

Research Report

Integrated oral health empowerment program for Imtaq Shighor Isy Karima Boarding School

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ABSTRACT

Background: A significant public health challenge among children and adolescents is dental and oral health problems, which is around 60-90%. This dental and oral disease can have a negative impact on the quality of life, causing pain, limited oral function, and emotional stress, and can cause students' teaching and learning activities to decline. **Purpose:** improving the health of students through early detection and independent and integrated management of general and dental health at Imtaq Shighor Isy Karima Boarding School, Karanganyar Regency, Central Java Province. **Methods:** Socialization activity on general health and dental management of students carried out in August 2023 at Imtaq Shighor Isy Karima Boarding School, Karanganyar Regency, Central Java Province. There were 30 cottage caregivers as participants. Evaluation is carried out by giving a pretest and post-test. **Results:** Based on the evaluation results, it was found that the average pre-test score was 68.18 while the post-test average was 81.36 so participants experienced an increase in knowledge of 13.18%. **Conclusion:** participants who took part in socialization activities on early detection and management of general and dental health of students experienced increased knowledge and were active in discussions, based on the participants' pre-test and post-test completion.

Keywords: dental health; detection; cottage caregivers

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INTRODUCTION

Dental and oral health problems are a significant public health challenge, especially among children and adolescents, namely around 60-90%. School-age children in the world suffer from dental caries and more than 531 million children experience caries in primary teeth.¹ In addition, approximately 2% of adolescents experience aggressive periodontitis which can cause premature tooth loss. This can have a negative impact on the quality of life, causing discomfort, limited oral function, and emotional stress, and can cause the child's activity and presence to decrease.² One effort that can be made to improve children's dental and oral health is by implementing dental and oral health promotion in schools as proposed by the World Health Organization (WHO). Schools serve as ideal settings for health promotion because they can reach the majority of school-age children and provide an important network for their families and communities. Access to education and a

safe and supportive school environment have been linked to better health outcomes.³

Promotive and preventive efforts for dental health in the school environment are School Dental Health Efforts (UKGS) for school children. UKGS activities include dental examinations for all students to receive dental treatment. Based on data from the Karanganyar District Health Service in 2021, dental and oral health services for elementary school and equivalent children were provided at 580 SD/MI with a total of 16,064 SD/MI students examined (22.8% of the total 70,254 students), 4831 students (30.11%) needed treatment and 3,326 students (68.8%) received treatment.⁴ Karanganyar Regency has a reputation as an area with strong religious overtones and many of its people adhere to religious values. This can create an environment that supports student culture or religious culture, which can be seen in people who tend to have high involvement in religious activities, including Islamic boarding schools. Islamic boarding schools have long been institutions that have an important contribution

to educating the nation, and also have an important role in forming healthy behavior to avoid health problems, one of which is dental and oral health.⁵

One of the largest Islamic boarding schools in Karanganyar Regency is Isy Karimah.⁶ Some of the problems that exist in Islamic boarding school environments include dental caries, gingivitis, and sensitive teeth.⁷ Dental and oral health problems can affect students' learning activities.⁸⁻¹⁰ Therefore, there is a need for routine preventive efforts related to students' oral and dental health, such as regularly brushing their teeth, paying attention to their diet, and making regular visits to the dentist.¹¹

This cannot be separated from the active role of boarding school caregivers in efforts to improve the students' dental and oral health. The success of efforts to improve students' oral and dental health often depends on the active role of the boarding school staff. Some aspects of this role include education, supervision, health facilities, and coaching. So with all these aspects in place, effective early detection can be carried out among students. Therefore, this community service program aims to improve the health of students through early detection and independent and integrated management of general and dental health in Imtaq Shighor Isy Karimah Boarding School, Karanganyar Regency, Central Java Province.

