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CAREGIVER'S ATTITUDE TOWARDS BEHAVIOR MANAGEMENT TECHNIQUES IN PEDIATRIC DENTISTRY: A CROSS-SECTIONAL STUDY

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ABSTRACT

Aim & Background: Managing children's behaviour during dental treatment is crucial in Paediatric Dentistry. Caregivers' attitudes toward Behaviour Management Techniques (BMTs) significantly influence treatment success and the child's dental experience. Understanding these attitudes enhances communication, builds trust, and fosters collaboration between caregivers and dental teams. This study examined caregivers' attitudes and comfort levels regarding Voice Control, Parental Presence/Absence, Protective Stabilization, and Aversive Conditioning.

Methods: A cross-sectional study was conducted with 40 caregivers of children aged 3–12 years in the Department of Paediatric Dentistry. Caregivers were interviewed using a structured questionnaire to assess demographic details and comfort levels with various BMTs. Data analysis focused on caregiver attitudes and preferences.

Results: The study found that 57.5% of caregivers were comfortable with Voice Control, indicating a preference for this non-invasive approach. Protective Stabilization caused discomfort in 50% of participants, reflecting concerns over its restrictiveness. Parental Presence/Absence was accepted by 47.5%, with 30% remaining neutral. Aversive Conditioning had mixed responses, with 60% expressing discomfort or neutrality.

Conclusion: Caregivers preferred non-invasive techniques like Voice Control over assertive methods such as Protective Stabilization and Aversive Conditioning. These findings highlight the need for clear communication and informed consent to enhance caregiver comfort and cooperation. Larger studies are needed to refine behavior management protocols.

Clinical Significance: Understanding caregiver attitudes enables paediatric dentists to tailor behavior management strategies, improving acceptance and cooperation. Prioritizing non-invasive techniques and effective communication fosters positive dental experiences, reduces anxiety, and encourages long-term adherence to oral health care in children.

Keywords: Aversive conditioning, Behavior Management Techniques, Caregivers attitudes, Paediatric dentistry, Protective Stabilization, Voice Control.

INTRODUCTION

Paediatric dentistry presents unique challenges, particularly when addressing the behavioural needs of young patients during treatment. To manage these challenges effectively, Behavior Management Techniques (BMTs) have been developed to guide children's behavior, ensuring successful clinical outcomes while creating a positive and reassuring dental experience.[1]These techniques encompass a wide range, from non-invasive, positive methods such as Tell-Show-Do and distraction to more assertive strategies like voice control, protective stabilization, and aversive conditioning.Behavioural management is both an art and a skill developed through various scientific disciplines, incorporating methods that improve children's ability to cope. Its goal is to diminish and ease fear and anxiety, enhance disruptive behavior, and ensure complete acceptance for undergoing dental treatment.[2]

Positive approaches are generally well-received by caregivers due to their child-friendly and engaging nature.[3]Assertive techniques often elicit mixed responses, with concerns about their potential impact on children's emotional and physical well-being.[4,5]Although obtaining informed consent and providing thorough explanations are standard practices in pediatric dentistry, consent alone may not always reflect genuine understanding or acceptance.[6]Caregivers may still harbor concerns or uncertainties, affecting their

trust in the treatment process. These differing perceptions highlight the need to comprehensively explore caregivers' attitudes to bridge potential gaps in understanding and communication.

This study aimed to investigate caregivers' attitudes toward specific BMTs, including Voice Control, Parental Presence/Absence, Protective Stabilization, and Aversive Conditioning.

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of Paediatric Dentistry, following ethical approval from the Institutional Ethics Committee. All procedures adhered to the principles outlined in the Declaration of Helsinki, ensuring ethical integrity throughout the research process.[6]

The research sample consisted of 40 parents, randomly selected from those accompanying their children to the outpatient department of pediatric dentistry at our institution. Informed consent was obtained from all participants before their inclusion. Participants were interviewed individually in a private and quiet room, ensuring confidentiality and minimizing distractions while their children underwent dental treatment in the operatory.

Inclusion Criteria

- Caregivers accompanying children aged 3 to 12 years for dental treatment.
- Caregivers without any prior history of psychological conditions that might influence their responses.

