



Oral and Dental Health: A Mentoring Program for Oral Hygiene Care Among Students of Bina Jaya Senior High School, Kertapati Palembang

¹ Sulistiawati, ² Mellani Cindera Negara, ³ Trisnawaty K, ⁴ Bambang Nuryadi

^{1,2,3,4} Fakultas Kedokteran, Universitas Sriwijaya

Sulistiawati.setiaji@gmail.com

Article Info	Abstract
Article History Received: 2 th May 2026 Revised: 21 th August 2026 Published: 29 th August 2026 Keywords: oral health, dental care education, interactive media, community service, SDGs 3	<i>Oral and dental health problems remain a significant public health issue among adolescents, particularly those from lower–middle socioeconomic backgrounds. SMA Bina Jaya Kertapati Palembang, as the partner of this community service program, faces two major challenges: low oral health literacy and limited access to attractive and accessible educational media. This community service initiative by Sriwijaya University developed an interactive, media-based educational approach designed to increase students' understanding of proper dental and oral care. The program included the production of a 5–6-minute animated educational video titled “Sehat Gigi dan Mulut”, which delivered essential materials on dental anatomy, correct toothbrushing techniques, recommended brushing times, and the negative impacts of poor oral hygiene. Implementation involved classroom-based video sessions, guided discussions, hands-on toothbrushing simulations, and mentoring. The activity involved 31 second-grade students of SMA Bina Jaya Kertapati and received active participation throughout the educational sessions. Students engaged in guided discussions, raised relevant questions regarding oral and dental health, and participated in supervised toothbrushing practice. Observations during the practical session indicated that students were able to follow the recommended toothbrushing steps after facilitator guidance. These immediate responses reflect positive engagement and practical understanding of oral hygiene rather than quantitatively measured changes in knowledge or behavior. This program supports the achievement of Sustainable Development Goal 3 (Good Health and Well-being), contributes to higher education performance indicators (IKU), and aligns with the Impactful Dikti-Saintek agenda. The findings strengthen the evidence that interactive digital media combined with practical demonstration is an effective strategy for improving adolescent oral health literacy.</i>

INTRODUCTION

Oral and dental health constitute an essential component of overall wellbeing, yet are often overlooked, particularly among adolescents in lower-middle socioeconomic environments. In Indonesia, awareness and preventive behaviors related to oral hygiene remain low, contributing to the high prevalence of dental caries, periodontal disease, and other preventable oral health conditions. These challenges are more pronounced among school-aged populations who lack access to structured oral health education and regular dental care.

SMA Bina Jaya Kertapati Palembang, the partner school in this community service program, represents such a context. Situated in a densely populated area of Kertapati District, the school serves students predominantly from families with limited financial resources. Preliminary surveys, classroom observations, and discussions with teachers revealed several important concerns: students did not fully understand correct toothbrushing techniques, were unfamiliar with appropriate brushing times, and rarely received routine dental check-ups. Additionally, the school lacked engaging and accessible educational media that could support effective health promotion.

School-based oral health education has been widely recognized as an important preventive strategy for strengthening students' knowledge and oral hygiene practices. Haleem et al. (2012) demonstrated the value of structured school-based oral health education among adolescents, while Stein et al. (2018) showed that oral health educational interventions can support better oral hygiene outcomes among schoolchildren. The development of digital learning has further expanded opportunities for delivering oral health information in an engaging manner. Mobile-assisted and blended educational strategies have been applied to support oral health knowledge, self-efficacy, and preventive practices among adolescents (Marchetti et al., 2018; Hashemi et al., 2021; Marashi et al., 2024).

Despite the growing use of digital media in oral health education, a structured school-based mentoring activity integrating animated educational media, guided discussion, supervised toothbrushing practice, and teacher involvement had not been systematically implemented at SMA Bina Jaya Kertapati Palembang. This condition represents a practical gap between students' oral health education needs and the availability of attractive, reusable, and practice-oriented learning resources. Addressing this gap is particularly relevant during adolescence because oral hygiene habits established during this developmental stage may influence health practices in later life.

