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PARENTS KNOWLEDGE AND ATTITUDE TO ORAL HYGIENE OF SPECIAL NEEDS CHILDREN

Dhiya Nabila[1)], Renie Kumala Dewi[2)], Galuh Dwinta Sari[3)]
[1)] Faculty of Dentistry, Lambung Mangkurat University, Banjarmasin
[2)] Department of Pediatric Dentistry, Faculty of Dentistry, Lambung Mangkurat University, Banjarmasin
[3)] Department of Psychology, Faculty of Dentistry, Lambung Mangkurat University, Banjarmasin

ABSTRACT
Background*: Knowledge and attitudes of parents are important in underlying the formation of children's dental and oral hygiene behavior because parents are the foundation for children's behavior and also influence children's development and independence. The role and practice of parents can affect the dental and oral problems of special needs children which will increase when they are older.* ***Purpose:*** *Analyzing the relationship between parents' knowledge and attitude toward oral hygiene of special needs children.* ***Material And Methods:*** *This study uses correlational analysis with a cross-sectional approach, the sampling technique is a simple random sampling technique. The study was held at SLB Negeri Samarinda with a total sample of 52 respondents using questionnaires to parents and examine children's oral hygiene then the data were analyzed using the Spearman rank test.* ***Results:*** *Parent's knowledge of (40,4%) in the moderate level, parent's attitudes of (75%) in the positive category, and special need children's oral hygiene of (55,8%) in the moderate category. The Spearman Rank test on parents' knowledge obtained a significance of 0.*000 (p<0,05) *which means there is a relationship between parent knowledge toward oral hygiene of special needs children and the measurement of parent attitudes obtained a significance of 0.*000 (p<0,05) *which means there is a relationship between parent attitudes toward oral hygiene of special needs children* ***Conclusion:*** *The higher of knowledge and attitudes of parents toward oral hygiene, the better oral hygiene of special need children will.*

Keywords: *Oral hygiene of special needs children, parent attitude, parent knowledge*
Correspondence: Renie Kumala Dewi; Department of Pediatric Dentistry, Faculty of Dentistry, Lambung Mangkurat University, Jl.Veteran 128B, Banjarmasin 70249, South Kalimantan, Indonesia; E-mail: renie.dewi@ulm.ac.id

INTRODUCTION

According to Riskesdas 2018, the prevalence of Indonesian who have dental and oral health problems is quite high at 57.6%. The high number of dental and oral problems can be influenced by several factors such as infrequent regular dental check-ups and knowledge from people who do not understand the importance of dental and oral health, where Indonesian tend to do the dental treatment by themselves or do not take treatment to dental health facilities. This is evidenced by data from Riskesdas 2018 which states that Indonesian who receive dental and oral care is only 10.2% and in the data of East Kalimantan residents who have dental and oral problems of 61.5% only 13.8% receive dental and oral care.[1]

The most common dental and oral health problem suffered by Indonesian is dental caries. The National Institute of Health reports that dental caries is a disease that is often suffered by children aged 5-17 years and in Indonesia, the case of dental caries in children is 93%. The occurrence of dental caries in children in Indonesia is caused by the child's dependence on the parents. Children still need help from parents to maintain their oral hygiene. Moreover, dental and oral hygiene in children with special needs requires greater parental participation and guidance than in ordinary children.[2]

Children with special needs are children who have physical, psychological, cognitive, and social limitations who are late in reaching their full potential including those who are blind, deaf, mentally impaired, hearing impaired, ADHD, dyslexic, and autistic.[3] Based on the Central Statistics Agency the number of children with

special needs in Indonesia has increased from 1.48 million people to 1.6 million people in 2016 and based on the Ministry of Home Affairs' Clean Population Data in 2018, the highest number of special needs children in Kalimantan is found in the East Kalimantan region within the total of 3,230 children. According to Rachmawati (2019) the level of oral hygiene of children with special needs was in the moderate category with an average OHI-S of 2.00 with caries and moderate periodontal disease and according to Octiara (2018) the prevalence of caries for children with special needs was 92.71%. The risk of dental and oral health problems in children with special needs is higher than in ordinary children because they have congenital developmental abnormalities that support the high risk of oral cavity problems in children with special needs.[4]

The oral hygiene condition of children with special needs was found that they have more dental caries that were not treated, missing teeth due to caries, periodontal disease, and poor oral hygiene compared to other children. Things that can be done to maintain the dental and oral hygiene of children with special needs are the role of parents and dentists needed to maintain their dental health and treat their oral health problems.[3-4]

