

# PRELIMINARY EXPLORATION OF PARENTING STYLES AND CHILDREN'S DENTAL ANXIETY IN MALAYSIA: INSIGHTS FROM UITM PAEDIATRIC DENTISTRY CLINIC

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## **Abstract**

Parenting styles play a crucial role in shaping children's behaviour and anxiety levels, but there is limited information on this aspect in Asian countries, particularly Malaysia. This pilot study aims to examine parenting styles among Malaysian parents and their potential correlation with children's dental anxiety. A pilot study involved 30 parent-child pairs attending the UiTM Paediatric Dentistry Clinic. Participants aged 5 to 12 completed the Parenting Styles and Dimensions Questionnaire (PSDQ) and the Malay Modified Child Dental Anxiety Scale (MCDAS<sub>r</sub>). Parenting styles were classified based on PSDQ scores, and dental anxiety levels were assessed using MCDAS<sub>r</sub>. Parents exhibited a predominant authoritative parenting style. Pearson's correlation revealed a positive association between MCDAS<sub>r</sub> and parenting styles in two items. However, linear regression analysis demonstrated no substantial correlation between PSDQ domains and children's total anxiety scores ( $R^2 = 14.1\%$ ). This suggests that, in this preliminary study, parenting styles did not significantly impact children's dental anxiety. The pilot study did not find a direct association between parenting styles and dental anxiety in children. The limited sample size may have affected the ability to detect subtle associations. Further investigation, possibly through qualitative research or more detailed surveys, is recommended to explore additional factors contributing to dental anxiety in children.

**Keywords:** Parenting Styles, Children's Dental Anxiety, PSDQ

## **Introduction**

Parenting encompasses all actions and behaviours related to raising and caring for one's offspring. It includes various activities and responsibilities parents undertake to nurture, support, and guide their children as they grow up and develop. Parenting styles refer to a psychological construct representing a standard strategy parents use in the upbringing and socialisation of their children (1). The styles reflect the emotional climate and the overall approach parents adopt when interacting with their children. In 1971, Baumrind introduced a parenting typology into 2 two parts: parents' responsiveness and parents' demandingness (2). A good balance between these two components was shown to provide a child with self-esteem and social competence (3). This concept was later modified by Darling and Steinberg in 1993, and parenting has been categorised into three types:

authoritative, authoritarian, and permissive (4). Studies have revealed that the level of expectation and support provided by parents significantly impact children's well-being. For instance, it affects their mental state and may lead to the development of anxiety (5).

Authoritative parenting balances warmth with control, responding to children's needs and setting consistent behavioural expectations, resulting in more compliant children during dental treatment than other parenting styles (6). The authoritarian parenting style is high in demand but low in responsiveness; these parents are strict and impose rules and discipline without much emotional warmth and flexibility. Unlike authoritarian parenting, the permissive parenting style is high in responsiveness but low in demandingness. Permissive parents are

indulgent and lenient, often allowing their children significant freedom and autonomy.

Understanding these parenting styles helps researchers and professionals analyse the impact of parenting styles on children's development, behaviour, and well-being. Different parenting styles can have distinct effects on a child's emotional, social, and cognitive development. It is imperative to note that in 2002, the American Association of Paediatric Dentistry (AAPD) diplomats unequivocally recognised the rising prevalence of indulgent parenting, which has undeniably contributed to a surge in oral health problems and harmful conduct in children due to the lack of parental control (7).

Numerous studies on parenting styles in dentistry provide clear evidence of the connection between oral hygiene practices and oral health or caries status (8,9). However, a prevalent and significant concern is dental anxiety, which can greatly impact a patient's willingness to seek dental care and result in delayed or neglected treatment (10). Providing care for a dentally anxious patient affects clinicians' cost, time, and demands, resulting in referral to secondary dental care services and consequently increasing the waiting time for them to be treated (11). Additionally, it is more difficult to perform adequate restorations in children with dental anxiety, which requires treatment under general anaesthesia (12).

Issues regarding cross-cultural parenting have gained much interest worldwide; nonetheless, there is limited relevant literature in Southeast Asia, including Malaysia (13). Therefore, this study aimed to examine parenting styles among Malaysian parents and their potential correlation with children's dental anxiety.

### **Materials and Methods**

This cross-sectional pilot study, approved by the Research Committee of Universiti Teknologi MARA (UiTM) under REC/08/2022 (PG/MR/172), involved 30 parent-child units attending the UiTM Paediatric Dentistry Clinic. The sample size was determined through consecutive sampling, wherein participants were selected based on their sequential presentation and availability during clinic visits. This practical approach aligns with the natural flow of patients seeking dental care in a clinical setting suitable for efficient participant recruitment.

