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Research Paper

Dental Health Status of Early Childhood Patients in Dental Health Care Clinics

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Abstract

Background: Dental health problems in early childhood are higher than adults, so they need serious attention. Dental health status is a condition that describes the percentage and degree of health in the community. standard indicator of the World Health Organization to measure the status of dental caries using the def-t index. PHP-M index to measure dental hygiene status in mixed dentition. Objective: This study aims to determine the dental health status of early childhood patients in dental health care clinics. Methods: This research is a descriptive study with a cross sectional design. The sampling technique used was purposive sampling with 37 respondents. The data collection instrument used a questionnaire to measure dental health knowledge, an observation sheet brushing teeth to measure brushing skills, PHP-M index to measure dental hygiene status and def-t index to measure dental caries status. This research is processed and analyzed and presented in a frequency distribution. Results: Most of the early childhood children in dental health care clinics had less knowledge (54.1), less brushing skills (54.4), moderate dental hygiene status (64.9) and high dental caries status (75.7) Conclusion: Dental health status in early childhood patients in dental health care clinics is in the moderate category.

Keywords: Dental health status, eaely childhood, patients, dental health care clinics

INTRODUCTION

Dental health is an integral part of general health, besides that the teeth are one of the digestive organs that play an important role in the process of chewing food, so it is important to maintain dental health. Maintenance of dental and oral hygiene is one of the efforts to improve health because it can prevent the occurrence of various oral diseases.[1–3]

Teeth in early childhood are generally still primary teeth with tooth structure and morphology that are susceptible to caries. The prevalence of dental caries in early childhood is still high due to, among other things, their habit of brushing their teeth not according to procedures and the habit of consuming cariogenic foods. In addition, children are still very dependent on their parents in terms of maintaining cleanliness and dental health. When fully erupted, there are 20 deciduous teeth, 10 in the upper jaw and 10 in the lower jaw, consisting of 4 incisors, 2 canines and 4 molars. The first teeth usually erupt after 6-7 months after birth and all primary teeth usually erupt at 2.5 or 3 years of age. Thus, from this age the child is ready to chew food perfectly.[4–6]

Caries is an infectious disease resulting from the interaction of bacteria. Dental caries occurs due to the demineralization process from the interaction of bacteria on the tooth surface.[7,8] Bacteria are acidic, so over a period of time, the acid will damage tooth enamel and cause cavities. The etiological factors of caries are plaque microorganism, diet and time.[9,10] Caries in primary teeth often affects the mandibular molars, maxillary molars, and maxillary anterior teeth. During the mixed dentition period, dental caries often attacks the mandibular permanent molars compared to the maxillary teeth.[11] Dental caries in children can affect the quality of life and even the growth and development of children's teeth. This happens very quickly and affects several teeth and often causes pain, difficulty eating and speech problems. If not treated, it can lead to difficulty chewing due to toothache or premature loss of primary teeth.[12,13]

Several studies have proven that caries in early childhood is high caries. In early childhood in TK Pertiwi IV, Pondok Labu Village, Cilandak District, South Jakarta, children experience high tooth decay, as indicated by the def-t index of 4.8.[11] Likewise, early childhood children at PAUD Nurul Iman Radio Dalam have high criteria for dental caries status. This is included in the high category when compared to the 2018 WHO target, which is 50% of children aged 5-6 years free from caries.[14]

One of the causes of dental and oral health problems in the community is the low behavior of maintaining oral hygiene, namely brushing teeth. Other factors are the distance to access dental health services, the role of parents and the dental hygiene status of the children themselves.[15,16]

Dental and oral health is influenced by four important factors: heredity, environment (physical, biological, social, behavioral and health services.[17] Behavioral factors play an important role in influencing dental and oral health status, while behavior is influenced by education. Education is not only obtained formally at school but also at home with parental guidance. Parents are role models for children, as well as in maintaining dental health. Parents' habit patterns will be imitated by children.[18,19]

Elementary school students are strategic targets for the implementation of health programs, because apart from the large number, elementary school students are also an easy target to reach because they are well organized to provide

education and skills. Children entering elementary school age, in general, children will have difficulty understanding abstract learning material. Learning media can go beyond the boundaries of promotional space. Health promotion media are all means or efforts to display information messages to be conveyed by communicators so that targets can increase their knowledge which is ultimately expected to change their behavior in a positive direction towards health.[20,21]

Dental health status is a condition that describes the percentage and degree of health in the community. This is measured by indicators and assessment standards that have been adapted to World Health Organization (WHO) standards, namely the dental caries index, where the def-t index is used for primary teeth. The PHP-M index is an index to measure the dental hygiene status of mixed dentition.[11,15]

