

Evaluation of the parenting styles and other social variables influencing behaviour of child in dental clinic

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Abstract

Background: Parents play a major role in the physical and emotional development of children. The parenting style has influence over child behaviour in the dental office. Other factors like family type, presence of siblings as well as position of child in the family may also affect the behaviour of the child in the dental clinic.

Objectives: To evaluate the parenting styles and other social variables influencing child dental behaviour.

Methods: One hundred and fifty-one healthy children aged 4-12 years were recruited by convenience sampling during their regular dental visits to Paediatric Dentistry Department, Kantipur Dental College from April to July 2021 after ethical clearance. Family and child demographic data were evaluated through a questionnaire. The accompanying parent completed the Parenting Styles and Dimensions Questionnaire (PSDQ). The behaviour of the children was evaluated during the routine non-invasive dental procedure using Frankl behaviour rating scale.

Results: All three parenting styles were identified among Nepali parents, including authoritative (136, 90.06%), authoritarian (6, 3.97%), and permissive parenting styles (9, 5.96%). Most of the children showed positive behaviour (98, 64.9%). Significant associations were detected with age ($p = 0.027$) and gender ($p = 0.015$) and their behaviour, but not between parenting styles, type of family, number of siblings, and position of child in the family with behaviour.

Conclusion: The behaviour of the child was significantly associated with the age of the child, with younger children exhibiting more negative dental behaviour than older ones. However, other factors did not have association with child behaviour.

Key words: Child behaviour; Parenting style; Sibling; Family type.

INTRODUCTION

A child's behaviour in dental office is influenced by multiple factors like age, gender of the child, parenting style, and social variables like socio-economic

status, family type, and sibling position.¹⁻³ It has been found that negative experiences of parents like fear and anxiety are transmitted to the child.^{4,5}

Research has established that a child with warm and supportive siblings is more likely to have better cognitive abilities, social intelligence, emotional understanding, moral awareness, and psychological well-being.⁶ Position of the child in the family also influence their behaviour, younger children follow the older as role models.⁷ Children in joint family learn patience, tolerance, and cooperation while in a nuclear family, only the parents shape the child's personality.⁸

Baumrind categorised parenting styles into: (1) Authoritative; (2) Authoritarian; and (3) Permissive.^{3,9} Different rating scales are used for classifying the child behaviour in the dental clinic and Frankl's scale is considered as one of the most reliable tools. It categorises child behaviour into: Frankl 1 (definitely negative), Frankl 2 (negative), Frankl 3 (positive), and Frankl 4 (definitely positive).¹⁰

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The purpose of present study was to evaluate parenting styles and other social variables that may influence child dental behaviour.

METHODOLOGY

An analytical cross-sectional study was conducted among four to 12-year-old children visiting the Department of Paediatric Dentistry, Kantipur Dental College, Basundhara, Kathmandu, Nepal for a routine dental check-up. The study was carried out during April to July 2021 after getting ethical approval from the institutional review committee of Kantipur Dental College (Ref. 39/020). The inclusion criteria were children with complete, physical, and mental health, with no confounding medical history. Children with systemic disorders, with special health care needs, history of post-traumatic stress disorders, previous unpleasant dental or medical experience were excluded.

The sample size was calculated using the formula $n = Z^2p(1-p)/d^2$ with a confidence interval of 95% ($Z = 1.96$), margin of error 7% ($d = 0.07$), and an estimate based on the parenting and child behaviour study of Howenstein et al.⁴ ($p = 0.77$). The final sample size calculated was 153 (10% non-response rate). However, two parents had similar averages for two categories of parenting styles and had to be excluded from the analysis, which was finally done for 151 samples.

A written informed consent was obtained from parents willing to participate in the study after explaining the purpose of the study. The parents accompanying the child filled the questionnaire in English, which consisted of two parts. The first part of the questionnaire contained the demographic and social details of their child and themselves which included: age, gender, type of family, position of child in the family; and the second part was the short version of Parenting Style and Dimension Questionnaire (PSDQ)⁹ questionnaire. The PSDQ is considered an effective and reliable psychometric instrument used to assess parenting style according to Baumrind's model. The short English version of PSDQ consists of 32 items rated on a five-point Likert-type scale ranging from 1 (never) to 5 (always) was used. The items were grouped into three styles and seven dimensions of parenting (Table 1). The authoritative parenting style included 15 items, which were divided into three dimensions: support and affection, regulation, and autonomy. The authoritarian style had 12 items and consisted of three dimensions: physical coercion, verbal hostility, and punishment. The permissive style consisted of one dimension: indulgence, which was composed of

five items. The parenting dimensions were calculated as the arithmetic mean of the scale items, and the parenting styles were calculated as the arithmetic mean of its dimensions. Therefore, the score in all dimensions and styles ranges from 1 to 5, with higher scores indicating more use of its dimensions or styles.