Inclusion criteria encompassed children aged 5 to 12, accompanied by their parents during clinic visits. The

exclusion criteria applied to parents or children with impaired cognitive function and parents who did not consent to participate in the study. Participants were asked to complete a set of questionnaires which included sociodemographic information, parenting styles assessed using the translated and validated Parenting Styles and Dimensions Questionnaire (PSDQ) for parents, and evaluation of children's anxiety using the Malay Modified Child Dental Anxiety Scale (Malay-MCDAS<sub>r</sub>).

The items of the PSDQ underwent a rigorous forward-backwards translation process in accordance with the methodology proposed by Sousa and Rojjanasirrat (14) preceding the commencement of the pilot study. Subsequently, face validation was systematically conducted involving 30 adult participants, resulting in a total clarity score of 0.68.

Content validation was meticulously executed with the input of six experts in the field. The S-CVI/Ave (Scale-level Content Validity Index/Average) was calculated as the sum of Individual Content Validity Index (I-CVI) scores divided by the total number of items, yielding a S-CVI/Ave of 0.74.

To assess the internal consistency of the PSDQ items, Cronbach's alpha was applied, revealing a coefficient of 0.568. This comprehensive validation process enhances the reliability and validity of the PSDQ instrument for subsequent research endeavours. Parenting styles were assessed in this study using the PSDQ, a self-reported instrument consisting of 32 items. Each item is systematically categorised across seven domains: Warmth and Support, Reasoning, Democratic Participation, Physical Coercion, Verbal Hostility, Punitive, and Indulgent Dimensions.

The PSDQ utilises continuous scales representing authoritative, authoritarian, and permissive parenting styles. Developed by Robinson et al. (15), this instrument serves as a concise version of the Parenting Practice Questionnaire (PPQ). To determine the predominant parenting style among authoritative, authoritarian, permissive parenting style exhibited by each parent, the highest mean score within the respective parenting type was identified. A 5-point Likert scale was utilised for each item, capturing the frequency of parental behaviours towards their child. This methodological approach ensures a detailed assessment of parenting styles, which adds to the findings' comprehensiveness and reliability.

The assessment of dental anxiety in the participating children was conducted utilising the Modified Child Dental Anxiety Scale (MCDAS<sub>r</sub>), an 8-item questionnaire recognised for its reliability and validity in gauging dental anxiety among Malaysian children aged 5-12 years. This translated and validated questionnaire was adapted from the work of Esa et al. (16). The selection of the age range for this study aligns with the recommendations derived from a systematic review of contemporary measures of assessing dental anxiety in children, as reported in a study by Porritt et al. (11). The review indicated that the MCDAS<sub>r</sub> has been successfully employed in various studies with respondents falling within the age range of 4 to 17 years old.

Administering the questionnaire followed the methodology outlined in the study by Esa et al. (16). During individual face-to-face interviews, children were provided with an overview of the cartoon faces scale incorporated in the MCDAS<sub>r</sub>. Subsequently, the investigator read the MCDAS<sub>r</sub> questions aloud, and the children selected cartoon facial expressions that best represented their feelings. Any queries pertaining to the questions were addressed directly to the investigator for clarification.

Continuous scores, ranging from 8 to 40, were recorded for each participant, facilitating the determination of individual anxiety levels. This meticulous approach enhances the precision and validity of the assessment of dental anxiety in the studied cohort.

The consecutive sampling technique was selected for its practicality in a clinical setting, ensuring efficient recruitment of participants. This choice demonstrates its feasibility as a method for exploring trends, patterns, and for preliminary data gathering. Consecutive sampling is a pragmatic approach to quickly gather information without the complexity associated with random sampling methods.

Throughout the study, ethical standards were meticulously maintained in accordance with the approved protocol (REC/08/2022 (PG/MR/172)). Informed consent was obtained from all participants, and confidentiality of the collected data was strictly upheld. The research team prioritised the well-being and rights of the participants, adhering to the principles of ethical conduct in research.

### **Data analysis**

The statistical analysis of the data was conducted using SPSS Version 27.0. The chi-square test and Fisher's exact test were employed to explore the relationship between parenting styles and children's dental anxiety. However, due to the absence of distinct differentiation in the parenting groups, linear regression analysis and Pearson correlation analysis were employed to assess the correlation between the seven domains of the Parenting Styles and Dimensions Questionnaire (PSDQ) and the total anxiety scores in children.

Linear regression helps identify potential relationships between multiple variables, while Pearson correlation assesses the strength and direction of linear relationships between two continuous variables. These analyses aimed to comprehensively understand how specific parenting dimensions might influence children's dental anxiety scores.

