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**Do Age and Gender Factors Influence the Form of Parental Social Support for the Dental Health of Children with Down Syndrome in Surabaya?**

Siti Fitria Ulfah<sup>1</sup>, Agus Marjianto<sup>2\*</sup>

Department of Dental Health, Poltekkes Kemenkes Surabaya, Indonesia

\*Corresponding author: [mirzafitri@poltekkesdepkes-sby.ac.id](mailto:mirzafitri@poltekkesdepkes-sby.ac.id)

**ABSTRACT**

Down syndrome often results in cognitive and motor impairments, leading to poor oral hygiene and increased susceptibility to periodontal disease. Parental support, particularly in maintaining dental health, plays a crucial role in ensuring the well-being of children with Down syndrome. This study examines the influence of parental age and gender on the social support provided for dental care, highlighting the variations in involvement based on these factors. This study utilized an analytical cross-sectional design conducted in 14 special schools (SLB) in Surabaya. A total of 100 randomly sampled parents of children with Down syndrome participated by completing a questionnaire on parental social support for dental health. The data, including demographic information and five aspects of social support, were analyzed using a chi-square test to assess the relationship between parental age, gender, and social support. The results showed that parents aged 41-50 years provided moderate (47.1%) to high (66.7%) levels of social support for their children's dental health. Parents aged 51-60 years mainly provided moderate support (28.6%), and a significant relationship was found between parental age and social support ( $p=0.037$ ). Female parents were predominant in offering moderate (82.9%) to high support (85.7%), but gender did not significantly influence the level of social support ( $p=0.120$ ). In conclusion, Parental age has a significant impact on the social support provided for the dental health of children with Down syndrome, while gender does not have a significant effect, though mothers tend to offer more moderate levels of support in Surabaya city.

**Keywords:** Age, Gender, Dental Health, Social Support, Down syndrome, Parents

**INTRODUCTION**

Down syndrome is a congenital disorder caused by human chromosomal abnormalities and often leads to cognitive impairments as well as certain physical characteristics. The prevalence of Down syndrome varies from 1 in 400 to 1,500 live births across different populations. This condition is an intellectual disability caused by genetic factors. A recent study in the United States reported that the prevalence of children with Down syndrome is 8.72 per 10,000 people annually [1]. In Indonesia, according to Riskesdas 2013, the prevalence of children aged 24-59 months with disabilities, including Down syndrome, is 0.13% [2].

Down syndrome occurs due to an extra chromosome 21, first described by John Langdon Down in 1866 [1].

Children with Down syndrome experience cognitive and motor limitations and often suffer from periodontal disease due to poor oral hygiene, plaque accumulation, and calculus [3]. Severe periodontal disease occurs in more than 50% of Down syndrome patients, due to immune system disorders and motor difficulties that impede independent oral hygiene maintenance [4]. Enhanced oral hygiene care for individuals with Down syndrome requires support from their parents.

Parents need to be aware and

sensitive to their child's needs, whether the child is typically developing or has special needs. Appropriate parental support and attention can help children perform daily activities effectively, as the role of parents significantly impacts the success of children with special needs [5]. Support and acceptance from parents and other family members can boost the child's confidence in the decisions made. This encourages them to strive harder to learn and try new skills in their lives [6]. Parents of children with disabilities often face stress, necessitating social support in the form of emotional support, information, and instrumental support [7].

Parental social support in maintaining dental health for children with Down syndrome is influenced not only by the child's condition but also by the parents' characteristics, including age and gender. Parents play a crucial role in the dental care of children with Down syndrome, with variations in involvement levels based on the parents' age and gender, as well as the challenges related to the child's oral care [8]. Another study by Scalioni et al. also reviewed that parents, especially mothers, tend to be more active in ensuring their child's dental health, while parental age may influence parenting approaches [9]. This study aims to analyze the impact of parental age and gender on parental social support for the dental health of children with Down syndrome.

## RESEARCH METHOD

This study is an analytical research with a cross-sectional approach. The research location involves 14 Special Schools (SLB) in the Surabaya city area. The study was conducted from April to August 2024. Parents of children with Down syndrome in Surabaya are the subjects of this research. A random sampling method was used to determine the sample, consisting of one hundred parents with children with Down syndrome. Prior to the study, parents of children with Down syndrome were

provided with a research consent form. The data collection methods used were as follows: 1) primary data (demographic information of parents of children with Down syndrome, including parental gender and age); 2) a questionnaire on social support from parents of children with Down syndrome regarding the dental health of their children, consisting of 5 aspects: emotional support, esteem support, instrumental support, informational support, and social network support. The questionnaire items include 20 statements, both positive and negative. Responses are measured using a Likert scale with options: "Strongly Agree," "Agree," "Disagree," and "Strongly Disagree." Scores are categorized as follows:

Category 1 (Low): This score range includes values below the median.

Category 2 (Moderate): This score range includes values around the median.

Category 3 (High): This score range includes values above the median.

After performing descriptive data analysis, the relationship between parental age and gender with parental social support regarding the dental health of children with Down syndrome will be analyzed using the chi-square test with IBM SPSS Statistics 24. This study has been approved by the Ethics Committee of Poltekkes Kemenkes Surabaya: No.EA/2976/KEPK-Poltekkes\_Sby/V/2024.

## RESULT AND DISCUSSION

Demographic characteristics of parents of children with Down syndrome can be identified through parental gender and age. These characteristics may influence the social support provided by parents of children with Down syndrome regarding their children's dental health.

