

Dental and Oral Health Counseling and Examination at SDN Pamongan 1 Mojo, Kediri

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Abstract: *Dental and oral health problems remain a major concern in Indonesia, particularly among primary school children, with dental caries being the most prevalent issue. This community service activity was conducted through collaboration between Universitas Kediri (Indonesia), Karnavati University (India), and SDN Pamongan 1 Mojo Kediri. The aim was to screen students' dental and oral health while providing counseling on proper oral hygiene practices. The method included three stages: an opening session, dental examinations using disposable diagnostic instruments, and counseling sessions emphasizing correct brushing techniques, diet control, and regular check-ups. A total of 86 students participated, with results showing 74% had dental caries, 25% had healthy teeth, and 1% presented other conditions. The counseling sessions were interactive and well received by students and teachers. In conclusion, the program successfully combined screening with education, providing immediate health benefits and fostering awareness for long-term oral health improvement.*

Introduction

Dental and oral health remain a pressing public health issue in Indonesia, particularly among children in the primary school age group. One of the most common and serious problem is dental caries, a chronic and irreversible condition that, if left untreated, can lead to tooth loss, chewing and speech difficulties, and a decline in children's self-confidence and overall quality of life. The increasing prevalence of caries has been observed not only in urban settings but also in rural areas, including communities such as SDN Pamongan 1 Mojo, Kediri. Unfortunately, awareness among parents and guardians is still relatively low. Many continue to believe that primary teeth, which will eventually be replaced by permanent teeth, do not require treatment if no pain is reported by the child. This perception contributes to

poor oral hygiene practices and the neglect of regular dental care.

According to Sulmiati (2019), the ages of 5–9 years are considered a critical developmental stage, as this is the period when children's permanent teeth begin to erupt. Without proper prevention, such as routine brushing and periodic check-ups with dental professionals, the risk of caries increases significantly. The etiology of caries is multifactorial, involving the interaction of host factors (teeth and saliva), microorganisms (plaque), substrates (dietary sugars), and time. Additional predisposing factors include socioeconomic conditions, educational levels, gender, and behavioral habits. These combined risk factors create a complex challenge in reducing caries incidence among school-aged children.

The situation at SDN Pamongan 1 Mojo reflects these broader national challenges. Two primary issues were identified: first, the need for comprehensive screening of students' dental and oral health conditions to establish a baseline understanding of the problem; and second, the need for continuous education and counseling aimed at both students and parents to promote better oral hygiene practices and regular preventive care. Addressing these challenges requires a structured intervention that combines clinical examination with health education tailored to the needs of the local community.

To respond to this need, a collaborative community service initiative was implemented through a Memorandum of Agreement (MoA) between Kadiri University, Karnavati University of India, and SDN Pamongan 1 Mojo Kediri. The program aimed not only to provide immediate health benefits to the participating students but also to create long-term awareness and behavioral changes regarding oral health. The objectives of the program were threefold: (1) to conduct dental and oral health screening for all students in grades 1–6, (2) to provide interactive and practical education on oral hygiene practices, and (3) to encourage regular visits to professional dental services such as Puskesmas or clinics at least once every six months. Through this approach, the initiative was expected to build both knowledge and habits that would contribute to sustainable improvements in oral health among children and their families.

Method

The community service activity was conducted on June 14 at SDN Pamongan 1 Mojo, Kediri. The method of implementation followed a systematic approach that combined both clinical intervention and health education strategies. The steps were designed not only to identify the prevalence of oral health problems but also to equip students with the knowledge and skills necessary to practice proper oral hygiene in their daily lives.

The activity began with an opening session, which was led by the school principal. This session provided a platform to welcome the teams from Universitas Kadiri and Karnavati University and to introduce the purpose of the activity to both students and teachers. Establishing rapport and clarifying the goals of the program were essential to ensure that the students felt comfortable and motivated to participate. Following the opening, the collaborating institutions formally introduced their teams, emphasizing the importance of international cooperation in addressing community health issues.

The second stage consisted of dental and oral health screening. This process was carried out by a team of dental professionals, including four dentists from Karnavati University, who performed clinical examinations of all students from grades 1 through 6. The examinations were conducted using disposable diagnostic instruments to maintain hygiene and safety standards. Each child's oral cavity was carefully assessed for the presence of caries, calculus deposits, fractured teeth, and overall oral hygiene status. This stage served as the foundation for identifying the most urgent problems faced by the students and provided data for the subsequent educational intervention.

