

ASSESSMENT OF KNOWLEDGE, ATTITUDE, AND PRACTICE (KAP) RELATED TO ORAL HEALTH IN RESIDENTS OF THE PUSKESMAS PEGIRIAN AREA

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Abstract

Oral and dental health remain important public health issues because they directly affect overall well-being and quality of life. Community-based Puskesmas play a crucial role in promoting preventive oral health habits within the community. This study explored levels of knowledge, attitudes, and daily practices regarding oral health among community members at Pegirian Puskesmas. A descriptive study was conducted with 50 participants who took part in an oral health education activity. The analysis revealed that most participants possessed good knowledge and held very positive attitudes toward oral health; however, these attitudes were not always reflected in their everyday practices. The primary challenge identified was the disparity between what people know and how they apply it in their daily lives. For this reason, health education was delivered with an emphasis on strengthening behaviour and providing practical guidance. The results indicated that attitudes were the strongest aspect, followed by knowledge, while oral health practices remained the weakest. In conclusion, oral health promotion efforts should not only aim to increase knowledge and improve attitudes but also place greater focus on behaviour-based approaches to achieve lasting oral health outcomes.

Keywords: Oral Health, Knowledge, Attitude, Practice, Community Members

INTRODUCTION

Oral and dental health is a key aspect of public health and has a strong influence on quality of life, general well-being, and social functioning. Globally, oral diseases such as dental caries, periodontal disease, and tooth loss remain widespread across all age groups, creating a considerable economic burden for both health systems and individuals. Despite long standing public health initiatives and preventive programs, many communities continue to face high levels of untreated oral conditions and inadequate oral health behaviors. Public health efforts focus not only on clinical management but also on prevention through education, early identification, and sustained community involvement to support healthier behaviors and outcomes. Increasing evidence shows that effective oral health improvement requires attention

not only to clinical services but also to the cognitive and behavioral factors that influence oral health across different populations. These factors include knowledge, attitudes, and practices related to oral hygiene maintenance and dental care seeking, which are commonly examined using the Knowledge, Attitude, and Practice (KAP) framework (Singh et al., 2022).

In Indonesia, oral and dental health remain pressing concerns. National health surveys have repeatedly shown high prevalence rates of dental caries and periodontal problems across age groups, indicating persistent gaps in preventive behaviours and access to adequate dental services. While access to primary health care through Puskesmas (Community Health Centres) has expanded, translating service availability into improved population behaviours is not always straightforward. Local health data often reveal that community members have general awareness of preventive oral health but struggle to consistently practice healthy habits, such as regular brushing with fluoride toothpaste, interdental cleaning, and routine dental visits. This misalignment between awareness and practice indicates deeper issues in the delivery of health education, cultural beliefs, and behavioural reinforcement mechanisms within community settings. In this context, evaluating KAP toward oral health in specific populations helps identify barriers and opportunities to strengthen public health interventions at the grassroots level, especially within Puskesmas frameworks that are central to Indonesia's preventive health strategy (Arinawati et al., 2025).

The KAP model is widely used in public health research to assess how knowledge and attitudes influence health behaviours and to identify gaps that may hinder effective preventive actions. Studies from diverse contexts highlight that while high levels of oral health knowledge often correlate with positive attitudes, this does not always translate into consistent oral hygiene practices. For example, research among different population groups, including adults, students, and patients with chronic conditions, shows that knowledge alone is not sufficient to change behaviour unless it is coupled with supportive attitudes and enabling environments that promote practice adoption. Findings from a mixed-method systematic review reveal considerable variability in how knowledge and attitudes shape oral health practices, underscoring inequities and unmet needs in vulnerable subpopulations. Other studies further emphasise that tailored community education and behaviour-change interventions are necessary to bridge the gap between oral health awareness and habitual preventive behaviour (Johnson et al., 2024).

At the local Puskesmas Pegirian level, oral health has been a consistent community concern. Routine surveillance and preliminary screenings often indicate persistent incidences of dental caries, gingival inflammation, and other preventable oral conditions among residents. Community members frequently report barriers, including a lack of confidence in self-care techniques, limited understanding of preventive strategies, and insufficient reinforcement following health promotion activities. These challenges reflect broader patterns observed in other settings, where even educated populations struggle to align knowledge and attitudes with daily health behaviours. For instance, cross-sectional studies conducted across various community and clinical populations demonstrate that although respondents may correctly answer questions about oral health benefits and hold positive attitudes toward preventive care, their self-reported practices often fall short of recommended behaviours, such as brushing twice daily or attending regular dental checkups (Islam et al., 2025).

