

Original Research

Assessment of stress levels among dental students and general practitioners while performing pediatric dental procedures in Ahmedabad city

¹Priyal Fadia, ²Vasudha Sodani, ³Bhumi Sarvaiya, ⁴Jay Chhatrola, ⁵Pinkal Patel, ⁶Parth Solanki

¹⁻⁶Department of Pediatric and Preventive Dentistry, Ahmedabad Dental College and Hospital, Ahmedabad, Gujarat, India

ABSTRACT:

Background: Pediatric dentistry involves treating young patients. Pediatric dentist may experience stress due to working with children. Stress gives a negative impact to the physical and mental health of dental students and dentists. **Aim:** To assess the level of stress among dental students and dentists performing pediatric dental procedures. **Methodology:** The survey was conducted in Ahmedabad city from September 2023 to October 2023. A self-designed questionnaire was sent via e-mail to all dental students and dental practitioners of Ahmedabad city. **Results:** The participants taking part in the study were BDS, MDS, PG and UG students. Maximum stress (89%) was observed in method of isolation among UG students. Minimum stress (50%) was observed among MDS. Maximum participants agreed that behavior management techniques were useful in managing the pediatric patients. Particularly, the stress levels were at peak at the initial days of practice and gradually reduced during the course. **Conclusion:** The level of stress was high while performing the clinical procedures in pediatric patients. Knowledge about child's psychology helped them in managing a child during treatment and knowledge about behavioural management technique helped reduce stress levels better.

Key words-Stress, psychology, behavior management

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Corresponding author: Priyal Fadia, Department of Pediatric and Preventive Dentistry, Ahmedabad Dental College and Hospital, Ahmedabad, Gujarat, India

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INTRODUCTION

Pediatric dentistry is one of the challenging branch of dentistry, which deals with children's unpredictability and demands patience. At times, it can lead to stress. Stress is a state of mental or emotional strain or tension resulting from adverse or demanding circumstances

Stress may harm the professional effectiveness by decreasing attention, reducing concentration, impinging on decision-making skills, and reducing the ability to forge good clinician-patient relationships.¹ Stress can have detrimental effects on dental students and dentists it has been associated with physical symptoms.²

Common stressors reported by dentists include time related pressures, heavy workloads, financial concerns, anxious-uncooperative patients, the causing and managing of pain to patients, staff problems, equipment breakdown, defective material, poor

working conditions, medical emergencies and the routine nature of the job.³

Stress can be reduced by knowledge and skill which are developed with experience. There are various techniques to reduce stress while performing procedures which help the clinician to relax during the procedures.

Though, high levels of stress have been well documented among dentists and dental students, differences in levels of stress have been less investigated.⁴

Therefore, the purpose of this survey was to evaluate the level of stress during different procedures in pediatric dentistry and to analyze and compare the levels of stress in dental students and dentists performing various pedodontic procedures.

METHODOLOGY

The survey was conducted in Ahmedabad city from September 2023 to October 2023. The aim of the study

was to assess the level of stress among dentists performing Pediatric dental procedures. A self-designed questionnaire was prepared via google form and sent to all under graduate students, post graduate students, working professionals (BDS, MDS) in Ahmedabad, Gujarat. The questionnaire was sent to all 210 dental students and dentists via e-mail.

The questionnaire contained 16 questions to access the level of stress while performing pediatric dental procedures among the dental students and dentists. The questionnaire was validated.⁵

First part of questionnaire contained the questions about demographic details of the participants. Second

part contained the questions regarding preference in performing pedodontic procedure and questions related to stress and anxiety faced by the students while treating pediatric patients. It also included the questions related to various behavioral management techniques implemented toward pediatric patients. 200 dental students and dentists responded to the questionnaire and were included in the study. The collected data from the participants was entered into a computer system using IBM.SPSS software 20.0 version.

RESULTS

Table 1 depicts the demographic data according to the qualification.

Table 1: Qualification wise distribution of the participants

Qualification	N (%)
PG	74 (37%)
UG	60 (30%)
BDS	48 (24%)
MDS	18 (9%)
Total	200

The demographic data showed that total 200 dentists and dental students participated in the survey. 74% participants were post graduate students, 60% participants were undergraduate students, 48% and 18% were BDS and MDS participants respectively.

Table 2 depicts stress level in performing pedodontic procedure. Stress developed during different clinical procedures among undergraduate students, post graduate students, BDS and MDS participants was observed.

Table 2: Stress observed among undergraduate, post graduate, BDS, MDS performing various procedures in pediatric patients.

