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Parental Attitude and Acceptance of Behavior Management Techniques used in Pediatric Dentistry as Reported by Pediatric Dental Specialists: A Cross Sectional Survey

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Abstract

Background: Behavior management acts as a pillar for laying the foundation of successful pediatric practice. Over the time, several Behavior Management Techniques (BMTs) have been used in clinical practice and parental viewpoint and acceptance of these techniques holds a prime importance in treatment of the child.

Aim: To assess the attitude and acceptance of parents regarding the behavior management techniques used in dental office.

Method: This was a cross sectional, self-constructed and validated close ended questionnaire responded by 192 dentists. The participants completed the questionnaire on parental preference of the behavior management techniques used with their child and the factors influencing their acceptance. The responses were in the form of categorial data which were converted to numerical data for statistical analysis. Obtained data was analyzed using Chi square test with SPSS version 20.0

Result: Most of the parents were aware (70.4%) but 31.3% of parents were hesitant or unwilling to accept the behavior management techniques. Tell show do (98.3%), live modeling (80%) and positive reinforcement (73.9%) were the most preferred techniques in both the groups. Most parents according to postgraduate dentists, preferred to stay in the operatory (75.5%). For multiple teeth treatment, the parents in pediatric dentists group opted single appointments more.

Conclusion: Enlightening the parents regarding BMTs resulted in their acceptant attitude and non-pharmacological techniques were preferred over pharmacological techniques. Factors like socio economic status, birth order of child and parent education showed a direct impact on level of parental acceptance.

Keywords: Behavior management technique, parental acceptance, pediatric dentistry

I. INTRODUCTION

Oral health holds a prime position in maintenance of child's general health. The necessity of dental treatment in children has increased in recent years. Personality traits and parental factors dictate the child's reaction to conglomerate needs of dental treatment. The long-term success of any pediatric dental treatment is highly dependent on the child's cooperation level. Behavior management is a continuum of interaction with a child/parent directed toward communication and education. The main objective of behavior management techniques is to establish pleasant rapport with kiddies. It is an integral part of pediatric dentistry. It helps to build good relationship between child, parent and dentist.[1] Positive attitude towards dentistry is crucial for successful dental treatment. Behavior management of a child during dental visit helps in instilling a positive dental attitude and making the treatment more acceptable which is mandatory for achieving optimal oral health.

Parents have an immense contribution in planning child's dental treatment. Parental attitude and awareness can be an important contributor for child's cooperation in dental care. Due to the changing parent attitudes and increasing legal concerns, management of child in the dental setting has been affected. Behavior of the child during dental visit is influenced by maternal emotions. It has been rightly stated that children having authoritarian parents show higher anxiety levels in contrast to better coping skills portrayed by children having less controlling parents.[2] Now a days parents have become over protective for their child and this has likely affected their acceptance of various behavior management techniques (BMT).

For modern-age parents, the child's comfort is of utmost importance and they do not accept anything that cause physical or mental suffering to their child. These also have resulted in change in their acceptance regarding various behavior management techniques. Parental acceptance of BMT demands thorough explanation of the technique along with their easy visual demonstration to help parent in providing their consent. [3,4]

Although the BMT's have not changed much over the period of time but due to changing parenting style and societal factors and increased awareness through media, there arises need to study the influence of these factors on behavior of child in dental office and the readiness of parents to accept the various BMT's. By far, this is the first study in which the Pediatric Dental specialists reported parental attitude and acceptance of behavior management techniques instead of parents and this makes it unique. Thus, the aim of this study was assessment of parental attitude and acceptance of behavior management techniques in dental office and the factors affecting it.

II. MATERIAL AND METHODOLOGY

After approval from the Institutional Ethical Review Committee of Karnavati University, Gandhinagar, a closed ended e-questionnaire was formed and was mailed to 250 individuals which included Pediatric dentists and postgraduate students pursuing pediatric dentistry in Gujarat. The questionnaire was validated by university faculties using item objective congruence. The questionnaire was divided into three parts namely demographics, awareness and acceptance of BMT by parents and the factors affecting their acceptance. The demographics included gender, qualification and years of clinical practice of the participants. The BMT generally used and accepted by American Academy of Pediatric Dentistry (AAPD) were rated by the dentist according to their acceptance by the parents. The confounding factors influencing the parent's preference for BMT were also accounted. After two gentle reminders 192 responses were recorded.

III.STATISTICAL ANALYSIS

Responses were in the form of categorial data which were converted to numerical data to calculate counts and percentage for statistical analysis. Chi square test was used to analyze the obtained data. Data was tabulated and analyzed using Statistical Package for Social Sciences (SPSS) version 20.0. The confidence interval

determined was 95% and statistical significance value was accepted at p< 0.05 to determine significance of various responses

IV. RESULT

The demographic distribution (Table 1) shows that female respondents (69.6%) were more as compared to male (30.4%) and pediatric dentists (76.5%) were more as compared to post graduates (23.5%).