The gap between students' needs and available educational resources underscores the urgency of implementing an innovative and practical approach to oral health literacy. To address these issues, the community service team developed an animated educational video designed specifically for adolescents. The video introduces foundational concepts such as tooth anatomy, proper brushing techniques, ideal brushing frequency, and the risks associated with poor oral hygiene. As a digital tool, the video is accessible, engaging, and easily integrated into classroom learning activities.

This program is aligned with national and institutional strategic priorities. It supports Sustainable Development Goal (SDG) 3 on Good Health and Well-being, contributes to the achievement of Universitas Sriwijaya's Key Performance Indicators (IKU), and is consistent with the principles of the Dikti-Saintek Impactful Program that emphasizes community empowerment through scientific and technological innovation.

The objectives of this initiative are to:

1. Improve students' understanding of oral and dental health.
2. Teach proper toothbrushing techniques using interactive digital media.
3. Encourage the adoption of healthy oral hygiene behaviors among adolescents.
4. Provide sustainable educational resources that can be utilized by teachers and school health units (UKS).

Through a combination of digital learning, direct simulation, and participatory methods, the program aims to create meaningful improvements in oral health literacy and foster long-term healthy habits among students.

Oral and dental health play a fundamental role in supporting overall wellbeing and quality of life. Poor oral hygiene can contribute to dental caries, periodontal disease, halitosis, and systemic health complications. Meidina (2024) emphasizes that oral health is a critical determinant of an individual's general health status and should receive adequate attention in public health initiatives. Despite its importance, oral health literacy remains low in many parts of Indonesia.

Hidayat and Tandiar (2016) highlight that dental caries and gum inflammation continue to be prevalent problems among Indonesians, driven largely by inadequate oral hygiene practices and lack of proper health education. The National Basic Health Survey (Riskesdas 2018) reports that although the majority of Indonesians brush their teeth daily, only a small proportion do so at the recommended times after breakfast and before bedtime reflecting a gap between routine behavior and proper technique. This gap underlines the need for structured and targeted oral health education, especially for children and adolescents.

Educational interventions in schools have been shown to significantly improve students' oral health knowledge. Sulistiani et al. (2023) demonstrated that school-based health promotion programs can strengthen children's understanding and awareness of proper oral hygiene practices. Adolescents, in particular, respond well to educational media that are engaging, visually appealing, and contextually relevant to their daily experiences.

The adolescent period is crucial for establishing long-term health behaviors. Fadjeri et al. (2022) note that preventive health habits formed during adolescence tend to persist into adulthood, making this developmental stage ideal for interventions. However, studies by Senjaya et al. (2019) report that many students at the elementary and high school levels lack adequate oral health knowledge, which correlates with higher rates of dental problems.

Digital and interactive educational media have gained increasing recognition in oral health promotion due to their ability to simplify complex information and increase engagement. Animated videos, infographics, and digital simulations can enhance comprehension and retention by providing visual demonstrations of correct toothbrushing techniques and the risks of poor oral hygiene. This aligns with recent evidence showing that combining educational media with hands-on practice provides the most effective learning outcomes for adolescents.

Recent evidence further supports the use of digital approaches in oral health education. Marchetti et al. (2018) reported positive outcomes from a mobile oral health application combined with conventional educational methods among adolescents. Hashemi et al. (2021) demonstrated that blended learning can support oral health self-efficacy and self-care behaviors among students. Interactive strategies have also been explored, including game-based oral health education for schoolchildren (Aljafari et al., 2022). More recent studies have examined mobile and multimedia educational interventions for supporting adolescent oral health knowledge and preventive behaviors (Marashi et al., 2024; Bakhtiar et al., 2025). Structured school-based interventions have likewise been used to strengthen knowledge, attitudes, practices, self-efficacy, and oral health literacy among adolescents (Taheri et al., 2025; Hosseini et al., 2025).

