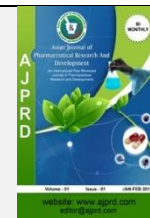


Available online on 15.06.2022 at <http://ajprd.com>

Asian Journal of Pharmaceutical Research and Development

Open Access to Pharmaceutical and Medical Research

© 2013-20, publisher and licensee AJPRD, This is an Open Access article which permits unrestricted non-commercial use, provided the original work is properly cited

Open  Access

Research Article

Dental Health Promotion: A Diet That Supports Dental and Oral Health Through a Family Approach

Wiworo Haryani

Department of Dental Health, Poltekkes Kemenkes Yogyakarta, Indonesia

ABSTRACT

Background: choosing the wrong diet and the influence of modern lifestyles can cause dental caries in children, especially the consumption of cariogenic foods. One of the community empowerment efforts is by involving community members who are willing to voluntarily be involved in dental health problems, so that dental health promotion through a family approach can improve community dental health behavior. **Objective:** to analyze the effectiveness of dental health promotion about eating patterns that support oral and dental health through a family approach to dental health knowledge. **Methods:** Pre-experimental research with pretest-posttest one group design. The sampling technique was purposive sampling as many as 50 respondents. The study was conducted at Surokarsan village, Mergangsan, Yogyakarta. The research instrument used a questionnaire and data analysis used the SPSS program with the Paired Sample Test. **Results:** the level of knowledge of respondents increased by 22.5 and the average value of knowledge before counseling was 57 to 79.50 with a p value of 0.016. **Conclusion:** Promotion of dental health about eating patterns that support oral and dental health through a family approach is effective in increasing public dental health knowledge.

Keywords: Dental Health Promotion, Family Approach, Knowledge

ARTICLE INFO: Received; 19 April 2022 Review Complete; 05 May 2022 Accepted; 14 June 2022 Available online 15 June. 2022



Cite this article as:

Haryani W, Dental Health Promotion: A Diet That Supports Dental and Oral Health Through a Family Approach., Asian Journal of Pharmaceutical Research and Development. 2022; 10(3):21-23.

DOI: <http://dx.doi.org/10.22270/ajprd.v10i311336>

*Address for Correspondence:

Wiworo Haryani, Department of Dental Health, Poltekkes Kemenkes Yogyakarta, Indonesia

INTRODUCTION

Dental caries and periodontal disease are the most common dental and oral diseases in Indonesia. Both of these diseases can attack all levels of society, including those who are prone to dental and oral diseases.^{1,2} Oral and dental health has improved in the last century but the prevalence of dental caries in children remains a significant clinical problem. In general, children are at risk of developing caries. Permanent dental caries in children usually occurs at the age of 12 years, while caries in milk teeth in children aged 5 to 7 years.³⁻⁵

Children who enter school age have a high risk of developing caries. At the age of 6-12 years more intensive care is needed because at that age there is a change of teeth and the growth of new teeth. Children's dental health needs to be maintained from the start so that children have good permanent teeth, so that permanent

teeth can function properly from childhood onwards. Based on this, the age of 12 years is defined as the global monitoring age for caries.⁶⁻⁹ The results of the study by Worotitjan et al showed that elementary school students in North Kawangkoan had a DMF-T score of 3.71, this means that each child has an average of 4 teeth caries.¹⁰

Dental and oral disease prevention measures should be taken from an early age. Elementary school age is an ideal time to train a child's motor skills, including primary prevention of dental and oral diseases.^{11,12} Primary prevention is a form of preventive procedure carried out before clinical symptoms of a disease arise, in other words prevention before the occurrence of the disease. These primary prevention efforts include modifying children's habits, dental health education, oral hygiene, diet and sugar consumption, protection against teeth such as silicone and

the use of fluoride.^{13,14} In order to achieve the target of achieving healthy teeth in 2010 according to WHO, namely the DMF-T number for children aged 12 years of 1, it is necessary to take dental caries prevention measures.⁹

In dental caries and periodontal disease, these two diseases would not occur in the absence of dental plaque, or if the effects of microbes on dental plaque could be resisted, the incidence of plaque disease could drop dramatically. In order to control plaque diseases with available methods and techniques, emphasis should be placed on 4 general strategies to reduce caries and 2 measures or actions required. Common strategies include mechanical, chemical or plaque control, dietary sugar discipline and use of pit and fissure sealants. The method or action needed is education and health promotion and making access to health care facilities.¹⁵⁻¹⁷

Choosing the wrong diet and the influence of modern lifestyles can cause dental caries in children (Widya, 2008). The most important factor in the relationship between diet and dental health is the frequency of consumption of foods containing carbohydrates. Consumption of carbohydrates, especially sucrose, has an effect on the strength of one's teeth, this is also stated by Morikava et al. that there is an effect of consumption of cariogenic foods with dental caries.¹⁸⁻²⁰