The parental acceptance of BMT (Graph 1) shows that Tell-show-do was the most preferred BMT (98.3%) followed by Live modelling > Positive reinforcement > Voice control > Nitrous oxide sedation. Techniques like general anesthesia (23.5%) and oral medication (31.3%) were seldomly preferred by parents. The lesser accepted techniques were hypnosis (3.5%) followed by restraints and Hand Over Mouth Exercise (HOME).

Majority of parents, according to both pediatric dentists and postgraduate students were aware of the behavior management techniques (71.1% and 66.7% respectively) and most of them were willing for the treatment (69.5% and 66.7%) (Table 2). There was no statistically significant difference regarding the response of both the groups in parental readiness to sign informed consent and 50.8% of parents in pediatric dentists group and 54.4% in postgraduates agreed for written consent. Most of the parents were aware that their anxiety can influence child's anxiety. 93% pediatric dentists and 88.9% postgraduates affirmed that pre-appointment parental education have positive influence on the behavior of their child and most of the parents preferred single appointment for treatment of multiple teeth. There was statistically significant difference regarding the question of parental presence in operatory between the responses of postgraduates and pediatric dentists (p value=0.035). Majority of the parents insisted to stay in the operatory during all the treatment but specially while injecting LA (49.6%) (Table 3)

The other factors affecting the behavior of the child (Table 4) shows that parental socio-economic status, the birth order of child in the family and parental education all affected the behavior of the child as observed by both pediatric dentist and postgraduates.

V. DISCUSSION

Behavior Management Technique (BMT) is an integral part of pediatric practice. BMT is generally used in all the patients to build trust and to communicate better with the child. As parents always accompany their child, they play an important role in making treatment plan. Parents have become more indulgent now and due to this altering parenting styles, they are interested in knowing the dental procedures in detail. Due to changing dynamics in parenting, societal influence and wide use of internet,

in the present study most of the parents were aware (70%) regarding various BMT and were ready to accept it. It may be due to visual demonstration of the technique as it is appealing, due to the increased use of internet the parents are more knowledgeable and socially active and also due to the increased pediatric dentist availability which has positively increased the awareness for BMT among parents compared to the past. AAPD guidelines specifically recommends that written consent should be obtained for performing protective stabilization on children.[5] However, some parents were unaware and hesitant to accept BMT which could be due to their more protective nature and are less likely to set limit on their child's behavior. In this study, the informed parents were more receptive towards acceptance of various BMT and were ready to sign the consent form either in written or verbal form. It is in accordance with Abushal *et al* who reported that parents who received explanation showed higher acceptance levels than parents who did not receive explanation.[3] Also, Kramar *et al* stated that greater resistance was found from parents of higher educational level while the less educated appeared to be more receptive to professional advice.6

In the present study the parental anxiety showed a negative impact on the behavior of the child. Parental anxiety could be due to their past dental experience, the personality and skill of the dentist and staff. This is in accordance with results of Milgrom *et al.*[7] In our study the most

preferred BMT were tell show do, live modeling and positive reinforcement. It may be due to the ease to use and understanding by the parents and as the techniques were more communicative and in non-aggressive form. This was consistent with the results of many previous studies.[8-11] The least accepted technique was restrain followed by hypnosis, general anaesthesia and sedation in our study. It is in accordance in study by Peretz *et al* who reported that restrain was least accepted technique by the parents.[12] But it was contrary to study by Sonu Acharya who reported an increase in the acceptance of general anesthesia and sedation techniques.[13]

In our study parents prefer single appointment more in the pediatric dentist group. It could be due to their polished skill, experience and knowledge as compared to post graduate, also as the child have to be given LA once and as the working parent do not have time for multiple visits.

Parents preferred to stay in the operatory more in the post graduate group (96.4%). As they might be fearful as the post graduates are learning and are less experienced compared to pediatric dentist. It is in accordance with study by Sabbagh *et al* in which most of the parents preferred to stay in the operatory as they feel their child would be safer and more protected with their presence.[14]

In our study parents preferred to stay in the operatory during all the treatments but mainly while injecting LA as they thought that their presence will comfy the child. It is contradicted by Ahuja *et al* who reported that there was no difference in child's behavior with parents' presence or absence.[15]

In the present study it was observed that parental presence in the operatory helps the dentist to communicate better and the parent can see compassionate behavior of the dentist but it also has some cons like interference of parents in between the treatment by asking about each step to be performed and it also limits the child dentist interaction. It has been pointed by Desai et al. that explanation of every step that is to be conducted on the child is mandatory for parental acceptance of treatment plan as supported by Murphy *et al*. and Lawrence *et al*.[8,9]

In the current study it was observed that parental socio-economic status and education had a great impact on the behavior of the child. It was observed that the less educated parents are more willing to accept BMT and the highly educated parents are more fearful. This has been supported by Lawrence *et al* who expressed that parent of low socioeconomic status may be more accepting to professional opinion and less likely to express dissatisfaction with a procedure.[9] In our study the birth order of children in the family also affected the behavior of the child. It could be as the younger ones are more pampered and hence are more stubborn and uncooperative. However, it was contradicted by Peretz *et al* who stated that the birth order does not affect the behavior of the child.[12]

VI. LIMITATIONS

The difference between the acceptance of behavior management techniques over the time has not been assessed. It was a cross sectional study that investigate the population only at given period of time

VII. CONCLUSION

Parents who were informed prior were more likely to give consent for BMT and were more acceptable to non-pharmacologic methods. They were more confident for their child to be treated under specialist pediatric dentist and also preferred single visit treatment. Parents preferred to stay in the operatory more in the post graduate group as they were skeptical regarding their skills and expertise.

