

## THE ROLE OF MOTHERS IN MAINTAINING ORAL HEALTH AND THE DENTAL HYGIENE OF CHILDREN

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### ABSTRACT

This study aimed to determine the relationship between mothers' roles in maintaining oral health and children's dental hygiene at Melati Kindergarten and Mutiara Umi Kindergarten, Pematang Tiga District. This study was analytical with a cross-sectional approach. The results showed that mothers' roles in maintaining oral health were mostly less than 74.3%. Children's dental hygiene at Melati Kindergarten and Mutiara Umi Kindergarten, Pematang Tiga District, as measured by the PHP-M index, was mostly in the moderate category, at 45.7%. In conclusion, there is a significant relationship between mothers' roles in maintaining oral health and children's dental hygiene at Melati Kindergarten and Mutiara Umi Kindergarten, Pematang Tiga District.

Keywords: Preschool Children, Dental Hygiene, Mother's Role

### INTRODUCTION

Oral health in early childhood, particularly in Melati Kindergarten (TK) in Pematang Tiga District, Central Bengkulu, plays a crucial role in determining children's dental hygiene. Oral health in children is a factor that must be addressed as early as possible, as tooth decay in childhood can affect tooth growth later in life. Oral health is essential for maintaining and improving health, including improving dental health, preventing and treating dental diseases, and restoring dental health in an integrated, continuous, and sustainable manner (Oktarina et al., 2017).

The prevalence of cavities in early childhood is very high, at 93%. This figure is still far from the World Health Organization (WHO) target of 93% for children aged 5-6 years old. The average number of children aged 5-6 years old has eight or more teeth with caries (Ministry of Health of the Republic of Indonesia, 2018).

One factor that significantly impacts children's dental health is the role of mothers. As the primary caregivers of children, mothers have a significant responsibility to provide attention and care for their children's dental health. Parents, especially mothers, play a crucial role in developing positive attitudes toward oral health in children. Parental involvement in maintaining children's oral health can be demonstrated by observing children's behavior regarding oral health and their diet. Mothers' knowledge, attitudes, and behavior significantly influence children's knowledge, attitudes, and behavior (Mentari et al., 2016).

Parental participation is essential in guiding, providing understanding, fostering, and providing facilities for children to maintain oral hygiene. Furthermore, parents also play a significant role in preventing caries in children. Parental knowledge is crucial in

shaping behaviors that support or discourage oral hygiene in children. Parents with low knowledge about oral health are behavioral factors that discourage children's oral health (Husna, 2019).

Oral health is closely related to knowledge, attitudes, and behavior. The environment plays a significant role in shaping the attitudes and behaviors of preschool-aged children (kindergarten-aged children). The immediate environment where preschool-aged children are located is the family (parents and siblings) and the school environment. Parents and teachers play a crucial role in changing attitudes and behaviors regarding maintaining children's oral health (Suratri, 2014).

Dental hygiene refers to teeth that are free of caries or that have received proper care to prevent their function. Clean and healthy teeth ensure proper chewing, phonetic, and aesthetic functions. Clean and healthy teeth must be supported by periodontal tissue, as the periodontal tissue is the supporting tissue of the teeth (Lestari, 2016).

Through mothers' active involvement in children's dental hygiene, it is hoped that children will grow up with healthy teeth and good self-care habits. Mothers' awareness of the importance of their role in this area can have a significant positive impact on children's dental health. A lack of maternal involvement in dental health maintenance negatively impacts children's dental health, particularly their dental hygiene (Halim, 2015).

To strengthen the theoretical basis for the study, "The Relationship Between Mothers' Roles in Oral Health Maintenance and the Dental Hygiene of Children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District," researchers conducted a preliminary study in December 2023 on 10 randomly selected students at Bintang Cemerlang Kindergarten. After a dental hygiene examination using the PHP-M index, three children were found to be in the good category, and seven were in the moderate category. Furthermore, researchers conducted brief interviews with five mothers who came to pick up their children. The interviews revealed that most mothers only instructed their children to brush their teeth during the morning bath, often forgetting to brush their teeth at bedtime.

Based on the above background, the authors were interested in conducting research on the Relationship Between Mothers' Roles in Oral Health Maintenance and the Dental Hygiene of Children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District. The general objective of this study was to determine the relationship between mothers' roles in oral health maintenance and the dental hygiene of children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District.