QUESTIONS	RESPONSES							
	UG N=60		PG N=74		BDS N=48		MDS N=18	
	YES	NO	YES	NO	YES	NO	YES	NO
Isolation	53 89%	7 11%	61 83%	13 17%	37 78%	11 22%	9 50%	9 50%
Fluoride application	26 43%	34 57%	25 34%	49 66%	17 35%	31 65%	4 25%	14 75%
Restoration	38 64%	22 36%	53 71%	21 29%	25 52%	23 48%	2 13%	16 87%
Local anesthesia	53 89%	7 11%	47 63%	27 37%	40 83%	8 17%	14 75%	4 25%
Extraction	49 82%	11 18%	51 69%	23 31%	31 65%	17 35%	11 63%	7 37%

The results showed maintaining isolation was most stressful procedure. Maximum undergraduate students (89%) found that maintaining isolation was stressful. Maximum 43% of undergraduate students found fluoride application is a stressful procedure. 83% of BDS agreed that administering local anesthesia was a

stressful procedure while 75% of MDS found the local anesthesia administration in children stressful. Minimum stress for extraction was observed among MDS 37% for extraction procedure. So, according to the results with the level of qualification stress levels while performing a procedure relatively decreases.

Table 3: Knowledge of child psychology and behavior management techniques

QUESTIONS	RESPONSES							
	UG N=60		PG N=74		BDS N=48		MDS N=18	
	YES	NO	YES	NO	YES	NO	YES	NO
Do you know any child psychology theories?	52 86%	8 14%	72 97%	2 3%	46 96%	2 4%	18 100%	0 0%
Do you find behavior management techniques helpful in managing stress?	49 82%	11 18%	66 89%	8 11%	44 91%	4 9%	16 88%	2 12%
Would you be interested in attending practice management workshop?	52 86%	8 14%	70 94%	4 6%	29 61%	19 39%	16 88%	2 12%

Table 3 depicts knowledge about child's psychology and behavior management techniques. The results showed that maximum undergraduate students were unaware of the child psychology theories. Behavior management techniques were proven to be helpful in 82% of undergraduate students, 89% of post graduate students, 91% of BDS and 88% of MDS dentists. Maximum post graduate students showed interest to attend practice management workshop.

DISCUSSION

In this study a total of 200 undergraduate, post graduate, BDS, MDS participated in this survey. In this current research, it was found that stress level was high among the beginners of clinical practice. 81% dentists agreed that their surrounding environment affected the stress level. Among all dental procedures 89% of undergraduate students found that maintaining isolation and administering local anesthesia was equally stressful. Among students, least stressful procedure was fluoride application. 88% MDS in this study agreed that behavior management technique was helpful in managing stress. Thus, with the clinical experience the levels of stress decreased relatively and with proper knowledge, performing pediatric dental procedures became stress free.

Aishwarya Aet al (2017)⁵ carried out a study in which 43% students were stressed administering local anesthesia. 27.7% students were stressed during extraction. This study revealed that stress level was generally high among the beginners of clinical practice and decreased on continuous practice. Students who had knowledge on child's psychology and behavioral management techniques agreed that it helped in reducing stress level. In the present study, 89% students were stressed in maintaining isolation and 82% students were stressed during extraction. Majority of undergraduate students were unaware of the child psychology theories. Hence, undergraduate students were observed to be more stressed. Least stress was observed among MDS. Maximum post graduates were interested in attending workshop of practice management. **Davidovich et al (2015)**⁴ carried a study in which placement of a rubber dam was rated as the most stressful procedure among dental students. For general practitioners and specialists, injection of local anesthesia to an anxious child was the most stressful procedure, regardless of age, sex or years of professional experience. In the present study, maintaining isolation and administration of local anesthesia was the most stressful procedure and application of fluoride was least stressful among students. Out of all participants,

the fluoride application procedure was least stressful. It was observed that with years of experience the stress was seen to be reduced. That was the reason why students showed relatively more stress in comparison to the dentists who already have their practice established.

Samadani et al (2013)⁶ carried out a research that showed that only 22% students suffered from severe stress. This study showed high degree of severe stress in more than 50%. Maximum stress was observed in maintaining isolation and administering local anesthesia among pediatric patients. **Dower et al (1995)**⁷ carried out a study in which administering mandibular block to pre-school child was considered to be most stressful pain control method. In the present study, maximum students felt that administering local anesthesia and maintaining isolation was most stressful in children. Fluoride application was least stressful among the students in the study.

CONCLUSION

The level of stress was high while performing the clinical procedures in pediatric patients. Particularly, the stress level was at peak at the initial days of practice and gradually reduced during the course. Knowledge about child's psychology helped them in managing a child during treatment. Knowledge about behavioral management technique helped reduce stress levels better.

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