Parents' attitudes toward behavior management techniques during dental treatment

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Abstract

Purpose: *This study investigated the attitudes of parents toward behavior management techniques used during dental treatment of children.*

Methods: *One hundred and four parents who accompanied their children to the Department of Pediatric Dentistry at the Hebrew University, Hadassah Faculty of Dental Medicine in Jerusalem, Israel, participated in the study. The techniques for managing the children's behavior were explained to the parents prior to treatment and parents were present in the operatory during dental treatment. At the end of the second appointment, parents completed a questionnaire requesting demographic, behavioral, and dental information as well as the parents' attitudes toward the management techniques.*

Results: *Most parents preferred an explanation as to the proper approach for treating their children. Voice control was totally accepted by most parents, Papoose Board® by one-third of the parents and physical restraint by nearly one-fourth of the parents. Of the parents who were in favor of restraint, most children did not cooperate.*

Conclusion: *Detailed explanations and witnessing children during dental treatment may raise parents' tolerance level to firm techniques. (Pediatr Dent 21:201–204, 1999)*

Dental treatment for children requires the use of behavioral management techniques. Tell-show-do, positive reinforcements, modeling, voice control, and physical restraint are some of the commonly used techniques.[1–6] When behavior management techniques fail to provide a practical tool, other methods like sedation or general anesthesia may be required.

The acceptability of a behavior management technique depends, among other factors, on the child's needs at the time of treatment, the type and urgency of treatment influencing both the selection of a particular technique and parental acceptance of that technique.[7] Behavior management techniques are not equally accepted by parents, and several techniques have been found to be unacceptable.[8]

While dentists continue to use these same management techniques,[9] societal attitudes have changed in the last years toward increased parental participation during the child's dental experience.[10, 11] With the emphasis on children's rights, and the growing demand for informed consent by the parents, dentists can no longer assume that parents approve of any form of behavior management technique.[12, 13]

Previous studies where parents viewed videotapes containing segments of behavior management techniques found that pharmacological techniques, hand-over-mouth, Papoose Board®, (Olympic Medical Co, Seattle, WA) and physical restraint were rated as unacceptable by most parents, while voice control and mouth prop were marginally accepted. Positive reinforcement and tell-show-do were overwhelmingly accepted.[7, 8]

More recent studies emphasized the importance of informing the parents in detail about the management techniques, and revealed that informed parents were significantly more accepting of behavior management techniques than uninformed parents.[13, 14] However, no difference in parental acceptance of management techniques was observed when parents viewed videotapes containing the management technique in groups or individually.[15] Also, parents from low social status were found to be less accepting of the more "ultimate" techniques such as general anesthesia.[14]

Most previous studies on parents' views regarding management techniques used in pediatric dentistry were carried out when the parents watched videotapes containing examples of the various management techniques.

The purpose of the present study was to evaluate parents' attitudes towards some management techniques actually employed on their children during dental treatment in a dental school environment in Jerusalem, Israel.

Methods

One hundred and four parents who accompanied their children to the Department of Pediatric Dentistry at the Hebrew University Hadassah Faculty of Dental Medicine in Jerusalem, Israel participated in the study.

Parents are often referred to this clinic by other dentists who failed to treat the children or generally prefer not to treat them at all. Another reason for parents' attending the university clinic is its reputation for providing proper solutions to dental and behavioral problems.

Each child had at least one session for an operative procedure after the initial examination. All treatment plans, and the possible behavioral approaches for managing the children's behavior, were verbally explained to the parents in detail. Subsequently, all parents were present in the operatory during dental treatment.

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Table 1. Parents' Evaluation of their Children

	N (%)
Behavior in general*	
Patient	26 (25)
Impatient	72 (69)
Hysterical	6 (6)
Behavior under pressure*	
Relaxed	46 (44)
Inclined to be stressed	58 (56)
Parents reaction when child does not behave properly at home	
Firmness	60 (58)
Anger	12 (12)
Relaxation	15 (14)
Surrender	17 (16)
Child's behavior at present visit	
"Good" - cooperative	76 (73)
Partial cooperation	13 (12)
Difficulties	5 (5)
Totally uncooperative	10 (10)
Parents' satisfaction from present treatment	
Very satisfied	78 (75)
Fairly satisfied	24 (23)
Not satisfied	2 (2)
Children's dental status	
Good-fair	58 (56)
Bad	46 (44)

*P=0.002, Chi-square.