## **RESEARCH METHOD**

The research was conducted using an analytical research method, namely research that tries to explore how The study investigated the causes and causes of these health phenomena. This study employed a cross-sectional approach. The study was conducted at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District, over two days: June 17, 2024, at Melati Kindergarten and June 18, at Mutiara Umi Kindergarten. The population consisted of all 35 students at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District. The sample size for this study was 26 students at Melati Kindergarten and 9 students at Mutiara Umi Kindergarten in Pematang Tiga District. Thus, the total sample size for this study was 35. Data analysis was conducted using univariate and bivariate methods.

## RESEARCH RESULTS

Table. 1  
Frequency Distribution of Mothers' Roles in Oral and Dental Health Maintenance

No	The Role of Mother	N	%
1	Good	9	25,7
2	Poor	26	74,3
	Total	35	100

Based on table 1, the results of the analysis of mothers' roles in dental and oral health show that 9 mothers (17.1%) have a good role in maintaining children's dental and oral health and 26 mothers (74.3%) have a less good role in maintaining children's dental and oral health. Children's Dental Hygiene (PHP-M Index) at Melati Kindergarten and Mutiara Umi Kindergarten

Table. 2  
Frequency Distribution of Dental Hygiene (PHP-M Index) of Children

No	PHP-M	N	%
1	Good	5	14,3
2	Medium	16	45,7
3	Bad	14	40
	Total	35	100%

Based on Table 2, it shows that 5 children (14.3%) in Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District have good dental hygiene, 16 children (45.7%) have moderate dental hygiene, and 14 children (40%) have poor dental hygiene. The relationship between the independent and dependent variables was examined using a bivariate analysis using the Chi-Square test.

Table. 3  
Frequency Distribution of Respondents Based on the Relationship between Mothers' Roles in Oral Health Maintenance and Dental Hygiene of Children

The Role of Mother	Dental Hygiene (PHP-M Index)						Total		P Value
	Good		Currently		Bad		N	%	
	N	%	N	%	N	%			
Good	5	14,3	1	2,9	3	8,6	6	25,7	0,00
Poor	0	0	15	42,8	11	31,4	29	82,9	
Jumlah	5	14,3	16	45,7	14	40	35	100	

From table 3, it is known that the role of mothers in maintaining oral health is in the good criteria, children's dental hygiene is mostly in the good criteria (14.3%), followed by poor criteria (8.6%) and moderate criteria (2.9%). Meanwhile, the role of mothers in maintaining oral health is in the less criteria, children's dental hygiene is predominantly in the moderate criteria (42.8%) followed by poor criteria (34.3%). The results of the statistical test obtained an Asymp.sig value of  $0.00 < 0.05$ , meaning  $H_0$  is rejected and  $H_a$  is accepted. It can be concluded that there is a relationship between the

role of mothers in maintaining oral health and the dental hygiene of children at Melati Kindergarten and Mutiara Umi Kindergarten, Pematang Tiga District.

## **DISCUSSION**

Based on the research results outlined in CHAPTER IV, this chapter addresses the limitations of the study and continues with a discussion of the relationship between mothers' roles in maintaining oral health and the dental hygiene of children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District.

### **Mothers' Roles in Maintaining Oral Health of Children**

The results of the study indicate that the majority of mothers' roles in maintaining children's dental health are in the "poor" category, at 74.3%. This means that mothers' roles are not being implemented optimally. Table 1 shows that the average maternal education level is secondary (42.49%) and primary (40%). A mother's education significantly influences children's dental and oral health. Mothers with a high level of education will have good knowledge and attitudes about dental health, which will influence their healthy lifestyles, which can then be taught and implemented by their children, leading to the habit of consistently maintaining dental health and hygiene (Afiati & et al., 2014). In addition to formal education, information about dental and oral health can be obtained from various media, such as social media. Table 4.2 shows that all mothers (100%) obtained information about dental health from health workers. In addition to health workers, mothers can also obtain information about dental health through online media. In today's technologically advanced age, it's easy to find the information you need; simply typing in keywords will bring up all the information. Mothers can select the information they need, especially regarding children's dental health issues.

The lack of maternal involvement in the health care of children at Melati Kindergarten and Mutiara Umi Kindergarten contrasts with the mothers' occupations, where the majority of mothers are unemployed (62.9%). Unemployed mothers should have more time with their children, thus increasing their opportunities to care for their children's dental and oral health. According to Prasiska et al. (2021), parents' occupations, especially mothers', can influence their communication and attention to their children. Unemployed mothers are more likely to be at home and have more time to guide or teach their children how to maintain good dental health than mothers who work outside the home. Non-working mothers have more time with their children, allowing them to freely teach them how to maintain dental health and monitor what they consume.