Dental health care clinic is a dental clinic that provides dental health care services to individuals, groups and communities. The process of dental health care is a process using a systematic approach in the fields of promotive, preventive and simple curative. Aspects of the implementation of dental health care include assessment, diagnosis of dental health, planning, implementation and evaluation.[22]

MATERIALS AND METHODS

The research design used is descriptive research, which is a research method carried out with the main objective of making an objective description or description of a situation.[23] This study aims to describe the dental health status of early childhood patients in dental health care clinics. This research was conducted on early childhood patients who were undergoing dental treatment at the dental health care clinic of the Jakarta Health Polytechnic from September to October 2021. The sampling technique used was purposive sampling with 37 respondents. The instrument used in data collection was a questionnaire to measure knowledge, an observation sheet to brush teeth to measure brushing skills, PHP-M index to measure dental hygiene status and def-t index to measure dental caries status. This study was analyzed by descriptive analysis with SPSS program and presented in the form of a frequency distribution.

RESULT

Table 1: Frequency distribution of respondent characteristics and dental health status

Variable		n	%
Gender	Male	13	35.1
	Female	24	64.9
Age	5 years	13	35.1
	6 years	24	64.9
Knowledge	Good	17	45.9
	Less	20	54.1
Skills of brushing teeth	Good	18	48.6
	Less	19	51.4
Dental and oral hygiene status	Very good	1	2.7
	Good	10	27
	Moderate	24	64.9
	Bad	2	5.4
Dental caries status	Low	9	24.3
	High	28	75.7

Table 1 showed that the majority were women aged 6 years, had less knowledge, less criteria for brushing teeth, moderate criteria for dental and oral hygiene status with high dental caries status.

Table 2. Cross tabulation of knowledge, skills of brushing teeth and oral and dental hygiene status with dental caries

Variable		Dental caries status			
		Low		High	
		n	%	n	%
Knowledge	Good	6	16.2	11	29.7
	Less	3	8.1	17	45.9
Skills of brushing teeth	Good	5	13.5	14	37.8
	Less	4	10.8	14	37.8
Dental and oral hygiene status	Very good	1	2.7	0	0
	Good	3	7	8.1	18.9
	Moderate	5	13.5	19	51.4
	Bad	0	0	2	5.4

Table 2 showed that the majority of respondents had less knowledge with high dental caries status (45.9%), less brushing skills with high dental caries status (37.8%) and moderate dental and oral hygiene status with high dental caries status (51.4%). .

DISCUSION

Based on research that has been conducted on 37 respondents, it was found that the majority were women. Most of the respondents were distributed in the 5 year age group (35.1%) and followed by the 6 year age group (64.9%). This age is the index age for primary teeth because the caries process in this age group is faster.

The results showed that most respondents had poor knowledge of criteria with high dental caries status (45.9%), poor brushing skills with high dental caries status (37.8%) and moderate dental and oral hygiene status with high dental caries status. (51.4%). From these results it can be interpreted that the status of dental caries in early childhood is high with poor knowledge, skills and dental hygiene status. Research shows that the prevalence of caries in the primary teeth of preschool children in the district of Malalayang, Manado city is very high. Firiana's research proves that the def–t index of PAUD Jati Kelurahan students is 5.18, based on the caries category according to the World Health Organization (WHO) in the high category.[24,25]

The high caries rate in early childhood is caused by several factors, including the diet of preschool children who prefer sweet and sticky foods (candy, chocolate, etc.).[26] In addition, the level of dental and oral hygiene in children is related to the child's behavior in maintaining dental and oral hygiene.[15] In general, the condition of children's oral hygiene is worse and children eat more food and drinks that cause caries than adults. Children generally like sweets, if children eat too much candy and rarely clean it, then many of their teeth have caries. The condition of the teeth and mouth that are not maintained properly can cause other problems around the mouth, including the emergence of cavities, toothache, calculus, dental plaque, gingivitis, and other abnormalities around the teeth.[4]

Another factor is the lack of awareness and independence of children in maintaining their own health and hygiene, children of that age are usually still very dependent on their parents. Lack of awareness of parents to bring their children to have their teeth checked because the teeth are considered to be replaced by permanent teeth. Children aged 5-6 really need parental assistance, especially mothers, in terms of maintaining oral and dental hygiene, especially when brushing teeth. The role of mothers in helping children brush their teeth is very necessary considering that early childhood still needs guidance from parents. Tooth brushing is one of the most frequently used techniques for mechanical plaque control.[16,27]

CONCLUSION

Based on the results of the study, it can be concluded that Dental health status in early childhood patients in dental health care clinics is in the moderate category.

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CONFLICT OF INTEREST

The authors declare that they have no conflict interests.

ETHICAL CLEARANCE

The study was conducted after obtaining approval from Ethical Exemption Poltekkes Kemenkes Jakarta I No.174/KEPK/VIII/2021.

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