The originality of the present study lies in its focus on community members served by

a primary health care institution in Indonesia, where existing research on oral health behaviour is limited. Much of the global literature tends to focus on specific clinical populations (such as orthodontic patients, students, or individuals with disabilities), leaving gaps in understanding how general adult communities interacting with primary health systems perceive and enact oral health behaviours. Addressing this gap is particularly relevant for designing contextualised oral health promotion strategies that align with local cultural norms, resource availability, and health service structures. By specifically examining KAP toward oral health among community members at Puskesmas Pegirian, this study seeks to generate evidence that can directly inform primary health care planning, targeted health education, and sustainable behaviour change programs at the community level (Rajbhandari & Aryal, 2024).

This study was conducted against the backdrop of increasing efforts by Puskesmas and district health authorities to promote preventive health measures, including oral health screening and education. While education efforts often raise awareness, anecdotal and preliminary data suggest that compliance with recommended oral health practices is uneven. The persistence of preventable oral diseases implies that educational messages may not sufficiently translate into habitual practices without addressing underlying attitudinal and contextual barriers. Known barriers include socioeconomic constraints, misconceptions about oral health maintenance, and competing health priorities that divert attention from preventive dental care (Johnson et al., 2024). Understanding these multifaceted contributors requires an empirical assessment of KAP within the community served by Puskesmas Pegirian, providing a foundation for tailoring health promotion strategies to actual needs. This research addresses the gap between oral health knowledge and attitudes versus preventive practices. Although awareness and education campaigns exist, their real impact on behaviour change remains unclear and requires systematic evaluation. Clarifying these gaps will help practitioners and policymakers design culturally sensitive, behaviorally informed interventions that support broader public health objectives (Oktadewi et al., 2024).

The purpose of this research is to quantitatively assess the levels of knowledge, attitude, and oral health practice among adult community members served by Puskesmas Pegirian. Through structured questionnaires administered to a representative sample, this study aims to identify strengths and weaknesses in current oral health behaviour patterns and to explore relationships between cognitive and behavioural dimensions. The outcomes will provide actionable insights for refining oral health education programs, prioritising areas for intervention, and strengthening the role of primary health care in facilitating sustained community health improvements. By situating this analysis within a real community context, the findings are expected to contribute to the design of more effective and culturally aligned oral health promotion strategies.

IMPLEMENTATION METHOD

This study used a descriptive cross-sectional design integrated with community-based health service activities at Puskesmas Pegirian. The activity involved adult community members who participated in oral health education sessions organised by the Puskesmas. Data collection utilised a structured questionnaire to evaluate knowledge, attitudes, and practices related to oral health. The questionnaire was developed using the Knowledge, Attitude, and Practice framework, commonly used in public health research, and adapted to the local context. Prior to data collection, participants received standardised oral health education delivered by trained health personnel to ensure consistent exposure to essential preventive messages. This methodological approach is supported by evidence demonstrating that the combination of structured education and standardised assessment tools is effective for evaluating community oral health behaviour and identifying behavioural gaps within primary care settings.

The implementation procedure emphasised practical, ethically appropriate techniques, including informed participation, clear instructions, and supervised completion of the questionnaire, to minimise response bias. The collected data were systematically recorded and analysed descriptively to identify patterns in participants' knowledge, attitudes, and practices. The use of the Knowledge, Attitude, and Practice model allowed for the identification of discrepancies between cognitive understanding and behavioural application, which is critical for planning targeted health promotion strategies. This method has been widely recommended in community oral health research as an effective tool for guiding evidence-based interventions and strengthening preventive programs at the primary health care level.

RESULTS

A total of 50 community members participated in this study conducted at Puskesmas Pegirian. Participation was voluntary, and informed consent was obtained from all participants prior to data collection. The assessment of Knowledge, Attitude, and Practice related to oral health was carried out using a structured questionnaire, and the results are presented descriptively. Overall, the findings provide an overview of the current level of oral health awareness and behavior among community members served by the primary health care facility. The knowledge domain demonstrated a mean score of 3.59 ± 1.06 , with a median score of 4 and a score range of 1 to 5, indicating a moderate to good level of oral health knowledge among respondents. The attitude domain showed the highest performance, with a mean score of 19.18 ± 1.63 , a median of 20, and a range of 11 to 20, reflecting a very positive attitude toward oral health and preventive behaviors.

In contrast, the practice domain showed greater variability, with a mean score of 12.29 ± 2.76 , a median score of 13, and a score range of 0 to 16. While most respondents reported acceptable oral health practices, several low scores were identified, indicating inconsistent application of recommended oral health behaviors. The findings indicate that attitudes constituted the strongest component of oral health behavior among respondents, followed by knowledge, while practice remained the weakest aspect among community members at Puskesmas Pegirian.