The child behaviour assessment was carried out by a Paediatric Dentist who evaluated the behaviour while the child was undergoing regular dental evaluation and non-invasive dental procedures. The rating scale used for categorising the child was the one given by Frankl et al. (Table 2).¹⁰ This scale classifies child's behaviour into four categories according to the child's attitude and cooperation or lack of cooperation during dental treatment.

The data collected was coded, entered, and analysed using Statistical Package for Social Sciences (SPSS) Statistics for Windows version 16 (SPSS Inc., Chicago, Ill., USA). Descriptive statistics (frequencies, percentages, mean, and standard deviation) and Chi-square test were used to describe the categorical and continuous variables at $p < 0.05$ considered statistically significant.

RESULTS

A total of 151 parent-child dyads participated in this study. The mean age for the child participants was 8.15 ± 2.4 years whereas that of the parent was 36.54 ± 5.36 years. The study consisted of 75 (49.66%) boys and 76 (50.33%) girls in the ratio of 1:1.01, who were divided into three groups: 4-6 years, 7-9 years, and 10-12 years. The questionnaires were completed by mothers for 92 children (60.9%), and by fathers for 59 children (39.07%); 108 (71.2%) children lived in nuclear family whereas 43 (28.47%) belonged to a joint family and 62 (41.05%) children were single child and the remaining had siblings (Table 3).

The parenting style established showed that one hundred and thirty-six parents (90.06%) had an authoritative style, six (3.97%) exhibited a permissive style, and nine (5.9%) had authoritarian style. Out of 151 parents, maximum parents (88, 58.27%) exhibited support and affection dimensions and only 6 (3.97%) had physical coercion, verbal hostility, and a combination of the two. None of the parents used punishment as a parenting dimension. It was noted that children of authoritative parents exhibited more positive behaviour than the other two groups although it was not significant statistically. The parenting style or dimensions did not have influence on child behaviour (Table 4).

Regarding the child behaviour, a higher percentage 98 (64.9%) of children exhibited positive behaviour. Very few (4, 2.62%) children were definitely negative (Figure 1).

It was found that children in the age group of four to six exhibited more negative behaviour than the other two groups and this was statistically significant ($p = 0.027$).

There was also a significant difference in the behaviour between the gender, where more girls exhibited negative behaviour as compared to the boys ($p = 0.015$) (Table 5). When other factors affecting the behaviour of the child in the dental clinic were analysed, it was seen that factors like presence of siblings, position of child in family or type of family did not have a significant impact on child behaviour.

Table 1: Parenting style and features

Parenting style	Features
Authoritative	High parental responsiveness and high parental demand. Warmth and involvement, reasoning/induction, demographic participation.
Authoritarian	Low parental responsiveness but high parental demand. Clear parental authority, unquestioning obedience, and punitive strategies.
Permissive	High parental responsiveness but low parental demand. Tolerance, general acceptance of child's decisions and Tendencies to ignore child's misbehaviour

Table 2: Child behaviour rating in dental clinic

Rating	Child Behaviour
Rating 1: Definitely negative	Refusal of treatment, crying forcefully, fearful, or any other overt evidence of extreme negativism.
Rating 2: Negative	Reluctant to accept treatment, uncooperative, some evidence of negative attitude but not pronounced e.g., sullen, withdrawn.
Rating 3: Positive	Acceptance of treatment; at times caution. Willingness to comply with the dentist, at times with reservation but the patient follows the dentist's direction cooperatively.
Rating 4: Definitely positive	Good rapport with the dentist, interested in the dental procedure, laughing and enjoying the situation.

Table 3: Demographic distribution

Variable	Mean \pm SD
Age of child (years)	8.14 \pm 2.4
Age of parent (years)	36.55 \pm 5.36
Gender of Child	n (%)
Female	76 (50.33)
Male	75 (49.66)
Gender of parents	
Female	92 (60.9)
Male	59 (39.07)
Type of family	
Nuclear	108 (71.52)
Joint	43 (28.47)
Position of child in the family	
Single	62 (41.05)
Eldest	29 (19.2)
Middle	1 (0.66)
Youngest	59 (39.07)

Table 4: Distribution of parenting styles and dimensions

	Styles n (%)	Dimension types	Dimensions, n (%)
Authoritative parenting	136 (90.06)	Support and affection	88 (58.27)
		Regulation	12 (7.94)
		Autonomy	2 (1.32)
		Combination of authoritative dimensions	34 (22.51)
Authoritarian parenting	6 (3.97)	Physical coercion	1 (0.66)
		Verbal hostility	4 (2.64)
		Punishment	-
		Combination of authoritarian dimensions	1 (0.66)
Permissive parenting	9 (5.96)	Indulgence	9 (5.96%)
Total participants	151 (100)		