Health promotion is essentially an activity or effort to convey health messages to adolescents or groups or individuals to gain knowledge about better health. Health promotion method is one of the factors that influence the achievement of an optimal counseling result. This knowledge is ultimately expected to affect the target behavior.²¹

The methods used in diet counseling must be planned not only to provide clarity but to persuade children and parents to act, at least for young children it needs parental involvement. One of the efforts to empower the community is to involve community members or cadres who are willing to voluntarily be involved in health problems. Participation or community participation is expected, especially the participation of health cadres, if implemented properly, will help efforts to realize a healthy Indonesian society.²²

Community participation can provide benefits to various parties, both for the community itself and for the service providers (providers). With the participation of the community in the health sector, the health efforts carried out are truly in accordance with the problems faced by the community, not only based on the assumption of the provider alone, health efforts can be accepted and affordable by the community both physically and economically, as well as develop skills and attitudes, positive and people's motivation to live healthy.^{23,24} Dental health promotion about eating patterns that support dental and oral health has the aim of raising attention to the importance of consuming healthy foods that support dental and oral health and increasing understanding of the information conveyed in order to cause changes in people's behavior.

METHODS AND MATERIALS

The research design used a quasi-experimental design with a one-group pretest and posttest design. The study was conducted at Surokarsan village, Mergangsan, Yogyakarta. The sampling technique was purposive sampling as many as 50 respondents.

The independent variable in this study was the promotion of dental health about eating patterns that support dental and oral health through a family approach, while the dependent variable was dental health knowledge. The instrument for measuring the dental health knowledge variable was measured using a questionnaire. Data analysis used paired sample test to analyze differences in knowledge before and after the intervention.

RESULTS

Table 1. Test the effectiveness of dental health knowledge before and after intervention

| Variable | | Knowledge | |
|-----------|-----------|-------------|---------|
| | | Mean± SD | P-value |
| Knowledge | Pre-test | 57.00±1.150 | 0.016 |
| | Post-test | 79.50±1.930 | |

Table 1 shows the results of the effectiveness test of the data before and after being given dental health promotion about diet that supports oral health through family approach showed that the p-value of the intervention group was 0.016 ($p < 0.05$), meaning that the promotion of dental health about eating patterns that support dental and oral health through a family approach was effective in increasing dental health knowledge.

DISCUSSION

Health promotion is essentially an activity or effort to convey health messages to adolescents or groups or individuals to gain knowledge about better health. This knowledge is ultimately expected to affect the target behavior.²¹ Promotive efforts carried out in research activities are counseling on a good diet for dental and oral health. The target of the service activities are PKK members. Based on the results of the implementation and evaluation in the village of Surokarsan, Mergangsan, Yogyakarta, it shows that there is an increase in the average level of knowledge in the good category and a decrease in the average knowledge in the bad category.

The level of knowledge is one of the important things that causes the high incidence of caries. Parenting patterns, especially mothers, play an important role in changing bad habits for children's health. Parents' attitudes and behaviors are always seen and assessed, and imitated by their children, which then consciously or unconsciously will be absorbed and become children's habits. Mother's knowledge about food that supports dental and oral health is important for a mother for the development and growth of children's teeth. Knowledge of mothers who are the closest people to children in health care has a significant influence on children's attitudes and behavior. Good knowledge affects health behavior in improving health, especially dental and

oral health, on the other hand, lack of knowledge about the importance of dental and oral care can lead to an attitude of neglecting dental and oral hygiene.²⁵⁻²⁸

CONCLUSIONS

Based on the research results, it can be concluded that there is promotion of dental health about eating patterns that support oral and dental health through a family approach is effective in increasing public dental health knowledge

ACKNOWLEDGMENTS

The author would like to thank the Poltekkes Kemenkes Yogyakarta which provides funding lecturer research.

CONFLICT OF INTEREST

The authors declare that they have no conflict interests.

