

The Relationship between Pediatric Patients' Anxiety Levels During Dental and Oral Care and Treatment Success at RSGM-P Nala Husada

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ABSTRACT

Anxiety in children can significantly impact the dental treatment process, making it essential to understand the factors contributing to this anxiety and its effects on treatment outcomes. This study explores the relationship between the level of anxiety in pediatric patients during dental care and the success of treatment at the Nala Husada Dental and Oral Health Teaching Hospital (RSGM-P). The study employed an observational analytic design with a cross-sectional approach, involving 35 children aged 6-12 years who underwent dental treatment at RSGM-P Nala Husada. Anxiety levels were measured using the CFSS-DS method, with scores ranging from 15 to 45, categorized into three levels: very anxious, anxious, and not anxious. Data analysis was conducted using the Spearman correlation test to examine the relationship between anxiety levels and treatment success. The results showed that the majority of pediatric patients had low levels of anxiety (54.3% not anxious), and the treatment success rate was 71.4%. The correlation analysis revealed a significant relationship between anxiety levels and treatment success (Sig. (2-tailed) < 0.05), indicating that lower anxiety levels are associated with higher success rates in pediatric dental care. This study underscores the importance of managing anxiety in children to improve dental treatment outcomes, as well as the crucial role of effective communication between dentists and pediatric patients in reducing anxiety.

KEYWORDS: anxiety, children, treatment success, dental and oral health

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INTRODUCTION

Dental caries is one of the oral health issues that can significantly disrupt daily activities. According to the 2018 Riskesdas data, the prevalence of dental and oral health problems related to caries in Indonesia was 57.6%. Additionally, the prevalence of dental anxiety among children in Indonesia is approximately 22% (Hartiana, 2023). The 2018 Riskesdas report indicates that the incidence of dental caries among children aged 5-9 years was 54.0%, while for those aged 10-12 years, it was 1.89% (Maharani, 2021).

Dental fear refers to a negative response to certain alarming factors linked to dental care, while dental anxiety involves an excessive or debilitating negative emotional state felt by dental patients (Cianetti, 2017). Anxiety occurs when a person is stressed, leading to feelings of unease and concern, combined with physical symptoms like a faster heartbeat and higher blood pressure (Rukmawati, 2019). The fear and anxiety associated with visiting the dentist have a substantial

impact on the decline of oral health in young children. Several factors, including personal, external, and dental factors, influence these feelings. Personal factors include gender, age, and temperament. External factors involve parental anxiety, vicarious learning, and social situations. Dental factors relate to pain and the treatment environment (Sanger, 2017). Therefore, when a child requires dental care, parents or guardians must provide adequate support and prevent fear from an early age (Marwansyah, 2018).

Anxiety during dental treatment in children can hinder dentists from effectively performing oral examinations or treatments, which may contribute to poor oral health outcomes in early childhood. Children of primary school age still develop social contact skills with their environment (Sanger, 2017). Maintaining good oral health is essential during the dental growth period, and managing anxiety in young children is a critical aspect of adequate dental care. Therefore, pediatric dental care should be conducted with

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good communication and access to reduce patient anxiety during treatment. Fear can become deeply ingrained in a child's mind, making it difficult to overcome (Yahya, 2016). Primary school-aged children often struggle to control their emotions, and fluctuations in emotions are a normal part of psychological development; however, some children may experience anxiety as a result of external emotional pressures (Wuisang, 2017).

METHODS

This study employed an observational analytic design with a cross-sectional approach. The study population consisted of primary school-aged children undergoing or undergoing dental treatment at the Nala Husada Dental and Oral Health Teaching Hospital (RSGM-P).

The sample criteria for this study were as follows:

1. Children aged 6-12 years at the time of the study.
2. Children undergoing or having completed dental treatment at RSGM-P Nala Husada.
3. Children who consented to participate in the study.

4. Both new and returning patients.

5. Children who were able to communicate effectively and cooperatively.

The sampling technique used was purposive random sampling, with 35 participants in the study. Data collection was conducted using a questionnaire comprising several questions addressing anxiety-related factors. Anxiety levels were measured using the CFSS-DS method, which includes 15 items related to dental treatment, with each item offering three possible responses. The total scores range from 15 to 45, with the following categorizations: Very Anxious (Score 15-24), Anxious (Score 25-34), and Not Anxious (Score 35-45).

Data analysis included both univariate and bivariate analyses. Univariate analysis was conducted to obtain the distribution of each research variable's frequency. Bivariate analysis was performed to examine the connection between independent and dependent variables. The Spearman correlation test was used for bivariate analysis to test the hypothesis, with the assistance of SPSS software (Nursalam, 2014).

RESULT

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6.00	2	5.7	5.7	5.7
	7.00	6	17.1	17.1	22.9
	8.00	6	17.1	17.1	40.0
	9.00	13	37.1	37.1	77.1
	10.00	3	8.6	8.6	85.7
	11.00	2	5.7	5.7	91.4
	12.00	3	8.6	8.6	100.0
	Total	35	100.0	100.0	

The study's results indicate that 9-year-old children represent the highest percentage of participants, accounting for 37.1% (13 children) of the sample.

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	11	31.4	31.4	31.4
	female	24	68.6	68.6	100.0
	Total	35	100.0	100.0	

Additionally, the study reveals that female patients constitute the majority, with a percentage of 68.6%.