Exclusion Criteria

- Caregivers of children requiring emergency dental care, as it may influence their emotional state and responses.
- Caregivers who declined to provide informed consent or did not complete the questionnaire in full.

DATA COLLECTION

A structured questionnaire served as the primary tool for data collection. The questionnaire was meticulously designed and divided into two sections. The first section captured demographic details such as age, household income, and previous dental experiences. This baseline information was crucial for understanding any demographic factors that might influence caregivers' perceptions and attitudes toward BMTs.

The second section explored caregivers' awareness, attitudes, and comfort levels concerning various BMTs, including Voice Control, Parental Presence/Absence, Protective Stabilization, and Aversive Conditioning. Each technique was thoroughly explained to the caregivers to ensure they had a clear understanding before providing their responses. Additionally, the questionnaire sought to capture caregivers' communication preferences, such as their inclination for detailed or simplified explanations, to assess how communication styles influence comfort and trust in the dentist-patient relationship.

Caregivers were asked to rate their comfort levels using a Likert scale ranging from "very uncomfortable" to "very comfortable." This section also included open-ended questions, allowing participants to elaborate on their concerns, preferences, or suggestions, providing qualitative depth to the quantitative findings. The questionnaire was validated through a pilot study with 15 parents (not included in the main study) ensuring clarity in the questions. The sample size was determined using G*Power software version 3.1.9.7, based on an expected effect size of 0.5, a significance level of 0.05, and a power of 80%, resulting in a required sample size of 40 participants.

DATA ANALYSIS

The data collected were analysed statistically to identify trends, patterns, and variations in caregiver attitudes. The analysis examined correlations between demographic factors, such as age and income, and caregivers' comfort levels with these specific techniques. Descriptive statistics and chi-square analysis were used, with Fisher's exact probability test applied when group sizes were too small for the chi-square test. Statistical analysis was performed using SPSS version 15, with significance set at $P<0.05$. One-way frequency tables were generated to present descriptive statistics.

RESULTS

The demographic analysis indicated that 42.5% of caregivers were aged 25 to 34 years, followed by 32.5% under 25 years. (Graph 1) Predominantly caregivers were females 62.5% followed by males 22.5% and 15% who did not prefer to say their gender. (Graph 2). Socioeconomically, 50% of participants reported a monthly household income between ₹20,000 and ₹50,000. (Graph 3).

Regarding BMTs, 57.5% of caregivers reported feeling comfortable or very comfortable with Voice Control. Parental Presence/Absence was comfortable for 47.5% of caregivers, while 30% remained neutral. Protective Stabilization emerged as a contentious technique, with 50% of caregivers expressing discomfort.Parental separation revealed varied responses, with 30% neutral and 25% expressing comfort. The Omission technique was accepted by 47.5% of caregivers, although some voiced neutrality

ordiscomfort. Negative Reinforcement was rated as comfortable or very comfortable by 60% of participants. (Table 1)

Overall, parents preferred Parental Presence/Absence the most, with 38% expressing comfort with this technique. Voice Control followed at 24%, while Negative Reinforcement was slightly less favored at 22%. Omission and Protective Stabilization were the least preferred techniques, with only 7% and 9% of parents, respectively, showing comfort with these methods. (Graph 4)

Among the respondents, 70% rated the use of BMTs by dentists as very important when treating children. Additionally, 27.5% considered it important, while only 2.5% felt it was not important. (Graph 5)

DISCUSSION

Children arrive at the dentist's office armed with a repertoire of behaviours that have effectively assisted them in managing other challenging and anxiety-provoking situations, and they will instinctively apply these coping mechanisms in the dental environment. While some of these strategies will prove beneficial, others may hinder the provision of high-quality dental care.The durable success of any pediatric dental treatment greatly relies on the child's willingness to cooperate. Consequently, pediatric dentists must achieve a high degree of cooperation by utilizing a range of behavior management strategies.Wright in 1975 defined Behaviour management as “The means by which the dental health team effectively and efficiently performs treatment for a child.”[7]Behaviour management is widely agreed to be a key factorin the care of children in Paediatric Dentistry. The behaviour of the child in dental clinic is of utmost importance, failure in managing the child in dental clinic makes it impossible to carry out any dental care needed by the patient.[8]