Taken together, the existing literature supports the development and use of interactive, visually oriented educational interventions to improve oral health literacy. These findings form the basis for the community service program implemented at SMA Bina Jaya Kertapati Palembang, which integrates digital media with participatory learning strategies to address gaps in knowledge and behavior related to oral hygiene.

METHOD

This community service program was conducted on 4 November 2025 at SMA Bina Jaya Kertapati Palembang and involved 31 second-grade students. The program adopted a participatory educational mentoring approach designed to address two major issues identified at the partner school: low oral health literacy and limited access to engaging educational media. The implementation consisted of four integrated components: animated digital oral health education, guided classroom discussion, supervised toothbrushing practice, and descriptive evaluation. Students participated directly in the educational and practical activities, while teachers supported the implementation and sustainability of the program. This community service program was conducted on 4 November 2025 at SMA Bina Jaya Kertapati Palembang and involved 31 second-grade students. The program adopted a participatory educational mentoring approach designed to address two major issues identified at the partner school: low oral health literacy and limited access to engaging educational media. The implementation consisted of four integrated components: animated digital oral health education, guided classroom discussion, supervised toothbrushing practice, and descriptive evaluation. Students participated directly in the educational and practical activities, while teachers supported the implementation and sustainability of the program.

1. Program Preparation

The preparation phase began with the development of a 5-6 minute animated educational video titled "*Sehat Gigi dan Mulut.*" The video included explanations of basic tooth anatomy, recommended toothbrushing techniques, appropriate brushing times, and the health consequences of poor oral hygiene. Alongside the animated educational video, the team prepared supporting evaluation materials consisting of a short post-session comprehension quiz and an observation sheet for monitoring students' toothbrushing practice during the simulation. The quiz focused on key oral health information delivered during the educational session, while the observation sheet was used by facilitators to document students' ability to follow the demonstrated toothbrushing steps. After the materials were finalized, coordination meetings were held with the school principal, teachers, and student representatives to explain the program's objectives, expected benefits, schedule, and technical requirements. This ensured that all stakeholders were aligned and that the school was ready to support implementation.

2. Implementation Strategy

The program was conducted primarily through classroom-based activities. Sessions began with the screening of the animated video, which served as an accessible and visually engaging learning resource. After the video presentation, facilitators led students in guided discussions that helped reinforce key messages and clarify misconceptions. Students were encouraged to ask questions, share personal experiences, and reflect on common oral hygiene problems, allowing the learning environment to remain interactive.

Following the discussion, a hands-on toothbrushing simulation was conducted. Students were instructed step-by-step on the recommended brushing techniques and were given the opportunity to practice them under supervision. The facilitators observed student performance closely, offering corrections and feedback to ensure that brushing movements were carried out effectively. This direct practice component helped bridge the gap between theoretical knowledge and behavioral application.

During the simulation, facilitators directly observed students' participation and ability to follow the demonstrated brushing movements and provided corrective feedback when necessary.

3. Technological Integration

The use of digital media formed the core of the educational approach. The animated video served not only as a classroom tool during the session but also as a reusable learning resource that could be accessed by students and teachers through school digital platforms such as WhatsApp groups or YouTube links. The choice to rely solely on digital materials without printed modules was intentional, as it enhanced practicality, reduced costs, and made the program easily replicable in other schools with similar characteristics.

4. Role of Community Partners

The success of the program depended heavily on the active participation of the partner school. SMA Bina Jaya provided the necessary facilities, including classrooms, projectors, screens, and audio equipment. Teachers were assigned as coordinators to manage student attendance, assist facilitators during sessions, and ensure smooth activity flow. Their involvement also supported the sustainability of the program, as they were encouraged to continue using the video for routine health education activities, especially within the School Health Unit (UKS).