At the end of the second appointment, parents were asked to complete a questionnaire requesting demographic, behavioral, and dental information regarding the parents and the children. In addition, the questionnaire contained questions regarding the parents' attitudes toward management techniques based on the explanation given in advance, and the actual technique used during treatment. Parents were also asked to note their preferred technique when their children did not cooperate with the dentist.

The questionnaire was tested in a pilot study with 15 parents (not included in the present study) to insure the clarity of the questions. The behavioral categories were developed by the authors, and included possible variations to the categorization of behaviors.

All dental treatments were carried out by post-graduate students, under the supervision of senior faculty members. At the end of each session, children were surrounded by the dental staff, and were given positive reinforcement and small presents.

Data were analyzed using descriptive statistics and chi-square analysis for the information obtained. Fisher's exact probability test was conducted when the number of items in the groups were too small for the chi-square. All statistical analysis was done with the SPSS software program, and the level of significance was set at $P<0.05$.

Results

The age of the parents ranged from 25 to 52 years (mean age 38±6.8). More than 90% of the parents had at least 12 years of formal schooling. Most parents (84%) had a white-collar office occupation. There were 58 males and 46 females among the children (56% and 44%, respectively). The ages of the children ranged from 2 to 13 years in the following age groups: 12 children were between 2 and 4 years, 56 were between 5 and 8 years, and 36 were between 9 and 13 years. Mean age of the children was 6.5±1.8 years. In 56% of the families, there were 1–3 children, while 27 of the children were the second in birth order, and 26 were the only children. Previous dental treatment was experienced by 85 children (82%).

Parents' age, education, and profession, as well as children's age, gender, number of children in the family, birth order of the treated child, and previous dental experience were not found to be associated with parents' expressed attitudes toward any of the management techniques in our study.

Table 1 shows the parents' assessment of their children. Most parents described their children as being impatient and inclined to become stressed (69% and 56%, respectively). Significant association was found between these variables. Most parents reported that they generally react firmly when their child did not behave properly at home.

The parents' preference of the dentist's attitude when children did not cooperate is shown in Table 2. Most parents ranked relaxation with explanation as the most desired approach, followed by explanation, and then sedation if the child still did not cooperate.

Table 3 demonstrates the parents' attitudes toward specific management techniques used during treatment of their children. More than half of the parents fully accepted voice control, 23 parents accepted physical restraint, 32 parents were in favor of the Papoose Board®, and 36 parents fully approved sedation. With regard to restraint, a significant difference was found according to the child's behavior during the treatment. Among the parents who were in favor of restraint, 61% of the children did not cooperate (Frankl 1 and 2).[16] The same pattern was found with respect to sedation, where most parents of children who cooperated (Frankl 3 and 4)[16] did not approve of sedation, and 68% of parents of uncooperative children (Frankl 1 and 2) approved of sedation. The parents of all the children who fully cooperated significantly rejected restraint. Regarding the Papoose Board®, among the parents who completely objected, 71% were mothers.

The dentists' reports on the treatments is shown in Table 4. Most children fully cooperated during the dental treatment (52%). Also, most children did not require any form of sedation (64%). Restraint (mostly manual) was used with only 18 children.

Discussion

Most parents in our study preferred relaxation and explanation as the proper approach for treating their children. Very few parents (4%) preferred to leave the decision as to which approach to adopt solely to the dentist.

Table 2. Parents' Preferences Toward Dentists' Proper Approach when Children Do Not Cooperate

	N (%)
According to dentist's decision	4 (4)
To consult with parent	3 (3)
Relaxation with explanation	59 (56)
Sedation	4 (4)
Not by force	2 (2)
Moderate threats	4 (4)
Explanation - then sedation	21 (20)
Explanation - then firmness	7 (6)

Table 3. Parents' Attitudes Towards Management Techniques

	N (%)
Voice control	
Total unacceptance	29 (25)
Dislike, only if really needed	23 (22)
Acceptance	55 (53)
Restraint*	
Total unacceptance	14 (14)
Partial acceptance	67 (64)
Acceptance	23 (22)
Papoose Board®†	
Total unacceptance	46 (44)
Partial acceptance	26 (25)
Acceptance	32 (31)
Sedation‡	
Total unacceptance	13 (12)
Partial acceptance	55 (53)
Acceptance	36 (35)

* Among parents who totally accepted, 61% did not cooperate, among parents who totally unaccepted, all children cooperated (P=0.0001, chi-square).
† Among parents who totally unaccepted, 78% were mothers (P=0.034, chi-square).
‡ Among parents whose children did not cooperate during treatment, 68% accepted sedation, while most parents (73%) whose children cooperated during the treatment, totally unaccepted (P=0.00061, chi-square).