The findings of this study provide valuable insights into caregiver attitudes toward Behavior Management Techniques (BMTs) in paediatric dentistry, reflecting both alignment with existing research and some deviations that highlight evolving trends. The demographic analysis revealed significant patterns related to age and socioeconomic background, which offer a broader perspective on how these factors influence caregivers' views on BMTs. Most caregivers were between the ages of 25 and 34, a group that typically has more experience in parenting and managing their child’s behavioural needs during medical or dental procedures. This age group is often more adept at utilizing effective parenting strategies, which can positively influence how children behave during dental visits.[9,10]

In contrast, caregivers under 25 years, who may be newer or less experienced parents, expressed more apprehension, suggesting that younger caregivers may require additional information and reassurance to embrace certain techniques fully. This age-based variation enriches the study by capturing diverse attitudes shaped by different stages of parenting.

The study also found that half of the participants belonged to middle-income households, with monthly incomes ranging from ₹20,000 to ₹50,000. This socioeconomic background is particularly relevant when considering how financial factors influence caregivers' preferences for certain BMTs. Middle-income families may prioritize cost-effective and value-driven approaches, which could shape their acceptance of specific techniques, particularly if these are perceived as unnecessarily expensive or invasive. The inclusion of participants from different socioeconomic groups strengthens the findings, offering a more nuanced understanding of how economic factors can intersect with perceptions of BMTs.

When examining caregiver comfort with specific BMTs, Voice Control emerged as one of the more accepted assertive techniques. This finding aligns with the work of Peretz et al. (1998) and Seangpadsa et al. (2020), who reported that caregivers are generally more receptive to Voice Control when its rationale is thoroughly explained.[11,12]These studies emphasize that caregivers perceive Voice Control as a non-invasive, effective way to manage a child's behavior during treatment, which maintains communication and control while allowing the child to retain some sense of agency. This acceptance reflects the broader trend in paediatric dentistry that favours empathetic and non-invasive approaches that minimize distress and encourage cooperation.

On the other hand, Protective Stabilization faced considerable resistance, reflecting a broader concern about its psychological and emotional impact on children. This resistance aligns with the findings of Patel et al. (2016) and Martinez Mier et al. (2019), who noted that caregivers often associate physical restraint techniques with potential harm, leading to reluctance to approve their use.[5,13]

These concerns are consistent with the shift in pediatric dentistry toward more minimally invasive, child-centered practices, as highlighted by the American Academy of Pediatric Dentistry (AAPD, 2020).[14]

The resistance to Protective Stabilization reflects a broader skepticism toward assertive methods that are perceived as invasive or forceful, as caregivers worry about their potential to erode the child's trust in dental care.

Similarly, Aversive Conditioning received mixed responses, with some caregivers expressing significant apprehension. These results align with Desai et al. (2019), who found that techniques involving negative reinforcement are often viewed unfavorably by caregivers due to their perceived harshness.[15]However, as Randall (2023) pointed out, caregiver acceptance of such techniques improves when the necessity of their use is communicated and when caregivers are reassured about their safety and effectiveness. This underscores the critical role of communication in addressing caregiver concerns and bridging the gap between clinical requirements and caregiver apprehension.[3]

In terms of overall comfort with Behavior Management Techniques (BMTs), as illustrated in Graph 4, Parental Presence/Absence emerged as the most favored technique, with 38% of caregivers expressing comfort with its use. This was followed by Voice Control, which was preferred by 24% of caregivers, while Negative Reinforcement was slightly less favored by 22%. In contrast, Omission and Protective Stabilization were the least accepted techniques, with only 7% and 9% of caregivers, respectively, indicating comfort with their use. These findings highlight a general discomfort with more assertive approaches.[4,14] These preferences align with the broader trends in pediatric dentistry, where caregivers increasingly favor less invasive, child-centered approaches.