Table 5: Comparison of various factors with child behaviour

Variables	Behaviour, n (%)					p-value
	1	2	3	4	Total	
Age of child (years)						
4-6	1 (2.7)	10 (27.02)	25 (67.56)	1 (2.7)	37 (100)	
1. 7-9	2 (1.32)	6 (3.97)	36 (23.84)	9 (5.9)	53 (100)	
10-12	1 (1.63)	6 (9.83)	37 (76.78)	17 (27.86)	61 (100)	0.027*
Total	4 (2.64)	22 (14.5)	98 (64.9)	27 (17.89)	151 (100)	
Gender of child						
2. Male	2 (2.66)	4 (5.33)	53 (70.66)	16 (21.33)	75 (100)	
Female	2 (3.5)	18 (30.70)	45 (49.21)	11 (14.47)	76 (100)	0.015*
Total	4 (2.64)	22 (14.5)	98 (64.9)	27 (17.89)	151(100)	
Parent						
3. Father	1(1.69)	8 (13.5)	39 (66.10)	11 (18.64)	59 (100)	
Mother	3 (3.20)	14 (15.2)	59 (64.13)	16 (17.39)	92 (100)	0.929
Total	4 (2.64)	22 (14.5)	98 (64.9)	27 (17.89)	151 (100)	
Age of parent						
4. Group 1	4 (3.36)	18 (15.12)	83 (69.7)	14 (11.7)	119 (100)	
Group 2	-	4 (12.5)	15 (46.85)	13 (40.62)	32 (100)	0.002*
Total	4 (2.64)	22 (14.5)	98 (64.9)	27 (17.89)	151 (100)	
Parenting type						
6. Authoritative	3 (2.2)	21 (15.44)	89 (65.44)	23 (16.91)	136 (100)	
Authoritarian	-	-	4 (66.66)	2 (33.33)	6 (100)	
Permissive	1 (11.11)	1 (11.11)	5 (55.55)	2 (22.22)	9 (100)	0.569
Total	4 (2.64)	22 (14.5)	98 (64.9)	27 (17.89)	151 (100)	
Siblings						
7. Absent	2 (32.25)	7 (11.29)	41 (66.12)	12 (19.35)	62 (100)	
Present	2 (2.24)	15 (16.85)	57 (64.04)	15 (16.85)	89 (100)	0.787
Total	4 (2.64)	22 (14.5)	98 (64.9)	27 (17.89)	151(100)	
Type of family						
8. Nuclear	3 (2.77)	17 (15.74)	69 (63.88)	19 (17.59)	108 (100)	
Joint	1 (2.32)	5 (11.62)	29 (67.44)	8 (18.6)	43 (100)	0.928
Total	4 (2.64)	22 (14.5)	98 (64.9)	27(17.89)	151 (100)	

*p-value < 0.05, Chi-square test

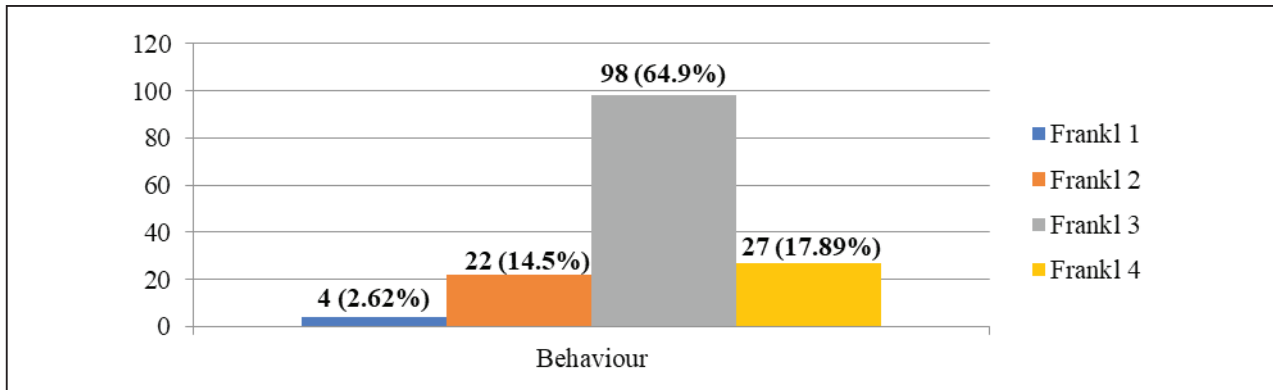


Figure 1: Distribution of child behaviour

DISCUSSION

The present study is one of the first of its kind in Nepal to have evaluated the parenting style and dimensions. The parenting type and other factors like age and gender of child, family type, and position of child in the family have been compared to child's dental behaviour. A child's personality, development, and behaviour are known to be greatly impacted by immediate family environment.^{4,8}