DISCUSSION

The present study provides important insights into the levels of knowledge, attitude, and practice regarding oral health among community members in Puskesmas Pegirian. The findings demonstrate that although respondents generally exhibited good knowledge and very positive attitudes toward oral health, practical implementation remained inconsistent. This pattern aligns with existing public health literature, which consistently reports that improvements in knowledge and attitudes do not automatically translate into sustainable health behaviours. Oral health promotion efforts, therefore, need to be examined not only in terms of awareness raising but also in their capacity to facilitate long-term behavioural change within community settings. Similar trends have been observed in community-based studies across low- and middle-income countries, where oral health education improves awareness but leaves significant gaps in daily preventive practices (Johnson et al., 2024).

The moderate to good level of knowledge identified in this study suggests that community members possess a basic understanding of oral hygiene and preventive measures. This may reflect ongoing health education initiatives conducted through Puskesmas programs and broader national campaigns. However, knowledge scores that do not reach optimal levels indicate potential limitations in the depth, consistency, or retention of educational messages. Previous studies have shown that superficial knowledge acquisition, without contextual reinforcement, often fails to influence behaviour. In community settings, knowledge is frequently shaped by informal sources, cultural beliefs, and past experiences, which may dilute or contradict formal health education messages delivered by health professionals (Guan et al., 2024).

The high attitude scores observed among respondents indicate a strong positive perception of oral health and a general willingness to engage in preventive behaviors. This finding is particularly important, as attitude is widely recognized as a key motivational factor influencing health behavior. Positive attitudes toward oral health suggest that community members value oral hygiene and recognize its importance for overall well-being. Similar results have been reported in studies conducted in primary health care settings, where individuals often express favorable views toward preventive oral health despite inconsistent practice. These findings highlight the potential of leveraging positive attitudes as an entry point for more effective behavior-focused interventions. Despite favourable knowledge and attitudes, the practice domain demonstrated considerable variability, with some respondents reporting very low scores. This discrepancy underscores the well-documented knowledge–attitude–practice gap in oral health promotion. Behavioural change theories emphasise that knowledge and attitudes alone are insufficient to modify entrenched habits, especially in the absence of enabling factors such as access to resources, supportive environments, and continuous reinforcement. In the context of oral health, barriers such as time constraints, economic limitations, perceived lack of urgency, and fear of dental treatment may hinder the translation of awareness into action (Rajbhandari & Aryal, 2024).

Research findings from various community settings indicate that oral health practices often develop more slowly than knowledge and attitudes, and a similar pattern was observed in this study. Although many individuals understand the importance of oral hygiene and express positive views toward preventive care, maintaining consistent daily practices remains a

challenge. Behavioral change in oral health is not an immediate process, but rather a gradual one that is influenced by social norms, family routines, personal confidence, and the availability of supportive environments. The presence of low practice scores among some community members at Puskesmas Pegirian suggests that single educational activities are not sufficient to produce lasting behavioral change. Positive attitudes, however, represent an important strength, as they indicate openness and readiness to adopt healthier behaviors when supported by appropriate guidance and reinforcement within primary health care services (Islam et al., 2025). The role of Puskesmas as a primary health care provider is therefore central in addressing the gap between oral health awareness and actual practice. As the first point of contact for most community members, Puskesmas has a unique opportunity to provide continuous education, reinforce positive behaviors, and integrate oral health promotion into routine health services. Practical strategies such as repeated counseling, simple demonstrations of oral hygiene techniques, and regular follow up during health visits may help translate positive attitudes into consistent daily practices. Strengthening community involvement and providing sustained support through primary health care services may contribute to more stable improvements in oral health behavior and reduce the burden of preventable oral diseases over time. The role of Puskesmas as a primary health care provider is central in addressing the gap between oral health awareness and actual practice. As the first point of contact for most community members, Puskesmas has a unique opportunity to provide continuous education, reinforce positive behaviors, and integrate oral health promotion into routine health services. Routine support within primary health care may help translate positive attitudes into consistent oral health practices, particularly when combined with practical guidance such as simple demonstrations, interactive counseling, and regular follow up during health visits. Continuous engagement through primary care services may therefore support gradual and sustainable improvements in community oral health behavior (Johnson et al., 2024). Evidence indicates that interventions integrating education with hands on practice and regular follow up are more effective in improving oral health behaviors than information-based approaches alone. Puskesmas are strategically positioned to implement these strategies due to their close and ongoing interaction with local communities.



Figure 1. Oral health education activity conducted for community members at Puskesmas Pegirian
(Personal documentation)

CONCLUSION

Community members at Puskesmas Pegirian generally demonstrate moderate to good knowledge and very positive attitudes toward oral health; however, the consistent application of appropriate oral health practices remains limited. This situation indicates a gap between awareness and daily behaviour, suggesting that knowledge and favourable attitudes alone are insufficient to sustain oral health practices. Oral health promotion at the primary health care level should therefore move beyond information delivery and prioritize behavior-oriented approaches, including practical guidance, continuous reinforcement, and active community engagement, to support long-term improvements in oral health outcomes.

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