5. Evaluation and Follow-Up

Evaluation of the program focused on students' immediate comprehension, participation, and practical toothbrushing performance. After the educational session, students completed a short post-session comprehension quiz covering key concepts presented through the animated video and classroom discussion. During the toothbrushing simulation, facilitators directly observed students' ability to follow the demonstrated brushing steps and provided corrective feedback where necessary. Teachers and students also provided informal feedback regarding the clarity, attractiveness, and usefulness of the animated educational media. The evaluation was descriptive and observational and was not designed as a quantitative pre-test–post-test assessment.

To ensure long-term impact, the program concluded with the handover of all digital educational materials to the school. Teachers received guidance on how to integrate oral health education into future lessons, and recommendations were made for establishing collaborations with local health centers (puskesmas) to support routine oral health checks for students.

RESULT AND DISCUSSION

Result

The implementation of the oral health education program at SMA Bina Jaya Kertapati Palembang took place on 4 November 2025 and involved 31 second-grade students, comprising 17 males and 14 females. The activity proceeded smoothly according to the planned stages, beginning with an introductory session on the importance of maintaining oral and dental health. The educational video “*Sehat Gigi dan Mulut*” was then presented as the primary teaching media. The animated format successfully captured students' attention and provided a clear explanation of tooth structure, proper brushing techniques, recommended brushing times, and the consequences of poor oral hygiene.

Students demonstrated active participation throughout the session. During the open discussion, several students raised relevant questions concerning the early signs of dental disease, appropriate daily oral hygiene practices, and strategies for maintaining oral health. These questions reflected students' engagement with the educational material and provided descriptive evidence of their interest in preventive oral health topics during the activity.

The toothbrushing simulation provided an opportunity for students to practice correct techniques under supervision. Facilitators observed that most students were able to follow

brushing instructions accurately after the demonstration. This hands-on activity reinforced the information presented in the video and allowed students to directly apply the knowledge they had gained.

The evaluation conducted during the program was descriptive and observational. The post-session quiz was used to identify students' immediate comprehension of the oral health information presented during the activity, while the toothbrushing simulation provided an opportunity to observe students' practical participation. Facilitators observed that students were generally able to follow the demonstrated brushing steps after receiving guidance and corrective feedback. Because no formal pre-test and post-test assessment was conducted, these observations should be interpreted as indicators of immediate comprehension and practical engagement rather than as quantitative evidence of changes in knowledge or behavior.

Teachers also provided positive feedback regarding the use of animated digital media, noting that the material made the educational session more attractive and accessible for students compared with conventional health talks. Their feedback supports the practical usefulness of the video as a complementary resource for school-based oral health education.

Overall, the activity provided students with opportunities to engage with oral health information, participate in interactive discussion, and practice recommended toothbrushing techniques under facilitator guidance. The observed participation and responses indicate that combining animated digital media with direct practical activities is feasible and well received in the school setting.

Discussion

The implementation of the oral health education program at SMA Bina Jaya Kertapati Palembang demonstrated positive immediate engagement among participating students. The combination of animated educational media, guided discussion, and supervised toothbrushing practice provided students with opportunities to receive oral health information visually and apply recommended hygiene techniques directly. The active participation observed during the activity suggests that participatory and media-supported education is relevant to the oral health education needs identified at the partner school.

Several themes emerged from students' questions during the discussion, particularly regarding the recognition of early signs of dental disease, appropriate daily oral care, and strategies for maintaining long-term oral health. These questions illustrate the types of oral health information that attracted students' attention during the activity. The interest in recognizing dental problems is relevant to the preventive approach emphasized in the 2018 Riskesdas report, which highlights the persistence of dental and oral health problems in Indonesia and the importance of early prevention.