Chi-square and Fisher's Exact tests were chosen to investigate the relationship between parenting styles and children's dental anxiety. Chi-square is suitable for examining associations between categorical variables, and Fisher's exact test is applied when dealing with smaller sample sizes or when assumptions of the chi-square test are not met. In this study, these tests were appropriate for analysing the categorical data related to parenting styles and dental anxiety.

The chosen statistical tests were aligned with the study's objectives and the nature of the data, allowing for a robust exploration of the relationship between parenting styles and children's dental anxiety within the limitations of the study design.

### **Results**

The demographic characteristics in Table 1 offer valuable insights into participating parents' profiles with potential implications for the study results:

#### ***i. Age distribution***

**Influence on Parenting Styles:** The predominant age range of 30 to 49 years may shape generational parenting perspectives, influencing parenting styles. Exploring age correlations could enhance contextual understanding.

### ii. Socioeconomic impact

On Dental Anxiety: Differences in income levels imply potential socioeconomic factors influencing dental health. The income distribution may have implications for access to dental care, affecting the levels of dental anxiety observed in children.

### iii. Parental education levels

Impact on Parenting Styles: Variations in parental education levels could potentially impact parenting methodologies, subsequently exerting an influence on the dental anxiety levels exhibited by children.

### iv. Quality of interaction

Time Spent with Children: An observed trend among the majority or 80% of parents dedicating more than 10 hours per week to their children suggests a potential correlation with positive parent-child relationships. This association may, in turn, contribute to the likelihood of lower levels of dental anxiety in children.

### v. Limited variability

Parental Educational Background: Balanced distribution suggests limited variability. This homogeneity may impact the study's sensitivity to nuanced relationships between parental education and children's dental anxiety.

### vi. Consistent engagement

Influence on Anxiety Levels: The absence of parents reporting less than 5 hours weekly may reflect cultural norms, potentially fostering a supportive environment and influencing children's anxiety levels.

Understanding these demographics aids interpretation of the result and lays the groundwork for further exploration. Considering these factors in future research enhances the findings' generalizability across diverse demographic profiles.

The MCDAS<sub>r</sub> items were individually assessed, resulting in a mean score of 19.70 and s.d of 6.64. Pearson correlation analysis was employed to examine the relationship between the eight MCDAS<sub>r</sub> items and parenting styles. Notably, a positive correlation was observed between dental anxiety (MCDAS<sub>r</sub>) and parenting styles in specific items. Item 5 ("Having a filling") and Item 6 ("Having a tooth taken out") demonstrated positive correlations, suggesting a potential influence of parenting styles on children's anxiety in these dental scenarios.

**Table 1:** Parent's sociodemographic characteristics and time spent with their children weekly

Variables	n	%
<b>Parent's age group</b>		
30-39y/o	15	50
40-49y/o	14	46.7
50y/o and above	1	3.3
<b>Parent's Income</b>		
below RM4000	10	33.3
RM4001-RM6000	16	53.3
RM6001-RM10,000	4	13.3
<b>Parent's highest education</b>		
SPM/STPM/Diploma	12	40
Degree	9	30
Master/PhD	9	30
<b>Time spent with child</b>		
5-10 hours	6	20
more than 10 hours	24	80

Table 2 displays the means, standard deviations (s.d), and Pearson correlation coefficients ( $r_p$ ) between items on the Malay Modified Children's Fear Survey Dental Anxiety Scale (MCDAS<sub>r</sub>) and parenting styles.

Table 3 illustrates the standardised coefficients, p-values, and 95% confidence intervals for the correlation between Parenting Styles and Dimensions Questionnaire (PSDQ) dimensions and the total anxiety score. The results suggest that while the regulation dimension in PSDQ showed the strongest positive correlation with the overall anxiety score, none of the dimensions reached statistical significance ( $p > 0.005$ ). The impact of the regulation dimension on the total anxiety score could vary from -0.142 to 2.501. Overall, the PSDQ domains did not exhibit a substantial correlation with children's total anxiety scores ( $R^2 = 14.1\%$ ).

## Discussion

Notably, a predominant number of parents in our study exhibited authoritative parenting styles, a trend consistent with prior research findings (5, 17, 18). This alignment underscores the prevalence of authoritative parenting as a common approach among the parents in our sample.