MATERIALS AND METHODS

Implementation of community service activities was carried out in August 2023 at Imtaq Shighor Isy Karimah Boarding School, Karanganyar Regency, Central Java, and was attended by 30 cottage caregivers as participants. This activity is a community service activity and is not experimental research so it does not use ethical standards. Some of the activities carried out included: the distribution of pre-test questionnaires, the event was opened by the presenter, remarks by the program head, socialization on early detection of general health and teeth, discussions and questions and answers with resource persons, ending with the distribution of post-test questionnaires. This activity aims to improve the health of students through early detection and management of general and dental health in Imtaq Shighor Isy Karimah Boarding School, Karanganyar Regency.

Evaluation of this activity is carried out by comparing the results of the pre-test and post-test that have been completed by students. The questionnaire questions include the definition of healthy teeth, risk factors for dental health, dental health problems, the impact of caries, and the danger of broken teeth. The statistical analysis used is the average of the pre-test and post-test results so that it can determine the increase in participants' knowledge.

RESULTS

Based on the results of community service activities held at Imtaq Shighor Isy Karimah Boarding School, Karanganyar Regency, Central Java, by conducting socialization on the general health and dental management of students, which was attended by 30 boarding school caregivers. After carrying out an evaluation using pre-test and post-test questionnaires, the results showed that there was an increase in participants' knowledge, namely 13.18% (Figure 1). Participants also actively discussed and asked questions with experts.

DISCUSSION

Community service activities held at Imtaq Shighor Isy Karimah Boarding School, Karanganyar Regency, Central Java, by providing socialization on early detection and management of general health and teeth, showed that after the socialization was carried out, the participants' knowledge increased. This is similar to previous research which explained that after providing dental health education, participants' knowledge increased compared to before the education was provided.^{12,13}

The cottage caretaker has a very important role in maintaining the health of students physically, mentally, and spiritually. This role covers many things, from providing health facilities to providing health education to students about clean and healthy living behavior.¹⁴ This proves that the boarding school caregivers are not only responsible for providing religious education, but also play a role in the health of the students in their daily lives such as supervising sanitary cleanliness, monitoring the health of the students, implementing health protocols, monitoring environmental



Figure 1. Average value of respondents.

health, as well as collaborating with medical personnel to avoid from communicable and non-communicable diseases.^{15,16}

Early detection of student health consists of a series of steps to identify potential health problems quickly so that effective preventive and treatment measures are needed.¹⁵ The importance of early detection is not only focused on the physical aspects of the students, but boarding school caregivers must also be careful in monitoring the students' behavior and emotions.¹⁷ This consultation session is very important where early detection of mental health can be carried out in-depth and openly. Disease prevention programs are also the main focus in the Islamic boarding school environment, through regular health education, providing information about the importance of maintaining healthy and healthy lifestyles.¹⁸ However, early detection is not only about preventing student illnesses, when cases of illness are detected, a quick response is the main key. This is because the boarding school administrators collaborate with related parties to provide the best protection for students who are affected by the disease. Some of the steps taken are isolation, medical treatment, and transparent communication as part of a collective effort to handle this situation.¹⁹⁻²¹ With this approach, Islamic boarding schools are not only places for religious education but also a source of inspiration to help maintain the physical and mental health of students and are one of the best ways to maintain students' enthusiasm for learning and worship.

CONCLUSION

The socialization program for general health and dental management carried out at Imtaq Shighor Isy Karimah Boarding School, Karanganyar Regency, Central Java, which was attended by boarding school caregivers as participants, increased knowledge in the management of general health and teeth of students, which can be seen from the increase in the average score. between the pre-test and post-test results that have been filled in by the participants. As well as active participants in discussions and questions and answers in this activity.