Dental and oral hygiene plays an important role in our overall health and will affect the quality of life such as speaking, chewing, and aesthetic functions. The average OHI-S of the Indonesian people is 1.46 while the national target for the OHI-S index is ≤ 1.2, this shows that the rate of tooth soft tissue damage is quite high. Meanwhile, the prevalence of the national DMF-T index touched 4.6 higher than the WHO standard of 3.5.[5] The way how to keep your teeth and mouth clean is to brush your teeth properly and appropriately. Riskesdas 2018 stated that only 2.8% of the Indonesian population and 3.6% of the population of East Kalimantan brushed their teeth correctly. Lack of knowledge about how to maintain dental and oral hygiene is one of the causes of dental health problems.[6]

The measurement of dental and oral hygiene is one of the efforts to determine the condition of a person's dental hygiene. Measurements of dental and oral hygiene can be done using the *Oral Hygiene Index Simplified* (OHI-S) index which is assessed based on debris and calculus. The main factor affecting the dental and oral hygiene of the population of developing countries is health behavior.[7] The domain of behavior is divided into three, which are knowledge, attitudes, and practice. Knowledge from parents is important in underlying the formation of dental and oral hygiene behaviors in children. Increasing knowledge and attitudes will affect increasing a person's awareness of maintaining health. A person's high knowledge of dental and oral health will influence the person's practice in maintaining dental and oral hygiene. Parents with a lack of knowledge of dental and oral hygiene are predisposing factors to poor health behaviors.[8]

As well as attitudes, which attitudes are said to be a closed response to a stimulus. Attitude is knowledge accompanied by a tendency to act by certain knowledge. Health behaviors based on knowledge, awareness, and positive attitudes will last longer than the ones without. Knowledge and attitudes about dental and oral hygiene are considered essential for developing healthy behaviors. Amelia (2017) stated that there is a relationship between the increasing of knowledge and oral hygiene. The way how to maintain the dental and oral hygiene of children with special needs who have higher dental and oral problems than children in general, knowledge, and attitudes of parents are needed.[9]

Based on the higher level of dental and oral problems of children with special needs than children in general, researchers are interested in knowing the relationship between knowledge and attitudes of parents towards dental and oral hygiene of children with special needs.

MATERIAL AND METHODS

The research was carried out after obtaining ethical approval from the Ethics Committee of the Faculty of Dentistry, Lambung Mangkurat University with No. 041/KEPKG-FKGULM/EC/IV/2022. This study used a correlational analytical research method with *a* cross-sectional approach with 52 respondents of parents and children with special needs at SLB Negeri Samarinda. The sampling technique used is the probability sampling technique, which is simple random sampling with inclusion and exclusion criteria. The inclusion criteria in this study were children with special needs with an age range of 12-17 years and special needs children in the deaf category. The exclusion criteria in this study were children who were uncooperative and could not continue the research. The research began with a briefing and explanation to respondents and then distributing informed consent to respondents and giving questionnaires. The questionnaire consists of 13 items questions about dental and oral hygiene knowledge and 13 items of attitude statements on dental and oral hygiene that will be filled by parents. Furthermore, the examination of special needs children's oral hygiene using the OHI-S index where the examination is carried out to see the debris index and calculus index within six index teeth using probes. The tooth surface examined was

16 buccal, 11 labial, 26 buccal, 36 lingual, 31 labial, and 46 lingual teeth.

If the index teeth are not available on a segment, a replacement will be made with the condition such as if the first molar tooth is absent, the examination is carried out using the second molar, if the first and second molar teeth are absent, the examination is carried out using the third molar and if all three teeth are absent hence the assessment on the segment is negated. If the first incisive tooth of the upper right is absent, the examination can be replaced using the first left incisive tooth, if the lower left incisive tooth is absent, the examination can be replaced using the first lower right incisive tooth, and if the first incisive tooth of the left or right is absent then the examination on the segment is negated. Index teeth are considered non-existent in such circumstances: the tooth is lost due to extraction, the root residual tooth, the jacket crown, the tooth crown is missing or damaged more than 1/2 part due to caries or fracture, the tooth whose eruption has not reached 1/2 of the clinical crown. The assessment can be done if at least 2 index teeth can be examined.[10]

Debris index criteria:
0= No debris
1= Debris covers less than 1/3 of the tooth surface
2= Debris covers more than 1/3 of the tooth surface but less than 2/3 of the tooth surface
3= Debris covers more than 2/3 of the tooth surface

Calculus index criteria:
0= No calculus
1= There is a supragingival calculus of less than 1/3 of the tooth surface
2= There is a supragingival calculus of more than 1/3 of the surface but less than 2/3 of the tooth surface or a subgingival calculus in the form of a black spot around the cervical of the tooth or there are both
3= There is a supragingival calculus covering more than 2/3 of the tooth surface or the subgingival calculus surrounding the tooth cervical or there are both

The data from the study were processed using the *Spearman Rank* correlation statistics test with SPSS.