**Table 2:** Mean, Standard Deviation, and Pearson Correlation of Malay Modified Children's Fear Survey Dental Anxiety Scale (MCDAS<sub>r</sub>) Items with Parenting Styles

MCDAS <sub>r</sub> item	Mean (s.d)	t	r <sub>p</sub>
Item 1 Going to the dentist	2.03 (0.928)	0.480	-0.134
Item 2 Having your teeth looked at?	1.80 (1.031)	0.418	-0.154
Item 3 Having your teeth scraped and polished?	2.20 (1.472)	0.518	-0.123
Item 4 Having an injection in the gum?	3.23 (1.406)	0.250	-0.217
Item 5 Having a filling?	1.93 (1.202)	0.921	0.019
Item 6 Having a tooth taken out?	3.23 (1.478)	0.353	0.176
Item 7 Being put to sleep to have treatment?	2.57 (1.406)	0.768	-0.056
Item 8 Having mixture of 'gas and air'	2.70 (1.291)	0.613	-0.096

*r<sub>p</sub>* = Pearson correlation

**Table 3:** Correlation Between Parenting Styles (PSDQ Dimensions) and Total Children's Dental Anxiety Score

PSDQ Dimension	Standardised Coefficients	p-value	95.0% CI	
			Lower bound	Upper bound
indulgent connection	-0.263	0.319	-2.378	0.81
regulation	0.095	0.663	-1.543	2.38
autonomy	0.473	0.078	-0.142	2.501
physical	0.018	0.932	-1.015	1.103
Non reasoning	0.084	0.706	-1.231	1.788
	0.202	0.41	-0.844	1.998

p<0.005

This style could prove advantageous for promoting oral health within the dental context. Characterised by high responsiveness, demandingness, warmth, and support, authoritative parents establish clear expectations and boundaries. Such parents will likely emphasise the importance of regular dental check-ups and preventive care, contributing to positive oral health behaviours. Despite these insights, our

analysis failed to establish a discernible correlation between different parenting styles and children's dental anxiety. This limitation stems primarily from the challenge of distinguishing distinct parenting styles within our sample, compounded by the small sample size characteristic of a pilot study. Additionally, the homogeneity of the ethnic composition, with the majority being of Malay ethnicity, further complicated the delineation of parenting styles (18).

An essential consideration in our study is the potential influence of social desirability during the self-reporting phase. Participants may have been inclined towards socially desirable responses, particularly when evaluating positive parenting practices as presented in the questionnaires. Social desirability introduces a possible confounding variable, impacting the accuracy and reliability of reported data (19).

In future research, strategies could be implemented to mitigate the impact of social desirability on self-reporting. The challenge of characterising each parent as adhering exclusively to a single parenting style is a recurrent issue in research on parenting styles. Our findings align with other studies (6, 17, 18) that indicate minimal distinctions among traditional parenting styles, with parents often displaying comparable scores. This complexity underscores the intricacies involved in studying and categorising parenting styles. Considering the influence of dental visit history and past traumatic experiences on children's anxiety levels (6), future studies should incorporate these variables.

While our study provides valuable insights within the Malaysian context, it is crucial to interpret these findings judiciously. The pilot nature of our investigation necessitates caution in drawing definitive conclusions. The limitations, including the small sample size and the challenge of delineating parenting styles within the sample, must be acknowledged. The homogeneity of the sample, primarily comprising Malay ethnicity, may impact the generalizability of our findings to a broader population. In practical terms, clinicians can leverage the insights from our study to inform behaviour management strategies and parental education in dental settings. Understanding the prevalence of authoritative parenting and its potential positive impact on oral health behaviours can guide tailored

approaches to promote dental health among children.

### **Conclusion**

In conclusion, this pilot study sheds light on the prevalent authoritative parenting styles among Malaysian parents, aligning with existing research trends. The characteristics of authoritative parenting, marked by high responsiveness, demandingness, warmth, and support, may contribute positively to oral health behaviours. Specifically, these parents will likely emphasise the importance of regular dental check-ups and preventive care, potentially fostering a foundation for positive dental habits in their children.

However, the study faced significant limitations, including a small sample size and challenges delineating distinct parenting styles within the homogeneous sample, primarily Malay ethnicity. Despite the valuable insights gained, the analysis could not establish a clear correlation between different parenting styles and children's dental anxiety, highlighting the complexities involved in studying these relationships. Acknowledging social desirability during self-reporting underscores the need for refined methodologies in future research to minimise potential biases.

While the findings offer a foundational understanding of parenting styles in the Malaysian context, it is essential to approach them with caution due to the pilot nature of the study. Further research with larger and more diverse samples and refined methodologies is imperative to draw more robust conclusions. Clinically, these insights can inform strategies for behaviour management and parental education in dental settings, recognising the potential impact of parenting styles on children's oral health habits.

### **Competing interests**

The authors declare that they have no conflicts of interest.

### **Ethical Clearance**

Approval was obtained from the Research Committee of Universiti Teknologi MARA (UiTM) (REC/08/2022 (PG/MR/172)).

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