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REFERENCES

1. James S, Abate D, Abate K, Abay S, Abbafati C, Abbasi N, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 354 Diseases and Injuries

- for 195 countries and territories, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017. *Lancet*. 2018;392:1789–1858.
2. Kaur P, Singh S, Mathur A, Makkar D, Aggarwal V, Batra M, et al. Impact of Dental Disorders and its Influence on Self Esteem Levels among Adolescents. *J Clin Diagnostic Res*. 2017;11:ZC05–8.
3. World Health Organization. WHO guideline on school health services [Internet]. World Health Organization. 2021 [cited 2023 Apr 28]. Available from: <https://www.who.int/publications/i/item/9789240029398>
4. Dinas Kesehatan Kabupaten Karanganyar. Profil Kesehatan Tahun 2021 Kabupaten Karanganyar. Karanganyar Kementerian Kesehat Republik Indones. 2021;87.
5. Pamunarsih. Factors Affecting the Low Utilization of Dental Polyclinic in Karanganyar II Community Health Center on Demak. *J Kesehat Gigi*. 2018;5(1):8–12.
6. Dinas Kebudayaan dan Pariwisata Kabupaten Karanganyar. Sejarah Kabupaten Karanganyar [Internet]. 2021. Available from: <https://karanganyarkab.go.id/sejarah-kabupaten-karanganyar/>
7. Kemenkes RI. Riset Kesehatan Dasar. Jakarta: Kemenkes RI; 2020.
8. Jirakittinan S, Sastraruji T, Kiattavorncharoen S, Surarit R. Oral Health-Related Quality of Life of High School Students in Bangkok, Thailand. *Southeast Asian J Trop Med Public Health*. 2015;46(4):775–85.
9. Braga MM, Oliveira LB, Bonini GA, Bönecker M, Mendes FM. Impact of Dental Caries and Its Treatment on the Quality of Life of Schoolchildren. *Braz Oral Res*. 2016;30(1):1–9.
10. Eberhard J, Pfarrer A, Willershausen B, Lenz J. The Impact of Oral Health on Quality of Life in Adolescents. *J Orofac Orthop der Kieferorthopädie*. 2017;78(4):304–12.
11. Bramantoro T, Palupi R, Kusumo A, Sinaredi B, Pratama A. Social support in forming dental and oral health behavior in Islamic boarding school. *Int J Innov Creat Chang*. 2020;13(4):932–943.
12. Arifin Z, Utami S. Evaluasi Efektivitas Program Penyuluhan Kesehatan bagi Pengasuh Pondok Pesantren. *J Kesehat Masy*. 2019;17(2):156–65.
13. Hidayat A, Setiawan R. Peningkatan Pengetahuan dan Sikap Pengasuh Pondok Pesantren melalui Program Penyuluhan Kesehatan. *J Promosi Kesehat Indones*. 2018;13(1):45–56.
14. Utami S, Laili A. Peran Pengasuh Pondok dalam Mengatasi Tantangan Kesehatan Lingkungan di Pondok Pesantren. *J Kesehat Lingkung*. 2021;19(2):134–45.
15. Kementerian Kesehatan Republik Indonesia. Pedoman Pencegahan dan Pengendalian Infeksi di Pondok Pesantren. Kementerian Kesehat Republik Indones. 2021;9–15.
16. World Health Organization. Water, Sanitation, Hygiene, and Waste Management for the COVID-19 Virus. *World Heal Organ*. 2018;1–11.
17. Nashori F. Deteksi Dini Kesehatan Mental Santri: Tantangan dan Peluang. *J Psikol Islam*. 2018;6(2):89–102.
18. Centers for Disease Control and Prevention. Early Detection and Control of Communicable Diseases and Conditions: Policy Statement. *Centers Dis Control Prev*. 2019;1–19.
19. Feldstein LR, Mariat S. The Role of Public Health Informatics in Enhancing Public Health Surveillance. *MMWR. Morb Mortal Wkly Rep*. 2017;66(35):954–8.
20. Anil S, Anand PS. Early childhood caries: Prevalence, risk factors, and prevention. *Front Pediatr*. 2017;5(July):1–7.
21. American Academy of Pediatric Dentistry. Caries-risk assessment and management for infants, children, and adolescents. *Pediatr Dent*. 2018;40(6):205–12.