Anxiety Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	highly anxious	7	20.0	20.0	20.0
	anxious	9	25.7	25.7	45.7
	not anxious	19	54.3	54.3	100.0
	Total	35	100.0	100.0	

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Furthermore, the findings show that 54.3% of pediatric patients were categorized as not anxious according to the anxiety level measured by the CFSS-DS method.

Treatment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not completed	10	28.6	28.6	28.6
	completed	25	71.4	71.4	100.0
	Total	35	100.0	100.0	

The majority of the children (71.4%) completed their dental treatments.

Correlations

		Anxiety Level		Treatment
Spearman's rho	Anxiety Level	Correlation Coefficient	1.000	.804**
		Sig. (2-tailed)	.	.000
		N	35	35
	Treatment	Correlation Coefficient	.804**	1.000
		Sig. (2-tailed)	.000	.
		N	35	35

** . Correlation is significant at the 0.01 level (2-tailed).

The Spearman correlation analysis demonstrated a significant relationship between anxiety levels and the completion of dental treatment, with a Sig. (2-tailed) value of 0.000. Since the Sig. (2-tailed) value is less than 0.05, the alternative hypothesis (H1) is accepted, indicating a significant association between anxiety levels and treatment success among pediatric patients at RSGM-P Nala Husada.

DISCUSSION

This study aimed to examine the relationship between pediatric patients' anxiety levels during dental and oral care and the success of treatment at RSGM-P Nala Husada. Anxiety is a common experience that can significantly influence behavior. It is a normal response to perceived threats, often manifesting as unease or apprehension. However, excessive anxiety can lead to irrational fears of specific situations (Syamsul, 2016).

The study's findings indicate that 9-year-old children represented the highest percentage of participants, at 37.1%. Children aged 8-10 years can generally express and manage their feelings during dental treatment, while those aged 11-12 and older can differentiate and anticipate what they feel. Children over 12 are better at self-regulation, possess enhanced cognitive abilities, undergo socio-emotional changes, and have quicker comprehension skills (Wuisang, 2015). According to Reza et al (2020), older children exhibit more excellent cognitive abilities and a better understanding of their environment, making them less likely to experience anxiety during dental and oral care.

The study also revealed that female patients constituted the majority, with 68.6%. This finding is

supported by research from Aranza et al. (2022), which suggests that females have a higher dental health awareness than males. This heightened awareness leads to more frequent visits to the dentist for check-ups. Women tend to place more emphasis on dental health, which builds trust in dental health services. Various factors, including lifestyle and socioeconomic status, influence this issue. Maintaining dental health involves good behavioral practices and regular dental health services, such as dental health education, regular check-ups, and professional prophylaxis (Sfeatu et al., 2022). Children who reported more frequent visits to the dentist were significantly less anxious than those who reported infrequent visits. If children had experienced a particular form of dental treatment, they were significantly less anxious about specific items related to that treatment (Al Saddi, 2019)

The findings showed that 54.3% of the pediatric patients were categorized as not anxious according to the CFSS-DS method. Children often fear or feel anxious about visiting the dentist due to the anticipation of pain during procedures such as injections, tooth extractions, and drilling. Fear manifests in various forms, with physiological signs such as increased pulse rate, pallor, cold sweats, restlessness, and crying (Putri, 2020). This study aligns with Sagrang's (2017) research, which found that 65.62% of respondents experienced low or no anxiety due to factors such as the dentist's patience and careful approach. It also corroborates Sanger's (2017) study on anxiety levels in children aged 6-12 during dental treatment at SD Kristen Eben Haezar 2 Manado, where 61.36% of respondents exhibited low anxiety. The lack of regular dental check-ups or rare visits to the dentist were

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associated with increased levels of dental fear and anxiety in both children and teenagers, as well as in adults (Saatchi, 2015).

The analysis of the correlation between anxiety levels and treatment completion (treatment success) using the Spearman correlation test revealed a significant relationship between anxiety levels and treatment success in pediatric patients at RSGM-P Nala Husada. Favorable interactions, including smiling and friendliness, between dentists and staff have been shown to decrease dental anxiety in children, thereby improving the efficacy of dental procedures (Chadwick et al., 2003). Additionally, dentists and their staff are generally careful, patient, and kind when dealing with pediatric patients (Sagrang et al., 2017). Mariska et al. (2016) also found that effective interpersonal communication between dentists and patients is crucial in reducing dental anxiety, contributing to successful treatment.

This study supports the theory that communication is essential in alleviating dental anxiety in children (Gupta et al., 2014). Dewi et al. (2020) highlighted that lack of control is a factor influencing dental anxiety in children, with those unable to control the dentist's actions during treatment being more anxious than those who can. This finding is consistent with the theory that lack of control is a significant factor in dental anxiety, as patients may feel uncomfortable or helpless in the dental chair and unable to interrupt the dentist during the procedure (Appukuttan DP, 2016). Ummat's research in 2019 revealed that as a child's fear and anxiety about dental visits increased, their behavior became more negative. Age, expectation of treatment, aversion to injections, and fear of dental drills were all contributing factors to this. These factors can be effectively utilized to identify a child's dental behavior, ultimately aiding in the reduction of their fear and anxiety related to dental visits.

CONCLUSION

According to the findings of the study conducted at RSGM-P Nala Husada, which examined the correlation between anxiety levels in pediatric patients during dental and oral care and the success of their treatment, there is a significant association between anxiety levels and the completion of treatment (treatment success) among pediatric patients at RSGM-P Nala Husada.

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