The findings of this study also resonate with global trends in Pediatric Dentistry, particularly the emphasis on non-invasive, child-friendly techniques. The growing preference for methods like Voice Control reflects a broader shift toward practices that are not only effective but also empathetic, ensuring that the child's experience is as comfortable and distress-free as possible. This trend is further supported by Ismail (2024), who observed that caregivers increasingly prefer techniques that prioritize the child's well-being and minimize emotional distress.[5]At the same time, the resistance to techniques like Protective Stabilization and Aversive Conditioning aligns with findings from Patel et al. (2016) and Ismail (2024), who noted that such methods are generally viewed as less acceptable due to their perceived invasiveness and potential psychological impact.[4,5]

The findings of this study regarding parental communication preferences align with existing literature. The majority of parents (67.5%) preferred detailed verbal communication during appointments, while a smaller percentage (25%) preferred both verbal and written information. These results emphasize the importance of real-time, personalized communication in fostering trust and understanding. Similar observations were reported by Peretz et al. (1998), who found that caregivers are more likely to comprehend and support treatment decisions when verbal explanations are provided in a personalized manner, particularly for behavior management techniques.[11]

The strong parental support for BMTs, with 70% of caregivers rating them as very important and 27.5% as important, is consistent with findings by Patel et al. (2016).[4]Their study highlighted that caregivers recognize the role of BMTs in reducing dental anxiety and facilitating cooperation during treatment. Additionally, studies by Wright et al. (2021) have noted that caregivers' positive perceptions of BMTs correlate with improved treatment outcomes and reduced stress for both the child and the dentist.[16]

High satisfaction levels among parents, as reflected in this study (52.5% very satisfied and 40% satisfied), further reinforce the importance of effective communication strategies. These findings are supported by the work of Martinez Mier et al. (2019), who observed that caregiver satisfaction increases when dentists

prioritize clear communication and align their behavior management approaches with parental expectations. Similarly, Desai et al. (2019) reported that caregivers are more likely to feel satisfied with their child's care when they perceive that the dentist's approach is empathetic, child-centered, and tailored to their child's needs.[13,15]

The preferences and perceptions of parents regarding communication about BMTs further highlight the importance of clear and effective interactions in pediatric dental care. These consistent findings from various studies demonstrate that personalized communication, combined with the strategic use of appropriate behavior management techniques, not only improves parental understanding and acceptance but also enhances overall satisfaction with pediatric dental care.

This study contributes to the growing body of evidence emphasizing the need for clear, empathetic communication and the integration of child-friendly techniques into routine practice. Additionally, findings of this study have significant clinical implications for pediatric dental practice. By understanding caregivers' attitudes toward behavior management techniques (BMTs), dental professionals can modify their communication strategies to enhance acceptance and cooperation. This insight enables clinicians to build trust with caregivers, improve treatment compliance, and create a more positive dental experience for children. Additionally, recognizing concerns about assertive techniques can help in developing alternative approaches or reinforcing the need for clear explanations and informed consent.

CONCLUSION

Caregivers typically prefer non-invasive and empatheticBMTs, such as Parental Presence/Absence and Voice Control, while assertive methods like Protective Stabilization are often met with resistance. These preferences are influenced by factors such as the caregiver's age, parenting experience, and socioeconomic background, highlighting the importance of tailored communication.Effective, real-time communication is essential in building trust and satisfaction among caregivers. By aligning clinical practices with caregiver expectations through minimally invasive techniques and maintaining open dialogue, Paediatric dentists can enhance treatment outcomes and ensure a positive experience for both children and their caregivers. This study is limited by its small sample size and single-center setting, which may affect the generalizability of the findings. Future research with larger, more diverse populations is needed to further explore these attitudes and their implications for pediatric dental practice.