Students' interest in proper toothbrushing practices and long-term oral health also demonstrates the relevance of combining theoretical information with direct practice. Hidayat and Tandiar (2016) emphasize the importance of appropriate oral hygiene practices in preventing dental problems, while Fadjeri et al. (2022) and Senjaya et al. (2019) highlight the role of sustained education and healthy habit formation among school-age populations. The supervised toothbrushing activity in the present program therefore served as a practical complement to the information delivered through the animated educational video.

Furthermore, interactive digital media played an important role in supporting the delivery of oral health information during the activity. Animated visual content enabled tooth anatomy, brushing techniques, recommended brushing times, and the consequences of poor oral hygiene to be presented in a format that was accessible to students. The positive participation observed during the session is consistent with Sulistiani et al. (2023), who emphasized the usefulness of educational media in school-based oral health promotion.

The approach used in the present program is also supported by broader evidence on school-based and digital oral health education. Haleem et al. (2012) demonstrated the value of structured oral health education among adolescents, while Stein et al. (2018) found that educational interventions can support oral hygiene outcomes among schoolchildren. Digital approaches provide additional options for educational delivery. Marchetti et al. (2018) examined mobile-assisted oral health education among adolescents, whereas Hashemi et al. (2021) demonstrated the potential of blended learning for supporting oral health self-efficacy and self-care behaviors. Interactive approaches have also been explored through game-based interventions (Aljafari et al., 2022), mobile applications (Marashi et al., 2024), and multimedia educational resources (Bakhtiar et al., 2025). More recent school-based interventions further demonstrate the relevance of structured educational strategies for adolescent oral health knowledge, attitudes, practices, self-efficacy, and literacy (Taheri et al., 2025; Hosseini et al., 2025).

Several limitations should be considered when interpreting the outcomes of this community service program. First, the activity involved only 31 students from one senior high school; therefore, the observed responses cannot be generalized to broader adolescent populations. Second, the program was conducted within a relatively short educational period and focused primarily on students' immediate responses during and after the activity. Third, no long-term follow-up was conducted to determine whether students consistently practiced the recommended toothbrushing techniques after the program. Fourth, the evaluation relied primarily on a post-session comprehension quiz, direct observation, and informal feedback rather than a standardized quantitative assessment. Most importantly, the program did not employ a formal pre-test–post-test design or a comparison group. Consequently, the findings cannot be interpreted as evidence of measurable changes or causal effects on students' oral health knowledge and behavior. Future programs should incorporate standardized evaluation instruments, repeated assessments, and longer follow-up periods to examine the sustainability of educational outcomes.

Overall, the implementation of this community service program supports the potential use of animated digital education combined with supervised practical activities as an engaging approach to school-based oral health promotion. The program provided students with access to oral health information, encouraged active participation, and created opportunities to practice recommended toothbrushing techniques under direct guidance. Although measurable changes in knowledge and long-term behavior were not assessed, the immediate observations provide practical support for the continued use of digital media and hands-on activities in school-based oral health education.

CONCLUSION

The community service program at SMA Bina Jaya Kertapati Palembang achieved its immediate educational objectives through the integration of animated digital media, participatory discussion, and supervised toothbrushing practice. Students were actively engaged with oral and dental health information presented during the activity and participated in direct practice of the recommended toothbrushing techniques under facilitator guidance. Their questions, participation, responses to the post-session quiz, and practical involvement provided descriptive indicators of immediate comprehension and engagement with preventive oral hygiene.

The program also provided the partner school with a reusable animated educational video that can be utilized by teachers and the School Health Unit (UKS) for future oral health education activities. In this way, the program contributes to Sustainable Development Goal 3 (Good Health and Well-being) by supporting preventive oral health education among adolescents. However, because the program did not employ a formal pre-test–post-test design

or long-term follow-up, the findings should not be interpreted as evidence of measurable changes in knowledge or sustained behavior. Future community service activities should incorporate standardized quantitative assessments and follow-up evaluations to examine longer-term educational outcomes.

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