention and a posttest at the conclusion. The questionnaire focused on key health topics, including the importance of handwashing, the benefits of a balanced diet, and healthy lifestyle habits. The results were analyzed by comparing the mean scores of the pretest and posttest to determine the percentage increase in knowledge. In addition, qualitative observations and teacher reports were used to identify behavioral changes, such as improvements in hygiene practices and healthier food choices brought from home. Descriptive statistics were applied to summarize both the knowledge gains and observable behavioral shifts among the students.

Discussion

The implementation of a structured health education program at SDN 2 Sukanegara demonstrated significant improvements in both students' understanding and behavior related to clean and healthy living. The increase in posttest scores—by an average of 32%—indicates that the intervention was effective in enhancing students' knowledge, particularly in areas such as the importance of handwashing and the need for a nutritious breakfast. These findings support previous studies that have emphasized the value of school-based health interventions in improving children's health literacy and habits (Suto et al., 2021).

In addition to knowledge gains, behavioral changes were also evident. Teacher observations noted that more than 70% of students began regularly washing their hands before meals and bringing healthier meals from home, even within the first two weeks of the program (Dodd et al., 2022). This aligns with Mustar et al. (2018), who found that consistent and contextual health education encourages the adoption of long-term healthy behaviors among elementary school students (Shibuya et al., 2025). Furthermore, the use of interactive methods such as role-playing, poster-making, and peer-group competitions proved to be particularly effective in fostering student engagement. These approaches are consistent with who emphasized the benefits of playful learning strategies in promoting nutrition and hygiene education in young children (Sharova et al., 2024).

Beyond individual behavior, the program also fostered a positive and collaborative school environment. Activities such as group clean-ups and collective morning exercises encouraged a sense of shared responsibility among students and teachers. These communal practices helped strengthen the habit of healthy living not just as an individual goal, but as a collective value within the school culture. This echoes the recommendations by (Singh et al., 2024) who highlighted the importance of habit formation and community involvement in sustaining health-promoting behaviors in schools.

Importantly, the program's success was also dependent on the support of teachers and parents. Teachers played a key role in reinforcing daily health routines, while parents ensured continuity of these practices at home. This partnership between school and family is critical in ensuring the long-term sustainability of health behaviors, as emphasized by (Pulimeno et al., 2020) Furthermore, the relevance of the program content to the students' developmental stage aligned with Piaget's theory of concrete operational thinking ensured that students could understand, internalize, and act on the health messages delivered (Shackleton et al., 2016).

Overall, this study confirms that a well-designed, interactive, and age-appropriate health education program can be a powerful tool for promoting healthy habits in elementary school children. By involving teachers, parents, and the wider school community, such interventions have the potential not only to improve student health but also to contribute to a healthier school culture.

CONCLUSION

This study highlights the importance of implementing a structured and engaging health education program tailored to the developmental needs of elementary school students. The findings demonstrate that such a program can significantly enhance students' knowledge and promote positive behavior changes related to hygiene and healthy living. Through interactive activities and continuous reinforcement from teachers, students not only gained a better understanding of health-related concepts but also began adopting healthier daily habits—such as washing hands regularly and bringing nutritious food from home.

The involvement of teachers and parents was instrumental in the program's success, reinforcing the idea that collaboration between school and home is essential for sustaining healthy behaviors. The program

also contributed to creating a more health-conscious school culture, encouraging shared responsibility and active participation among students.

Given the positive outcomes, this model can serve as a reference for similar school-based health education initiatives. It also aligns with broader educational objectives such as character development, contextual learning, and the goals of the Merdeka Curriculum in Indonesia. Future programs are encouraged to expand the scope to include mental health, physical activity, and environmental awareness, and to incorporate evaluation methods that track long-term behavioral outcomes.

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AUTHOR CONTRIBUTION STATEMENT

Julian Yuda Wijaya was responsible for the conceptualization of the study, designing the educational program, collecting and analyzing the data, and drafting the manuscript. Dr. Selvi Melianty, M.Pd. provided supervision, methodological guidance, critical revisions of the manuscript, and overall academic support throughout the research process. Both authors read and approved the final version of the manuscript.

CONFLICT OF INTEREST AND FUNDING

The authors declare that there is no conflict of interest regarding the publication of this article.

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