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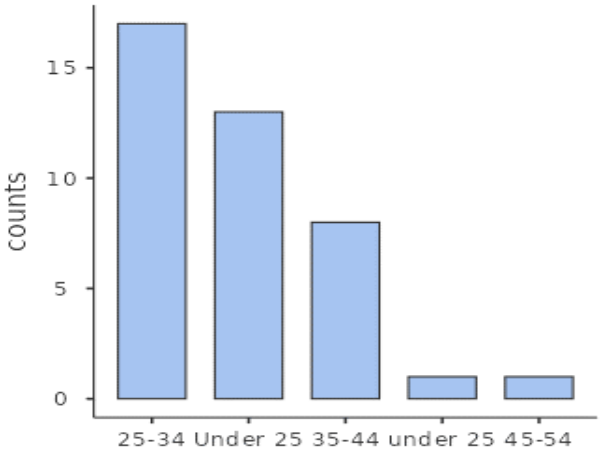
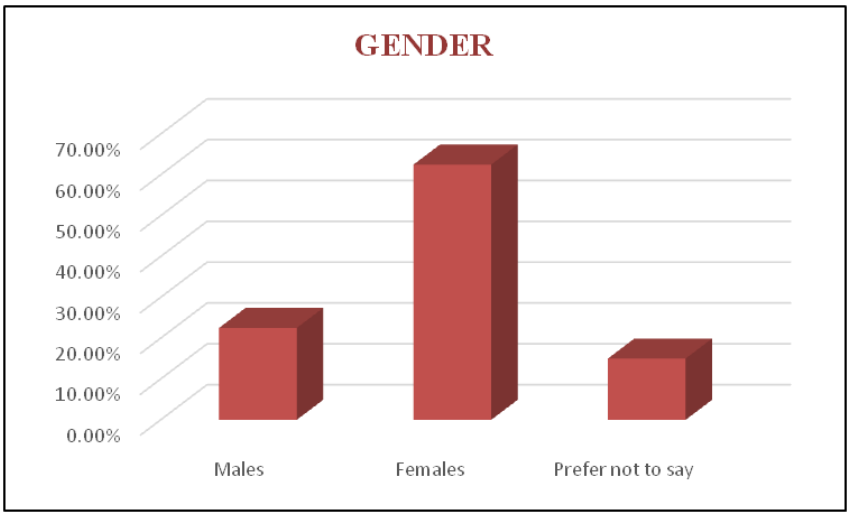
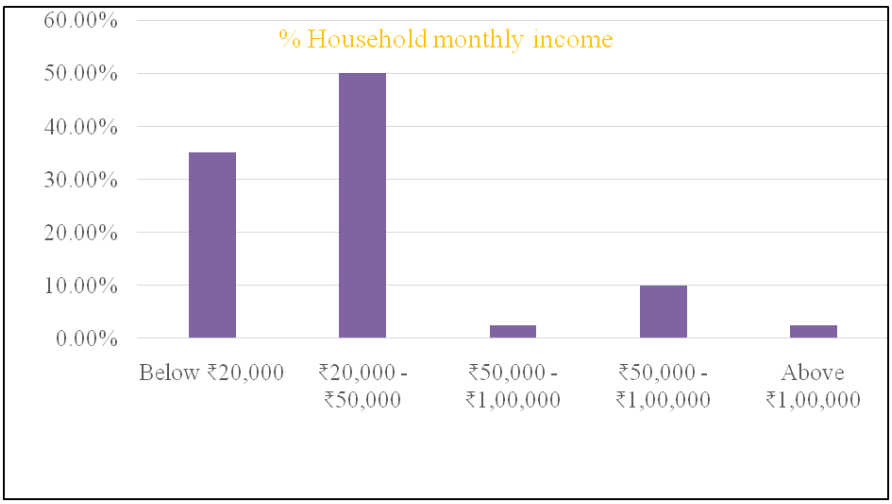