REFERENCES

- Adiatman M, Yuvana AL, Nasia AA, Rahardjo A, Maharani DA, Zhang S. Dental and gingival status of 5 and 12-year-old children in Jakarta and its satellite cities. *J Dent Indones*. 2016;23(1):5-9.
- Heilmann A, Tsakos G, Watt RG. Oral health over the life course. A life course Perspective Heal trajectories transitions. 2015;39-59.
- Cummins D. Dental caries: a disease which remains a public health concern in the 21st century—the exploration of a breakthrough technology for caries prevention. *J Clin Dent*. 2013;24(Spec Iss A):A1-14.
- Jurgensen N, Petersen PE. Promoting oral health of children through schools—Results from a WHO global survey 2012. *Community Dent Heal*. 2013;30(4):204-18.
- Rickne CS, Weiss G. *Woelfel's Dental Anatomy*. Philadelphia: Lippincott Williams & Wilkins; 2016.
- Anil S, Anand PS. Early childhood caries: prevalence, risk factors, and prevention. *Front Pediatr*. 2017;5:157.
- Sheiham A, James WPT. A new understanding of the relationship between sugars, dental caries and fluoride use: implications for limits on sugars consumption. *Public Health Nutr*. 2014;17(10):2176-84.
- Reddy KS, Reddy S, Ravindhar P, Balaji K, Reddy H, Reddy A. Prevalence of dental caries among 6-12 years school children of Mahabnagar District, Telangana State, India: A cross-sectional study. *Indian J Dent Sci*. 2017;9(1):1.
- Kemenkes RI. *Pedoman Usaha Kesehatan Gigi Sekolah (UKGS)*. Jakarta Kementerian Kesehatan RI. 2012;
- Worotitjan I, Mintjelungan CN, Gunawan P. Pengalaman karies gigi serta pola makan dan minum pada anak Sekolah Dasar di Desa Kiawa Kecamatan Kawangkoan Utara. *e-GiGi*. 2013;1(1).
- Chhabra N, Chhabra A. Parental knowledge, attitudes and cultural beliefs regarding oral health and dental care of preschool. *Eur Arch Paediatr Dent*. 2012;13(2):76-82.
- Jatmika SED, Maulana M. Dental and Oral Health Education for Elementary School Students through Patient Hygiene Performance Index Indicator. *Int J Eval Res Educ*. 2018;7(4):259-63.
- Hiremath SS. *Textbook of preventive and community dentistry*. Elsevier India; 2011.
- Horst JA, Tanzer JM, Milgrom PM. Fluorides and other preventive strategies for tooth decay. *Dent Clin*. 2018;62(2):207-34.
- Cuesta AI, Jewtuchowicz V, Brusca MI, Nastro ML, Rosa AC. Prevalence of *Staphylococcus* spp and *Candida* spp in the oral cavity and periodontal pockets of periodontal disease patients. *Acta Odontológica Latinoam*. 2010;23(1):20-6.
- Marsh PD. Microbiology of dental plaque biofilms and their role in oral health and caries. *Dent Clin*. 2010;54(3):441-54.
- Hiranya MP, Eliza H, Neneng N. *Ilmu pencegahan penyakit jaringan keras dan jaringan pendukung gigi*. Jakarta EGC. 2011;104.
- Bener A, Al Darwish MS, Tewfik I, Hoffmann GF. The impact of dietary and lifestyle factors on the risk of dental caries among young children in Qatar. *J Egypt Public Health Assoc*. 2013;88(2):67-73.
- Gupta P, Gupta N, Singh HP. Prevalence of dental caries in relation to body mass index, daily sugar intake, and oral hygiene status in 12-year-old school children in Mathura city: A pilot study. *Int J Pediatr*. 2014;2014.
- Morikava FS, Fraiz FC, Gil GS, de Abreu MHNG, Ferreira FM. Healthy and cariogenic foods consumption and dental caries: A preschool-based cross-sectional study. *Oral Dis*. 2018;24(7):1310-7.
- Notoatmodjo. *Promosi Kesehatan dan Perilaku Kesehatan*, Edisi Revisi. Jakarta: Rineka Cipta; 2012.
- Ismawati C. *Posyandu & Desa Siaga Panduan Untuk Bidan dan Kader*. Yogyakarta: Muha Medika; 2010.
- Wolff T. *The power of collaborative solutions: Six principles and effective tools for building healthy communities*. John Wiley & Sons; 2010.
- Petersen PE, Kwan S. The 7th WHO Global Conference on Health Promotion—towards integration of oral health (Nairobi, Kenya 2009). *Community Dent Heal*. 2010;27(Suppl 1):129-36.
- Rompis C, Pangemanan D, Gunawan P. Hubungan tingkat pengetahuan ibu tentang kesehatan gigi anak dengan tingkat keparahan karies anak TK di Kota Tahuna. *e-GiGi*. 2016;4(1).
- Purnama T, Rasipin R, Santoso B. Pengaruh Pelatihan Tedi's Behavior Change Model pada Guru dan Orang Tua terhadap Keterampilan Menggosok Gigi Anak Prasekolah. *Qual J Kesehatan*. 2019;13(2):75-81.
- Haryani W, Setiyobroto I, Siregar IHY. The Influence of the Knowledge about Cariogenic Food Towards Dental Caries and Nutrition Status Among 9-11 Years Old Children. *J Kesehatan Gigi*. 2020;7(1):40-5.
- Haryani W. Hubungan antara konsumsi karbohidrat dengan tingkat keparahan karies gigi pada anak usia prasekolah di Kecamatan Depok, Sleman Daerah Istimewa Yogyakarta. Universitas Gadjah Mada; 2002.