One factor that has a significant impact on maintaining children's dental health is the role of the mother. As the primary caregiver, a mother has a significant responsibility in providing attention and care for her children's dental health. A mother's role in children's dental health is as a caregiver, educator, supporter, and supervisor. As a caregiver, a mother plays a role in instilling good attitudes and habits in children, fostering a sense of responsibility for themselves. As an educator, a mother is obligated to provide health education to her family, instilling healthy behaviors, so that behavioral changes occur as expected to achieve optimal health. As a supporter or motivator, a mother provides support and motivation for her children to develop into exemplary individuals, especially in maintaining dental hygiene. Children will feel supported and appreciated for their good deeds. As a supervisor, a mother also functions as a manager,

managing the smooth running of the household and instilling a sense of responsibility in children (Rahma & et al., 2022).

Parents, especially mothers, play a crucial role in developing positive attitudes toward oral health in children. Parental involvement in maintaining children's oral health can be demonstrated by observing children's behavior regarding oral health and their diet. A mother's knowledge, attitudes, and behavior significantly influence a child's knowledge, attitudes, and behavior (Mentari, 2016). Parental involvement is essential in guiding, providing understanding, fostering, and providing facilities for children to maintain oral hygiene. Furthermore, parents also play a significant role in preventing caries in children. Parental knowledge is crucial in forming behaviors that support or discourage oral hygiene in children. Parents with low knowledge about oral health are behavioral factors that discourage children's oral health (Husna, 2019).

### **Dental Hygiene of Melati Kindergarten and Mutiara Umi Kindergarten, Pematang Tiga District**

Dental hygiene status of children in Measured using the PHP-M index, with the average percentage exceeding 45.7%, followed by poor (40%) and good (14.3%). One factor affecting children's dental hygiene is a lack of knowledge, awareness, and independence in maintaining their own dental health and hygiene. Preschool children are still highly dependent on their parents, especially their mothers. This is where mothers play a crucial role in teaching children to adopt behaviors that consistently maintain dental health and hygiene (Fitriana & Kusuma, 2013).

Another factor affecting dental hygiene is plaque. Plaque growth is also influenced by several factors, including areas of teeth that are difficult to reach with a toothbrush, such as the back molars; irregular teeth that make cleaning difficult with a toothbrush; sufficient time for plaque to develop on teeth; sweet and sticky foods, such as chocolate; soft foods that encourage bacteria to multiply more rapidly than hard foods; and meal frequency (frequent or infrequent); the more frequent the meal, the thicker the plaque formation (Putri, Herijulianti, Nurjannah, 2016).

### **The Relationship Between Mothers' Role in Oral Health Maintenance and Dental Hygiene of Children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District**

Based on the analysis of the research data, as shown in Table 4.5, the Asymp.sig. was  $0.00 < 0.05$ , meaning  $H_0$  is rejected and  $H_a$  is accepted. This indicates a relationship between mothers' role in oral health maintenance and dental hygiene of children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District. The results of this study are supported by research conducted by Santoso (2019), which showed a significant relationship between a mother's role in maintaining oral health and children's dental hygiene. This is because a mother's role in maintaining children's oral health encompasses several roles as caregiver, educator, advocate, and supervisor.

The importance of a mother's role in maintaining children's dental health is clearly evident in children's dental hygiene, where a mother's role in maintaining oral health is directly proportional to the child's dental hygiene. A lack of maternal attention to children's dental health impacts children's lack of awareness about brushing their teeth. Preschool children still need ongoing guidance, supervision, and encouragement in caring for their own teeth, which is where the mother's role is crucial. Research by

Octavia et al., (2023) showed that mothers' inadequate role in maintaining children's oral hygiene leads to tooth decay. This inadequate maternal role is demonstrated by a lack of concern for their children's dental hygiene, often leading to mothers not providing age-appropriate toothbrushes and toothpaste for their children. Furthermore, mothers often fail to inform their children about foods and drinks that can damage teeth. Parents, especially mothers, play a crucial role in developing positive attitudes toward oral health in children. Parental involvement in maintaining children's oral health can be demonstrated by observing children's behavior regarding oral health and their diet. A mother's knowledge, attitudes, and behavior significantly influence a child's knowledge, attitudes, and behavior (Mentari, 2016).