The third stage of the program was counseling and education. Once the screenings had been completed, students participated in an interactive session that combined Q&A discussions with practical demonstrations. Dentists and facilitators explained the importance of brushing teeth at least twice a day, the optimal times for brushing (after breakfast and before bedtime), and the proper techniques to ensure effective plaque removal. The session was designed to be engaging and age-appropriate, using demonstrations to make the information more accessible. Furthermore, both students and teachers were encouraged to support each other in building good oral hygiene habits. In addition, parents were advised to take an active role in supervising their children's daily dental care and to bring their children to health facilities for check-ups every six months or whenever problems arise.

By combining these three stages, opening and orientation, clinical examination, and health education. The program provided a holistic solution to the oral health challenges faced by the community of SDN Pamongan 1 Mojo

Result

Implementation of the community service activity successfully involved 86 students from grades 1 through 6. The distribution of participants was as follows: 19 students from grade 1, 11 students from grade 2, 10 students from grade 3, 13 students from grade 4, 18 students from grade 5, and 15 students from grade 6. This wide participation ensured that the program reached a representative proportion of the school's population, enabling a

comprehensive assessment of the overall oral health condition of the students (Figure 1).

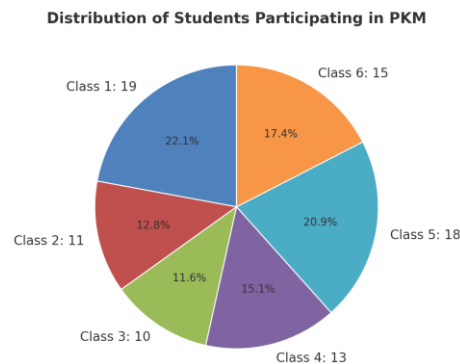


Figure 1. Distribution of Students Participating in Community Services

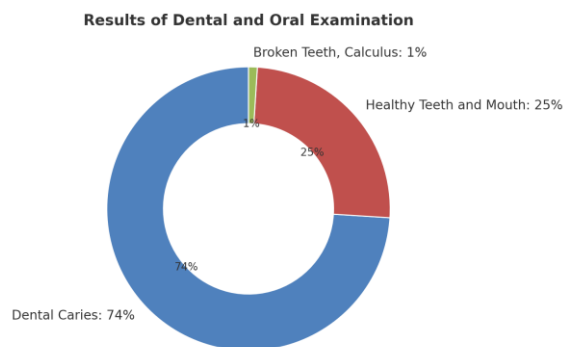


Figure 2. Student's Dental and Oral Examinations

After the examinations, all students attended an oral health counseling and education session. During this session, facilitators demonstrated the proper technique of brushing teeth, explained the importance of brushing at least twice daily (after breakfast and before bed), and emphasized reducing the consumption of sweet foods and drinks. Students also had the opportunity to ask questions and clarify their daily practices, making the session interactive and engaging.

Discussion

The findings of this community service activity indicate that dental caries remains highly prevalent among primary school children, with 74% of students at SDN Pamongan 1 Mojo experiencing the condition. This figure is consistent with national and international reports. According to the Basic Health Research Survey (RISKESDAS) 2018, the prevalence of caries among Indonesian children aged 5–9 years was reported at more than 90% (Kementerian Kesehatan RI, 2018). Similarly, the World Health Organization (WHO, 2022) has identified dental caries as one of the most common chronic diseases worldwide,

disproportionately affecting school-aged children in low- and middle-income countries where access to preventive care is limited.

Caries is a multifactorial disease involving the interaction of host susceptibility, bacterial biofilm, fermentable dietary carbohydrates, and time (Fejerskov & Kidd, 2015). Children are particularly vulnerable due to their developing dentition and frequent consumption of sugary snacks. In this study, the high proportion of affected students underscores the importance of early preventive interventions at the community and school level. Without intervention, the persistence of caries into adolescence and adulthood may result in cumulative tooth loss, nutritional deficiencies, and social challenges (Petersen et al., 2010).



Figure 3. Oral health screening activities

The documentation in Figure 3 shows the direct implementation of oral health screening activities involving elementary school children at SDN Pamongan 1 Mojo Kediri. The first image illustrates a dental examination performed on a female student, where a dental professional uses disposable diagnostic instruments to inspect the oral cavity. The left image depicts a similar process with male students, supported by multiple examiners, highlighting the collaborative nature of the health screening. The use of protective measures such as gloves and face masks also indicates adherence to basic infection control standards, which are crucial in community health programs (World Health Organization [WHO], 2022). These images confirm the high level of student participation and engagement in the program. Children appeared cooperative, suggesting that the school environment served as a supportive setting for conducting such health interventions. Schools have long been recognized as strategic platforms for health promotion, particularly oral health education, because they provide regular access to children during formative years (Petersen, 2003). Visual documentation of these activities not only strengthens the validity of the results but also reflects how school-based interventions can be implemented effectively at the community level.