RESULTS

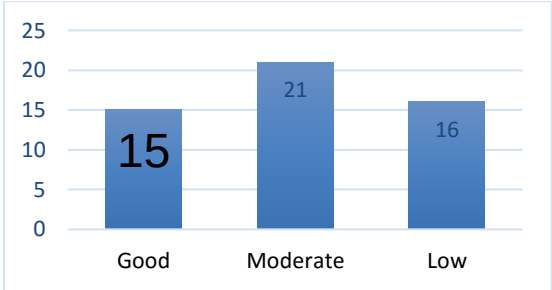

Figure 1. Distribution of Parents' Oral Hygiene Knowledge

Based on Figure 1, it can be seen that the majority of parents' knowledge about the dental and oral hygiene of 21 (40.4%) people are in the moderate category, 16 (30,8%) in the low category, and 15 (28,8%) in the good category.

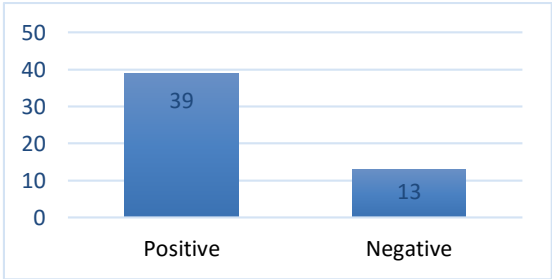

Figure 2. Distribution of Parents' Oral Hygiene Attitudes

Based on Figure 2, it can be seen that the majority of respondents have a positive attitude toward dental and oral hygiene as many as 39 (75%) people and 13 (25%) people have a negative attitude towards dental and oral hygiene.

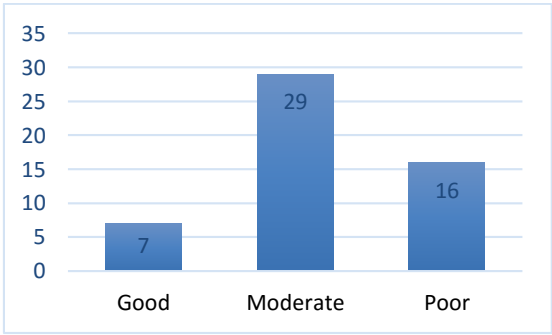

Figure 3. Oral Hygiene of Special Needs Children

Based on Figure 3, it can be seen that the oral hygiene status of children with special needs at SLB Negeri Samarinda is the most in the moderate category of 29 people (55.8%), 16 (30,8%) in the poor category, and 7 (13,5%) in a good category.

Table 1. Analysis of the Relationship between Parent's Knowledge with the Dental and Oral Hygiene Status of Special Needs Children

Significance	0,000
Correlation Coefficient	0,814

Based on the analysis of Table 1, it shows that there is a relationship between parents' dental and oral hygiene knowledge on the dental and oral hygiene status of special needs children with a signification value of 0.000 and a correlation coefficient value of 0.814.

Table 2. Analysis of the Relationship between Parents' Dental and Oral Health Attitudes with the Oral Hygiene of Special Need Children

Significance	0,000
Correlation Coefficient	0,776

Based on the results of the analysis, Table 2 shows that there is a relationship between parents' dental and oral hygiene attitudes towards the dental and oral hygiene status of special needs children with a signification value of 0.000 and a correlation coefficient value of 0.776.