With respect to specific management techniques, voice control was completely accepted by most parents, sedation and Papoose Board® by one-third of the parents, and physical restraint by nearly one-fourth of the parents.

This pattern of parents' response may represent some tolerance toward "aggressive" management techniques and to some extent, lack of solid views regarding the proper attitude. The parents' responses could be explained in part by the fact that most parents described their own reactions to their children's improper behavior at home as firm. Also, most parents were referred to the university clinic by other dentists after failure to treat their children, or came to the clinic due to its reputation for providing good and comprehensive dental treatment.

These two factors may suggest a basic high parental tolerance level regarding firm management of children's behavior in our study population prior to the dental treatment, and the possibility of an environment where the treatment and the behavior approach adopted by the dentists was viewed as the best solution to the dental and behavioral problems of the children.

Detailed explanations about the possible behavior management techniques prior to the dental treatment, staying with the children during treatment, and witnessing the behavioral problems encountered by the dentist that may interfere with proper dental treatment may have contributed to the recognition of the necessity of the techniques used. In a neutral situation (or when viewed in videotapes) these techniques could be perceived differently—perhaps in a more negative way.

The warm and cheerful attitude of the dental staff after each treatment session, and the positive reinforcement and the small presents the children were given only strengthened the idea that the management techniques were for the benefit of the child. Again this raised the parents' acceptance level of the more aggressive techniques during the treatment.

Our findings support previous findings that parental attitudes can be influenced by the way the proposed behavior management techniques are presented and that informed parents are more accepting of firm measures.[10, 13, 17–20]

The parents in our study completed the questionnaires after staying with their children during dental treatment. In most previous studies, parents viewed videotapes of various behavior techniques prior to completing the questionnaires.[7, 8, 13, 14]

Completing the questionnaires after the treatment session gave the parents the opportunity to watch the children and the dentists at work and may have helped them to realize the necessity of the management techniques. Viewing behavioral management techniques in videotapes only may lack the realization of the importance of the techniques. Thus, unacceptance of pharmacological techniques, physical restraint, and Papoose Board®, and the marginal acceptance of voice control which were found in the previous studies may be understood. Moreover, the findings in our study that most parents of uncooperative children approved sedation, and of the parents who approved restraint most children were uncooperative, only strengthens the need for parents to witness their children's behavior during dental treatment.

With respect to the Papoose Board®, our findings are different from the findings in some previous reports[7, 8] where the Papoose Board® was ranked the least acceptable technique (below general anesthesia). Our results are in keeping, to some degree, with another study conducted on mothers which reported that most mothers approved the use of Papoose Board®.[17] They thought the Papoose Board® was necessary to perform the treatment despite its being stressful for the child, and would have had it used on their other children should they require it. However, in our study both fathers and mothers participated, while in the previous study, only mothers participated.

Interestingly, the lack of definite and solid views about the Papoose Board® in our population is also demonstrated by the finding that among the parents who found the Papoose Board® unacceptable in our study, 78% were mothers.

Table 4. Dentists' Actual Treatment

	N (%)
Frankl score	
1	9 (9)
2	10 (10)
3	30 (29)
4	55 (52)
Management technique	
Nonpharmacological - Behavioral*	67 (64)
Nitrous-oxide	11 (11)
Hydroxysine (Atarax)	7 (7)
Both	18 (17)
General Anesthesia	1 (1)
Restraint	
No restraint	86 (82)
Manual restraint	11 (11)
Papoose Board®	3 (3)
Sitting on parents	4 (4)

*TSD and/or positive reinforcement.

Our study found that parents' age, education, and profession, as well as children's age, gender, number of children in the family, birth order of the treated child, and previous dental experience were not associated with parents' expressed attitudes toward any of the management techniques in our population. This may suggest that the desire for the dental treatment to the children be completed overwhelmed possible differences or that our group of parents was more homogeneous than in previous studies. Our findings were obtained from a selective group of parents. In times of rapid societal changes, evaluation of parental attitudes toward management techniques on larger and more heterogeneous populations is needed.

Conclusions

1. Most parents prefer explanations to their children even though the parents describe themselves as generally firm with their children at home.
2. Detailed explanations and witnessing children during dental treatment may raise parents' tolerance level toward aggressive management techniques.

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