The presence of both local and international examiners, as shown in the images, also demonstrates the role of academic collaboration in enhancing the quality-of-service delivery. International partnerships in oral health programs have been shown to improve knowledge transfer, strengthen clinical practice, and enrich the cultural exchange between institutions (Lester et al., 2020). By involving professionals from Universitas Kadiri and Karnavati University (India), the activity not only improved the credibility of the intervention but also introduced an intercultural dimension that could inspire both students and practitioners.

The counseling and education sessions conducted immediately after the screening served as a crucial preventive measure. Evidence suggests that oral health education in schools is one of the most effective approaches to instill positive oral hygiene behaviors (Petersen, 2003). By demonstrating proper toothbrushing techniques and engaging children in interactive Q&A activities, this program provided not only knowledge but also practical skills. Such school-based oral health programs have been shown to significantly reduce plaque levels and improve oral hygiene practices when conducted regularly (Kay & Locker, 1996).

Another important dimension of this program is the role of parents and teachers. Children at the age of 6–12 years still require supervision to ensure proper brushing and dietary habits. Studies have shown that parental awareness and involvement are directly linked to better oral health outcomes in children (Naidu et al., 2016). By encouraging teachers and parents to reinforce daily practices, this program aligned with the broader principle of community empowerment in health promotion.

Beyond the immediate health benefits, this initiative also demonstrates the value of international collaboration in addressing local health problems. The partnership between Universitas Kadiri and Karnavati University illustrates how academic institutions can contribute expertise and resources to community development. Similar cross-border collaborations have been reported to strengthen both research capacity and community service impact (Lester et al., 2020). By involving both local and international actors, the activity not only addressed oral health needs but also fostered intercultural learning and academic exchange.

In conclusion, the high prevalence of caries in SDN Pamongan 1 Mojo Kediri highlights the urgent need for sustained preventive strategies. School-based interventions, supported by parental involvement and reinforced through international academic collaborations, represent a promising model for addressing children's oral health challenges. Future programs should consider periodic follow-up screenings, continuous health

education sessions, and integration with broader community health campaigns to ensure long-term sustainability.

Conclusion

The community service activity on dental and oral health counseling and examination at SDN Pamongan 1 Mojo Kediri successfully identified the high prevalence of dental caries among school-aged children, with nearly three-quarters of students affected. This finding emphasizes that oral health remains a critical concern within the community and requires continuous preventive action. Through the implementation of clinical screenings and interactive counseling sessions, the program not only provided immediate benefits by detecting oral health problems but also empowered students, teachers, and parents with knowledge and practical skills to improve daily hygiene practices.

This program underscores the necessity of integrating oral health education into school curricula, encouraging regular dental check-ups at community health facilities, and fostering collaborative efforts between local and international stakeholders. Sustained interventions of this nature are expected to reduce the burden of dental caries, improve children's overall health, and contribute to the long-term well-being of the community.

References

- Fejerskov, O., & Kidd, E. (2015). *Dental caries: The disease and its clinical management* (3rd ed.). Wiley Blackwell.
- Kay, E., & Locker, D. (1996). Is dental health education effective? A systematic review of current evidence. *Community Dentistry and Oral Epidemiology*, 24(4), 231–235. <https://doi.org/10.1111/j.1600-0528.1996.tb00850.x>.
- Kementerian Kesehatan Republik Indonesia. (2018). *Riset kesehatan dasar (RISKESDAS)*. Badan Penelitian dan Pengembangan Kesehatan.
- Lester, J. N., Lochmiller, C. R., & Gabriel, R. (2020). International higher education partnerships: Building capacity in research, teaching, and community engagement. *Higher Education Policy*, 33(3), 381–403. <https://doi.org/10.1057/s41307-019-00158-2>.
- Naidu, R., Nunn, J., & Irwin, J. D. (2016). The effect of parental attitudes and behaviors on children's oral health practices and status. *International Journal of Paediatric Dentistry*, 26(5), 373–379. <https://doi.org/10.1111/ipd.12211>.
- Petersen, P. E. (2003). The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century. *Community Dentistry and Oral Epidemiology*, 31(S1), 3–24. <https://doi.org/10.1046/j..2003.com122.x>
- Petersen, P. E., Bourgeois, D., Ogawa, H., Estupinan-Day, S., & Ndiaye, C. (2010). The global burden of oral diseases and risks to oral health. *Bulletin of the World Health*

Organization, 83(9), 661–669.

World Health Organization. (2022). Oral health. World Health Organization.
<https://www.who.int/news-room/fact-sheets/detail/oral-health>.