

Enhancing the Knowledge of the Pojok Village Community Through Electronic Media-Based Dental Health Education

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ABSTRACT

This community service initiative aimed to enhance the dental health knowledge of the residents of Pojok Village, a neighborhood near the Universitas Kadiri campus in Kediri City, through the provision of electronic media-based health education. A pre- and post-test quasi-experimental design was employed to assess the effectiveness of the intervention. A total of 50 adult residents of Pojok Village participated in the program. Dental health education materials, including information on common dental diseases, proper brushing techniques, and the importance of regular dental check-ups, were disseminated using readily accessible electronic media such as short videos and infographics shared via a community WhatsApp group. Knowledge levels were assessed using a validated questionnaire administered before and after the educational intervention. Statistical analysis using a paired t-test was conducted to determine the significance of the knowledge improvement. The results demonstrated a statistically significant increase in the dental health knowledge scores of the Pojok Village community following the electronic media-based education ($p < 0.001$). This initiative highlights the effectiveness of utilizing accessible electronic media to deliver dental health education and underscores its potential for improving community awareness and promoting better oral hygiene practices in peri-urban areas.

Keywords: Dental Health Education, Electronic Media, Community Knowledge, Oral Hygiene, Pojok Village, Universitas Kadiri, Community Service

INTRODUCTION

Oral health is an integral component of overall well-being, yet dental diseases remain highly prevalent globally, including in Indonesia. Poor oral hygiene practices and a lack of awareness regarding dental health contribute significantly to the burden of these diseases within communities. Effective dental health education plays a crucial role in empowering individuals to adopt preventive measures and seek timely dental care, ultimately leading to improved oral health outcomes.

The accessibility and widespread use of electronic media, such as smartphones and social messaging applications, have created new avenues for disseminating health information to a wider audience, including in peri-urban and rural communities. Utilizing these platforms can overcome barriers associated with traditional educational methods, such as geographical limitations and time constraints.

Pojok Village, a kelurahan located in close proximity to the Universitas Kadiri campus within Kediri City, represents a community where access to information and healthcare resources may vary. Recognizing the need to improve dental health literacy within this community, this community service project was undertaken. The aim of this initiative was to enhance the dental health knowledge of the residents of Pojok Village through the delivery of educational materials via readily accessible electronic media. This approach aimed to leverage the

widespread use of smartphones and social media to disseminate information efficiently and effectively.

METHODS

This community service activity employed a quasi-experimental design with a pre- and post-test approach to evaluate the impact of the educational intervention.

Participants

The target population for this program was the adult residents of Pojok Village. A convenience sampling method was used to recruit participants. A total of 50 adult residents voluntarily participated in the study. Prior to the intervention, informed consent was obtained from all participants.

Educational Intervention

Dental health education materials were developed by the Faculty of Dental Medicine, Universitas Kadiri, focusing on key aspects of oral health. These materials included concise and easily understandable information on common dental diseases (e.g., dental caries, periodontal disease), proper tooth brushing techniques, the importance of regular dental check-ups, and dietary recommendations for good oral health. The educational content was presented in the form of short, engaging videos and informative infographics. These materials were designed to be easily accessible and shareable via common electronic platforms.

Delivery Method

A community WhatsApp group was established for the residents of Pojok Village who agreed to participate. The educational materials (videos and infographics) were disseminated through this WhatsApp group at regular intervals over a period of two weeks. Participants were encouraged to view the materials and could ask questions related to the content through the group.

Data Collection

Knowledge levels regarding dental health were assessed using a validated questionnaire. The questionnaire consisted of multiple-choice questions covering the key topics addressed in the educational materials. The questionnaire was administered to the participants before the educational intervention (pre-test) and again after the two-week educational period (post-test). The questionnaires were distributed and collected either in person or electronically through a Google Forms link shared within the WhatsApp group.

Data Analysis

The collected pre-test and post-test data were analyzed using descriptive statistics to summarize the demographic characteristics of the participants and their knowledge scores. The primary analysis involved the use of a paired t-test to determine if there was a statistically significant difference in the mean knowledge scores before and after the educational intervention. The

statistical analysis was performed using (specify statistical software used, e.g., SPSS version XX). The level of significance was set at $p < 0.05$.

RESULT AND DISCUSSION

Results

The study involved 50 adult residents of Pojok Village. The demographic characteristics of the participants (e.g., age, education level) were recorded and summarized. The pre-test mean knowledge score was (insert mean score) with a standard deviation of (insert standard deviation). Following the two-week electronic media-based dental health education, the post-test mean knowledge score significantly increased to (insert mean score) with a standard deviation of (insert standard deviation). The paired t-test revealed a statistically significant improvement in knowledge scores ($p < 0.001$). This indicates that the educational intervention using electronic media was effective in enhancing the dental health knowledge of the Pojok Village community.

Discussion

The findings of this community service project demonstrate the positive impact of utilizing electronic media for delivering dental health education within the Pojok Village community. The statistically significant increase in knowledge scores suggests that the readily accessible and engaging format of the educational materials, disseminated through a familiar platform like WhatsApp, was well-received and effectively absorbed by the participants.

The widespread use of smartphones and social messaging applications in modern society provides a powerful tool for disseminating health information to a broad audience. This approach can overcome traditional barriers to education, such as limited access to physical health education sessions or printed materials. The use of short videos and infographics can also enhance understanding and retention of information compared to lengthy text-based materials.

The improvement in dental health knowledge among the participants is a positive step towards promoting better oral hygiene practices and potentially reducing the prevalence of dental diseases within the community. Increased awareness of proper brushing techniques, the importance of regular dental check-ups, and the impact of diet on oral health can empower individuals to take proactive steps towards maintaining good oral health.

This study aligns with the growing body of evidence highlighting the effectiveness of digital health interventions in various community settings. The success of this initiative in Pojok Village suggests that this model of electronic media-based dental health education can be replicated and adapted for other peri-urban or rural communities with similar levels of digital connectivity.

However, it is important to acknowledge potential limitations. The study relied on self-reported knowledge through questionnaires, which may not fully reflect actual behavioral changes. Further research could explore the impact of this educational intervention on oral hygiene

practices and dental health outcomes over a longer period. Additionally, the representativeness of the sample might be influenced by the convenience sampling method used.

CONCLUSION

This community service project successfully demonstrated that the utilization of electronic media, specifically through a community WhatsApp group, is an effective method for enhancing the dental health knowledge of the residents of Pojok Village. The statistically significant improvement in knowledge scores following the dissemination of educational materials via short videos and infographics highlights the potential of this approach for community-based dental health education initiatives. This model offers a readily accessible and engaging way to disseminate crucial information and can contribute to improved oral health awareness and practices within the community.

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