Out of 151 children assessed, 98 (64.9%) exhibited Frankl's rating 3 (positive) behaviour, whereas 27 (17.89%), and 22 (14.5%) were Frankl's rating 4 (definitely positive) and Frankl's rating 2 (negative) respectively. Only four (2.64%) children represented Frankl's rating 1 (definitely negative). Similar findings have also been reported by many other authors.^{11,12} However Kamran et al.¹³ observed most of the children to be in the definitely positive category. The higher frequency of positive behaviour may be attributed to the fact that assessments of the state of behaviour were carried out during a non-invasive procedure, and it may vary when evaluated in other dental procedures.¹⁴ The behaviour in the present study was also assessed during non-invasive procedure which could have contributed to the result.

Parenting style is an attitude that parents perform while raising their child. Parenting style was conceptualised by Baumrind as a two-arm framework consisting of parent's responsiveness and demandingness, a balance between these determines the parenting style. Responsiveness is the level a parent responds to their child's needs and demands whereas demandingness is effort made to align the behaviour of their child by guidance, supervision, and disciplinary acts. The authoritarian style is defined by parenting practices that are harsh, while the authoritative is firm limit-setting, with compassion, and warmth. Authoritative and authoritarian parents

place high demands on their children, but they differ in how they try to control their children. Authoritative parents explain rules using reasoning while authoritarian use 'because I said so' to rule. On the other hand, the permissive parents provide few to no limits to behaviour, and often spoil the child.^{3,9}

All three parenting styles were identified among Nepali parents which was in consensus to the Howenstein et al.⁴ and Dabawala et al.,¹⁵ while it contrasted with findings of Alagla et al.³ who identified only two styles in Saudi Arabia authoritative (94%) and permissive parenting (6%). The majority (90.06%) of the parents in this study exhibited authoritative parenting. A change had been suggested over the earlier decades in parenting from authoritarian to permissive type in the western population however research in Nepal's neighbouring countries show a majority of authoritative style of parenting.^{14,15} The authoritative parents are known to encourage communication with the child, supporting children's independence leading to children with happier temperament, improved social skills, and higher emotional control, and coping abilities.⁴ The result of the present study is in agreement with many other articles.¹⁴⁻¹⁷ Maximum parents were seen to exhibit support and affection dimension (58.27%) and only 3.97% resorted to physical coercion, verbal hostility, and their combination. It was heartening to note that none of parents used corporal punishment as a parenting dimension.

It was observed in the current study that all the parenting styles had approximately similar numbers of children with positive behaviour in dental operatories with no clear association between parenting style and child's behaviour during dental treatment. This is in accordance with the study conducted by Krikken et al.¹⁸ who

concluded, no clear association between parenting styles and child's operative behaviour. Many authors however disagree, suggesting that children of authoritative parents have desired behaviour as compared to other two parenting styles.^{4,14,19-21} The parenting style also seems to differ globally and very few studies have been carried out around this region.

The role of gender in child behaviour has seen a mixed consensus, with some suggesting more preponderance of negative behaviour in male children as compared to female and some have found an opposite association. When the behaviour was compared with gender, a mixed type of relationships have been seen in past research. In this study, the girls exhibited significantly more negative behaviour as compared to boys which was in consensus to Mishra et al.² However it contrasted with findings of Kamran et al.¹³ who reported more negative behaviour in boys. Many studies have also stated that gender was unrelated to the behaviour of the child.⁸

The children exhibit a change in their behaviour and skills with advancing age, related to their cognitive development. On evaluating the age and behaviour, the younger children showed significantly more negative dental behaviour as compared to the older children, in accordance with findings of Kamran et al.¹³ Mishra et al.² stated that among the various socio-demographic factors, increasing age was directly related to child's positive behaviour. The results of the present study

were in consensus with those that showed a significant relationship between age and behaviour of the child.^{7,22,23} The older children showcasing better behaviour in dental clinic can be attributed to the fact that the cognitive abilities and stress coping skills improved with the growth and development of the child. Older children also have been exposed to stressful situations more than younger one which explains their better coping skills in the form of good dental behaviour.³ Among the family characteristics, the type of family, whether the child had a sibling or the position of birth of child among the siblings did not have a significant effect on their behaviour and this was in consensus with the findings of Suprabha et al.⁸

The relatively small sample size is not adequate to estimate prevalence satisfactorily, and the sample being from one institution does not represent the general population of Nepal aged 4-12 years.

CONCLUSION

The present study concluded that the behaviour of the child is significantly associated with the age of the child, younger children showing a tendency towards more negative dental behaviour than older ones. The role of type of parenting, gender of parent, type of family did not influence the behaviour of the child.

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