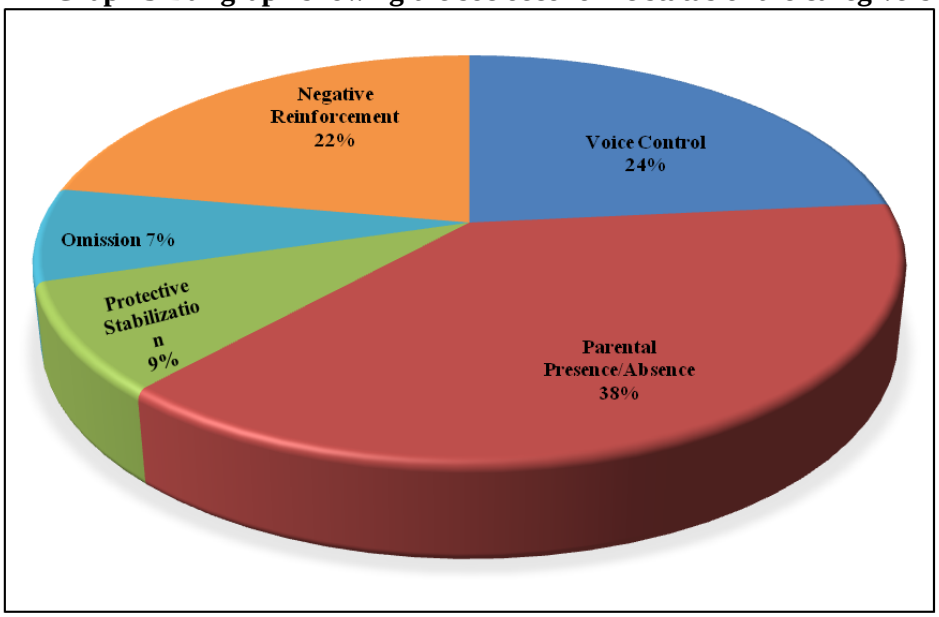
Graph 1 Bar graph showing distribution of age of caregivers



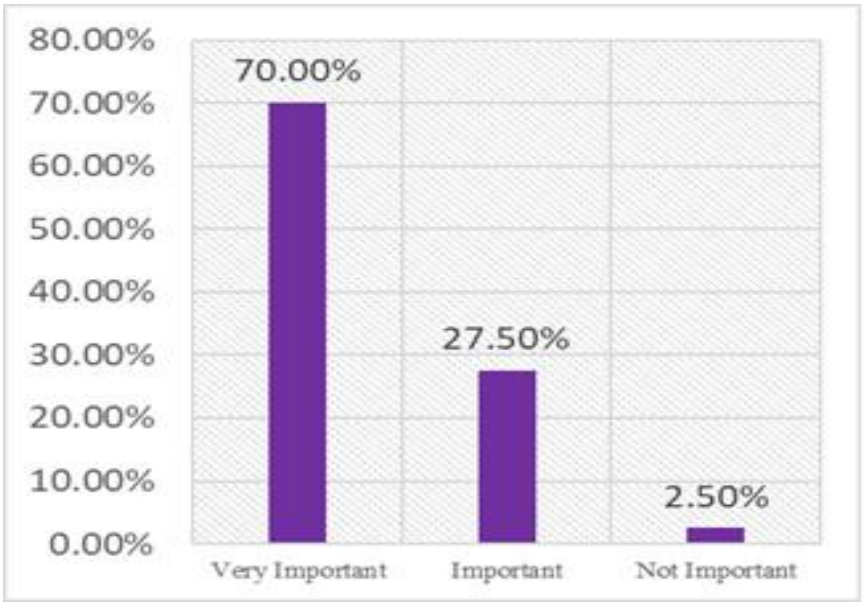
Graph 2 Bar graph showing gender distribution in the study



Graph 3 Bar graph showing the socioeconomic status of the caregivers



Graph 4: Pie chart showing the overall comfort levels with behavior management techniques



Graph 5: Bar graph showing importance of Dentist's using Behavior Management Techniques when treating Children

Table 1: Comfort level rated by the parent for the following Behavioral Management Technique

BMT	Response	Column N %
Voice control	Very Uncomfortable	12.50%
	Uncomfortable	12.50%
	Neutral	17.50%
	Comfortable	35.00%
	Very Comfortable	22.50%
Parental Presence/ Absence	Very Uncomfortable	15.00%
	Uncomfortable	5.00%
	Neutral	7.50%
	Comfortable	25.00%
	Very Comfortable	47.50%
Protective stabilisation	Very Uncomfortable	20.00%
	Uncomfortable	30.00%
	Neutral	17.50%

	Comfortable	15.00%
	Very Comfortable	17.50%
Omission	Very Uncomfortable	15.00%
	Uncomfortable	15.00%
	Neutral	22.50%
	Comfortable	35.00%
	Very Comfortable	12.50%
Negative Reinforcement	Very Uncomfortable	15.00%
	Uncomfortable	10.00%
	Neutral	15.00%
	Comfortable	30.00%
	Very Comfortable	30.00%