**Table 1.** Frequency Distribution of Demographic Characteristics of Parents of Children with Down Syndrome

Variable Demographic	Sum (n)	Percentage (%)
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Characteristics			
<b>Gender</b>			
-	Man	19	19
-	Female	81	81
<b>Age</b>			
-	26-40	19	19
-	41-50	48	48
-	51-60	27	27
-	61-69	6	6

In terms of the parental gender characteristics of children with Down syndrome involved in the study, the majority were female, with 81 respondents (81%). Regarding parental age characteristics, the ages varied, with the most common age range being 41-50 years (48%), followed by 51-60 years (27%) (Table 1). Therefore, the parents of children with Down syndrome who participated in this study predominantly fall into the adult and elderly categories according to the

Ministry of Health's age classification.

**Table 2.** Parental Social Support of Children with Down Syndrome Regarding Their Children's Dental Health

Variable	Sum (n)	Percentage(%)
- Low of Social Support	9	9
- Moderate of Social Support	70	70
- High of Social Support	21	21

Table 2 shows that the social support perceived by parents of children with Down syndrome regarding their children's dental health is mostly at a moderate level, with 70 respondents (70%).

**Table 3.** Influence of Age and Gender on Social Support Provided by Parents of Children with Down Syndrome Regarding Their Children's Dental Health

Variable Demographic	Social Support			Sum	P value
	Low n (%)	Moderate n (%)	High n (%)		
<b>Age</b>					
26-40	3 (33,3)	11 (15,7)	5 (23,8)	19 (19)	0.037
41-50	1 (11,1)	33 (47,1)	14 (66,7)	48 (48)	
51-60	5 (55,6)	20 (28,6)	2 (9,5)	27 (27)	
61-69	0 (0)	6 (8,6)	0 (0)	6 (6)	
<b>Gender</b>					
Man	4 (44,4)	12 (17,1)	3 (14,3)	19 (19)	0,120
Female	5 (55,6)	58 (82,9)	18 (85,7)	81 (81)	

Table 3 indicates that the social support provided by parents of children with Down syndrome aged 41-50 years is categorized as moderate and high, at 47.1% and 66.7%, respectively. Social support for dental health from parents of children with Down syndrome aged 51-60 years is categorized as moderate (28.6%). The variable of parental age significantly influences the form of social support provided by parents of children with Down syndrome regarding their children's dental health, with a p-value of  $0.037 < 0.05$ . Female parents of children with Down

syndrome most commonly provide moderate (82.9%) and high (85.7%) levels of social support. Parental gender does not significantly influence social support, with a p-value of  $0.120 > 0.05$ .

This study explores the influence of age and gender on the social support provided by parents of children with Down syndrome regarding their children's dental health. The parents involved in this study have a wide range of ages, including 26-40 years, 41-50 years, 51-60 years, and 61-69 years. The majority of parents of children with Down syndrome are between 41-50

years old, followed by those aged 51-60 years. Thus, the parents involved in this study primarily fall into the adult and elderly categories according to the Ministry of Health's age classification. Age is an important factor that can affect aging outcomes. As people age, they may experience declines in physical and cognitive functions [10].

The study indicates that the age of parents of children with Down syndrome significantly affects the form of social support provided regarding dental health in Surabaya. It was observed that parents aged 41-50 years provide moderate to high levels of dental health social support, while those aged 51-60 years offer support in the moderate category. Similarly, parents aged 21-40 years provide moderate support, whereas those older than 60 years show a decline in providing dental health social support for their children with Down syndrome. This study clearly shows that aging adults perceive social support in terms of their children's dental health, including emotional support, esteem, instrumental support, informational support, and social networks.

Mature age impacts their ability to function independently and participate in social activities. However, other studies have shown that older adults can maintain or improve positive aspects of aging, such as physical and cognitive functions, by engaging in healthy behaviors, social activities, and access to healthcare services [10]. Previous research indicated that parental age was not related to the social support perceived by parents of children aged 0-7 years [6]. Social support is a critical component in promoting successful aging among older adults. Social support can provide emotional and instrumental assistance, enhancing mental health and independence [11]. Older adults tend to have smaller social networks, fewer close relationships within their networks, and fewer non-primary group bonds compared to younger adults [12].

This study shows that parents of children with Down syndrome are predominantly female, with few fathers participating in the research. Parental gender does not have a significant impact on the social support perceived for the dental health of children with Down syndrome. The study reveals that female parents or mothers of children with Down syndrome receive moderate levels of social support across emotional, esteem, instrumental, informational, and social network aspects.

Previous research shows that women are more likely to give and receive emotional support compared to men, as women tend to have more female friends, allowing them more sources for emotional support when needed [12]. The type and source of social support are important factors influencing the effectiveness of social support. Literature reviews indicate that successful aging is complex and multifaceted, influenced by various factors such as age, gender, caregiving characteristics, and social support [10].

Social support makes mothers feel valued and loved by those around them, reducing parenting stress. Women seem to experience slightly higher levels of social support compared to men [12]. A mother experiences positive emotions when others understand her and provide support. Ultimately, mothers caring for children can feel comfortable, capable, and optimistic about their new roles and responsibilities [13]. Other studies have found that social support helps mothers experience positive emotions and reduce stress associated with child-rearing. Mothers can cope with stress and enhance their resilience with the support they receive. When mothers receive social support, they feel that it provides them with love, attention, or a sense of worth from their social group. Moreover, mothers will continue to maintain mental health to prevent stress. However, if mothers have low social support, they may feel undervalued and unloved by others [14].

## CONCLUSION

The conclusion of this study indicates that parental age, particularly those aged 41-50 years, significantly affects the form of social support for the dental health of children with Down syndrome. Younger parents tend to provide higher levels of support, while older parents experience a decline in social support. Additionally, although parental gender does not have a significant impact, mothers are more likely to provide and receive moderate levels of social support. This study reinforces the importance of social support for parents of children with Down syndrome, including emotional, esteem, instrumental, informational support, and social networks, in maintaining their children's dental health

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