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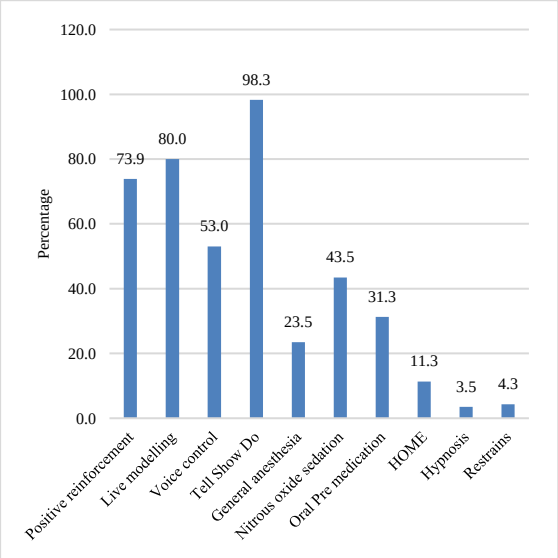
Table 1: Demographic distribution

Parameter	Response	N	%
Gender	Female	80	69.6
	Male	35	30.4
Qualification	PG in Pediatric dentistry	27	23.5
	Pediatric dentist	88	76.5
Years of Experience	< 5 years	1	0.9
	5-10 years	91	79.1
	> 10 years	23	20.0



Graph 1: Parental acceptance of Behavior management techniques

Table 2: Awareness and Attitude of parents towards BMT acceptance

	Categories	N	Group		P value
			Pediatric Dentist N (%)	Postgraduate Pediatric Dentist N (%)	
Parental awareness regarding behavior management Techniques	Aware	133	91 (71.1)	42 (66.7)	0.532
	Not Aware	58	37 (28.9)	21 (33.3)	
Willingness of parents to accept behavior management Techniques	Willing	131	89 (69.5)	42 (66.7)	0.498
	Unwilling	15	8 (6.2)	7 (11.1)	
	Hesitant	45	31 (24.2)	14 (22.2)	
Parental readiness to sign Informed consent before the use of Behavior management techniques	Acceptable	139	93 (72.7)	46 (73)	0.86
	Not Acceptable	10	6 (4.7)	4 (6.3)	
	Hesitant	42	29 (22.7)	13 (20.6)	
Consent	Verbal	84	58 (49.2)	26 (45.6)	0.661
	Written	91	60 (50.8)	31 (54.4)	
Are parents aware that their dental anxiety can affect the Child's dental fear and anxiety and their behavior?	Yes	62	41 (32)	21 (33.3)	0.278
	No	43	25 (19.5)	18 (28.6)	
	Sometimes	86	62 (48.4)	24 (38.1)	
Can pre appointment Parental education have positive influence on the behavior of their child?	Yes	175	119 (93)	56 (88.9)	0.399
	No	1	1 (0.8)	0 (0)	
	Not Sure	15	8 (6.2)	7 (11.1)	
Parental preference of number of appointments for multiple teeth treatment	Single Appointment	146	104 (82.5)	42 (73.4)	0.163
	Multiple Visit	45	34 (26.6)	11 (17.5)	
Parental preference to stay in the operatory	Yes	138	97 (65.1)	41 (75.8)	0.035*
	No	5	5 (3.9)	0(0)	
	Sometimes	48	26 (20.3)	22 (34.9)	

PD: Pediatric dentists
*P<0.05 statistically significant**

Table 3: Parental Preference to stay in the operatory during different procedures

Responses	N	%
Injecting LA	57	49.6
Surgical procedures	37	32.2
Using Voice control / Restrains	46	40.0
All treatments	64	55.7

Table 4: Other factors affecting the behavior of child as reported by pediatric dentist

	Category	N	Pediatric Dentist N (%)	Pediatric Dentist postgraduate N (%)	P value
Informed parents are more receptive for behavior management techniques than the uninformed parents	Yes	174	120 (93.8)	54 (85.7)	0.184
	No	4	2 (1.6)	2 (3.2)	
	Not Sure	13	6 (4.7)	7 (11.1)	
Parents socioeconomic status influences their preference for behavior management techniques	Yes	175	119 (93)	56 (88.9)	0.339
	No	16	9 (7)	7 (11.1)	
Number of children and birth order can influence the child dental fear and anxiety and behavior	Yes	137	93(72.7)	44 (69.8)	0.189
	No	8	3 (2.3)	5 (7.9)	
	Not Sure	46	32 (25)	14 (22.2)	
Parental education affects the behavior of the child	Yes	183	124 (96.9)	59 (93.7)	0.128
	No	2	0 (0)	2 (3.2)	
	Not Sure	6	4 (3.1)	2 (3.2)	

P<0.05 statistically significant*