Mothers' participation is crucial in guiding, providing understanding, fostering, and providing facilities for children to maintain oral hygiene. Furthermore, mothers play a significant role in preventing caries in children. Maternal knowledge is crucial in shaping behaviors that support or discourage oral hygiene in children. Mothers with low knowledge about oral health are behavioral factors that discourage children's oral health (Husna, 2019).

## CONCLUSION

The results of this study on the relationship between mothers' role in maintaining oral health and the dental hygiene of children at Melati Kindergarten and Mutiara Umi Kindergarten in Pematang Tiga District can be concluded as follows: 1) The role of mothers in maintaining children's dental and oral health is mostly in the poor criteria, namely 74.3% and good criteria as much as 25.7%; 2) Children's dental hygiene shows the most in the moderate criteria 45.7%, followed by poor criteria 40% and good criteria 14.3%; 3) There is a relationship between the role of mothers in maintaining oral dental health with children's dental hygiene with the results of the Asymp.sig analysis  $0.00 < 0.05$ .

## SUGGESTION

Based on the research results, it is recommended that mothers play a greater role in maintaining their children's oral health by instilling the habit of brushing teeth correctly and regularly, maintaining daily dental hygiene, and undergoing regular dental checkups at health care facilities. Furthermore, schools and healthcare professionals are expected to provide regular oral health education to parents and children to improve children's dental hygiene from an early age.

## REFERENCE

- Halim, M. P. (2015). *Peran Orangtua terhadap Pemeliharaan Kesehatan Gigi dan Mulut Anak dan Status Kesehatan Gigi dan Mulut Anak Kelas II SD St. Yoseph 1 Medan*. Repository Institusi Universitas Sumatera Utara. URI <http://repository.usu.ac.id/handle/123456789/33087>
- Husna, N. (2019). Efektivitas Penyuluhan Kesehatan Gigi dengan Menggunakan Media Busy Book Terhadap Tingkat Pengetahuan Kesehatan Gigi dan Mulut. *Jurnal Kesehatan Gigi*, 6(1), 51–55. <https://ejournal.poltekkes-smg.ac.id/ojs/index.php/jkg/article/view/4408>
- Kemendes RI. (2018). *Kesehatan Gigi. Kementerian Kesehatan RI*. <https://layandata.kemkes.go.id/katalog-data/riskesda/ketersediaan-data/riskesda-2018>

- Mentari, S., Bany, Z. U., & Novita, C. F. (2016). Hubungan Peran Orang Tua terhadap Indeks DMF-T Siswa Sedkolah Dasar dengan UKGS (Studi pada SDN 20 Kecamatan Kuta Alam Kota Banda Aceh). *Journal Caninus Dentistry*, 63-69. <https://scholar.google.com/scholar?cluster=11797689161651882611&hl=en&oi=scholar>
- Octavia, V. S., Gussevi, S., & Supendi, D. (2023). Pentingnya Peran Orang Tua terhadap Kebersihan Gigi dan Mulut Anak Usia Dini. *Pengabdian Masyarakat Sumber Daya Unggul*, 1(1), 42–47. <https://doi.org/10.37985/pmsdu.v1i1.32>
- Oktarina, O., Tumaji, T., & Roosihermiatie, B. (2016). Korelasi Faktor Ibu dengan Status Kesehatan Gigi dan Mulut Anak Taman Kanak- Kanak di Kelurahan Kemayoran Kecamatan Krembangan, Kota Surabaya. *Buletin Penelitian Sistem Kesehatan*, 19(4), 226–235. <https://doi.org/10.22435/hsr.v19i4.6815.227-235>
- Prasiska, N. S., Maria, L., & Rahmawati, P. Z. (2021). Hubungan antara Peran Orangtua dengan Teknik Menggosok Gigi yang Baik dan Benar pada Anak Pra Sekolah Usia 4-6 Tahun. *Professional Health Journal*, 2(2), 90-100. <https://doi.org/10.54832/phj.v2i2.129>
- Santoso, B., Sulistyowati, I., & Yodong, Y. (2020). Hubungan Peranan Ibu dalam Pemeliharaan Kesehatan Gigi Mulut terhadap Kebersihan Gigi Anak TK Bhakti Nurush Shofia Mutih Kulon Wilayah Puskesmas Wedung 2 Kabupaten Demak. *Jurnal Kesehatan Gigi*, 7(1), 58- 67. <https://ejournal.poltekkes-smg.ac.id/ojs/index.php/jkg/article/view/6529>