DISCUSSION

The results of the study from 52 respondents, respondents of children with special needs as many as 29 (55.8%) people had dental and oral hygiene in the moderate category. Deafness is a physical disorder related to reduced hearing that can hinder the development of speech and language. This can lead to obstacles in the assessment and maintenance of dental and oral hygiene.[9] Limitations in terms of speaking from deaf children will lead to a lack of tongue in the role of building vocals thus aggravating malocclusion. Children with disabilities such as deaf children have a high percentage of dental and oral problems and poor oral hygiene also due to factors that influence a person to clean their teeth and mouth, namely body image, knowledge, socioeconomic status, social practices, culture, personal choices, and physical conditions.[11]

The level of knowledge of parents as many as 21 (40.4%) people is in the moderate category. The level of a person's knowledge is influenced by several factors, for example, is education. The level of education can affect a person's awareness of the importance of health both to themselves and to their surroundings. In addition, education is one of the efforts to develop a person's personality and abilities in the hope that the higher a person's education, the easier the person will be to receive information.[12] Parents with a high level of education generally have high knowledge, broad insight, and a great sense of curiosity towards something so that they learn a lot about related things about health. Higher education can also affect the improvement of access to information technology. In today's digital era, knowledge about health can be found on the internet and social media. The higher level of a person's education, the more intense a person will look for sources of information in mass media such as television, social media, and newspapers. This can allow people to increase their knowledge.[13]

Another factor influencing parental knowledge in addition to the educational background of the parents is the type of work of the parents. In the results of this study, most parents who have moderate knowledge were found as many as 12 (23%) people who have jobs such as civil servants, in the private sector, and self-employed. In the category of parents who have a good level of knowledge of dental and oral hygiene, there were 12 (23.1%) people who had jobs such as civil servants, in the private sector, and self-employed. Meanwhile, parents who have a poor knowledge level are found as many as 13 (25%) people who do not work or are housewives. This is because both the work and the work environment can be a place for gaining experience and knowledge. In addition, the work environment is believed to be able to form knowledge because of the activity of exchanging information.[14]

Knowledge from parents is a variable that has a dominant role in influencing parents' actions in maintaining the health of the child's oral cavity because knowledge is a predisposing factor for changes in a person's behavior. Good knowledge of the health of oral hygiene is needed to cultivate consistent behaviors because action based on knowledge tends to last a long term. Education and knowledge from parents cannot guarantee the daily behavior of the child in keeping their oral hygiene clean. Therefore, the participation and supervision of parents are very necessary. The action that parents can take is to remind the child to brush their teeth and give directions on how to properly brush their teeth and tell them the right time to brush their teeth. Parents can use sign language or handwriting and use the *show-say-do* method how to brush their teeth properly and correctly. In the end, what is expected is that good knowledge in parents will influence children's behavior and also the oral hygiene of children's always maintained.[9]

Based on the results of the study, it is known that most parents have a positive attitude. A person's attitude is influenced by the knowledge they have, if a person has a good level of knowledge, then the person tends to have a good attitude.[14] Other factors that can influence a person's attitude are experience, culture, religious institutions, people considered

important, emotions of the individual, as well as mass media. Many mass media in the digital era as it is today informed about dental health problems and how to maintain oral hygiene such as those in advertisements on television and social media which make parents respondents mostly have a positive attitude about dental and oral health. Attitude is an important factor in maintaining a person's health because attitude is one of the domains of health behavior. Novitasari (2015) stated that parents with a positive attitude can prevent caries on children's teeth, this shows that attitude is a person's readiness to take action even though the attitude is still a closed response and has not been an action or activity, negative attitudes in parents about the oral hygiene can hinder parents from acting positively about maintaining oral hygiene.[15]

Attitude is one of the predisposing factors related to oral hygiene. If a person has a negative attitude towards oral hygiene, then the health of their oral hygiene will be bad. On the other hand, if a person has a positive attitude, the health of their oral hygiene will also be maintained well. A positive attitude of parents can be the first stage in the change of their child's behavior in order to take care of their oral hygiene. According to Moallemi (2008) the positive attitude of parents toward oral hygiene exerts a significant influence on the health of their child's teeth.[16]

Attitude is how a person likes something or not and then in the end the attitude will determine the person's actions or behavior.[8] It can be concluded that attitude makes a person approach or stay away from an object. A positive attitude is formed when a person has beliefs, ideas and concepts regarding dental and oral health which will subsequently involve feelings so that a tendency is formed for a person to act, such as maintaining dental and oral hygiene.[9]

Based on the results of this study, it can be concluded that parents at SLB Negeri Samarinda have knowledge on the moderate category and a positive attitude to oral hygiene. Special needs children, which is a deaf child at SLB Negeri Samarinda, have dental and oral hygiene in the moderate category.

In this study, there is a relationship between parents' knowledge and attitudes towards dental and oral hygiene of special needs children with a positive correlation which means that the higher of knowledge and attitudes of parents towards dental and oral hygiene, the better the dental and oral hygiene of special needs children.

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