ORIGINAL RESEARCH

Anxiety Measurements among Dental Students Undergoing Local Anesthesia Administration

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ABSTRACT

Background: Dental fear has been ranked fourth among common fears. Dental fear has also been reported as one of the most important reasons for avoidance and neglect of regular dental care.

Aims and Objectives: The aim of this study was to evaluate the anxiety among dental students undergoing local anesthesia (LA) administration.

Methodology: The present study was conducted among the students in the Department of Oral and Maxillofacial Surgery, Pacific Dental College and Hospital, Udaipur, Rajasthan, India. Dental students were comfortably seated on the dental chair for dental treatment. Pre-structured pro forma was filled and pre-anxiety level was measured. Then Local Anaesthesia administrated in the student's mouth following proper landmarks. After the treatment post-anxiety level was measured and a comparison of pre- and post-anxiety level was done. Reason for anxiety was also evaluated.

Results: Shows that 51 dental students had dental anxiety due to injection of LA, four dental students had dental anxiety due to instruments which were used during treatment, 35 dental students had dental anxiety due to the procedure and 10 dental students had dental anxiety due to post-operative discomfort.

Conclusion: We concluded that managing perioperative anxiety is still a challenging task. Prior awareness of dental anxiety to the patient will help us to take appropriate therapeutic care and to reduce the anxiety level of the patient.

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INTRODUCTION

Fear is a universal human phenomenon. Fear is generally defined as an individual response to a real threatening event or dangerous situation to protect his or her life. Dental fear has been ranked fourth among common fears. Dental fear has also been reported as one of the most important reasons for avoidance and neglect of regular dental care.[1-3] They tend to be uncooperative during their visits, frequently cancel appointments, and due to their anxiety and fear develop a lower pain threshold.[4-8] The assessment of dental anxiety has led to the development of a variety of measures, and several psychometric scales have been designed to quantify dental anxiety. Corah's dental anxiety scale (DAS) is probably the most widely used, consisting of a four-item, multiple-choice questionnaire designed to measure the degree of anxiety associated with the dental treatment on a scale from 4 (no anxiety) to 20 (high anxiety).[9] It takes <5 min to administer, is highly reliable, and has demonstrated predictive validity. It is widely used for both survey and clinical purposes.[3] The present study was carried out to evaluate the anxiety measurements among dental students undergoing local anesthesia (LA) administration based on Corah's DAS. The scale has been modified and some important additional features added to aid in assessment.[10-15]

METHODOLOGY

The present study was conducted in the Department of Oral and Maxillofacial Surgery, Pacific Dental College and Hospital, Udaipur, Rajasthan, India.

Materials

- Standard diagnostic instrument kit with extraction forceps and elevators.

- 2 ml disposable syringe and 2% Lignocaine with 1:80,000 adrenaline.
- Pre-structured pro forma was used to measure the anxiety in dental students.

Sample Size

The study population consisted of 100 dental students who consulted oral surgery department for treatment.

Inclusion Criteria

The following criteria were included in the study:

- Dental students who required treatment.
- Dental students who had undergone extraction.

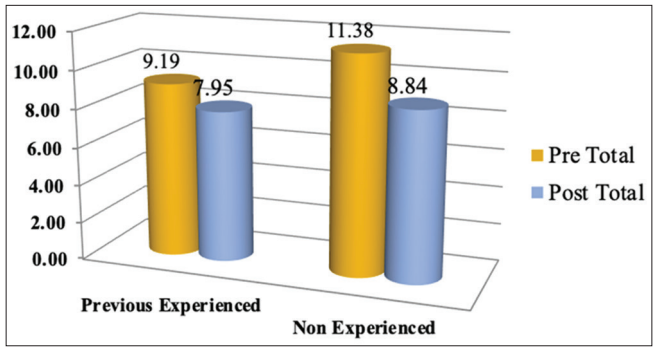
Exclusion Criteria

- Patients with contraindication of LA administration for whatever reason were excluded from the study.

All the dental students were informed with regard to the purpose of the study and consent were obtained. Dental student was comfortably seated on the dental chair for dental treatment. Pre-structured pro forma was filled and pre-anxiety level was measured. The student's face was prepared with povidone-iodine solution and draping was done. Then, intraoral preparation was done with povidone-iodine solution and normal saline irrigation. Then Local Anaesthesia administrated in the student's mouth following proper landmarks. After the treatment post-anxiety level was measured and a comparison of pre- and post-anxiety level was done. Reason of anxiety was also evaluated.

RESULTS

The present study was aimed to quantitate the anxiety associated with the administration of LA in 100 dental students and to compare the anxiety levels preoperatively and postoperatively in (1) males and females, (2) among previous experienced or non-experienced group, (3) age-wise distribution of dental students, and (4) to know the reason for dental anxiety. This study shows that a number of male dental students were 42 and female dental students were 58. According to age-wise distribution of dental students, a number of dental students for age group 19–22 years were 54, for age group 23–25 years were 36, and for age group 26–29 years were 10. According to non-experienced and previous experienced dental students, a number of non-experienced dental students were 58 whereas previous experienced dental students were 42. The reason dental anxiety shows that 51 dental students had dental anxiety due to injection of LA, four dental students had dental anxiety due to instruments which were used during treatment, 35 dental students had dental anxiety due to the procedure and 10 dental students had dental anxiety due to post-operative discomfort. The comparison of pre-operative and post-operative DAS in previous experienced and non-experienced dental students is shown in Graph 1.



Graph 1: Comparing of pre-operative and post-operative das in previous experienced and non-experienced dental students

DISCUSSION

Corah's DAS was proven to be popular among dental researchers.[10,11] It is simple, easy to score, short, valid, and reliable test for dental visit-associated anxiety. A study was conducted by Shrestha *et al*. to assess dental anxiety among patients would provide information on their behavior and aid in planning treatment. Results showed that a total of 136 answered questionnaires were analyzed. They concluded that the prevalence of dental anxiety was seen to be 34%. Females seemed to have higher dental anxiety as compared to males. Dental anxiety was seen to be most among the younger age of the sample population. Higher dental anxiety was reported among those individuals who had undergone dental extraction in their previous visit.[12] Furthermore, a study done by Liau *et al*. to evaluate whether dental patient anxiety has an effect on the cardiovascular response while delivering mandibular anesthesia. Anxiety was measured at 15 min before dental LA delivery using Corah's DAS, cardiovascular responses data including blood pressure, heart rate, oxygen saturation, and electrocardiogram changes were measured at 5-time points from 5 min before to 15 min after administration of anesthetics. They showed women and Younger age of sample population had a significantly higher scale score. Severe pre-operative was associated with significantly increased heart rate during anesthetic administration.[7] In the present study, we did not record the cardiovascular changes before and after LA administration.

CONCLUSION

We concluded that managing perioperative anxiety is still a challenging task. Prior awareness of dental anxiety to the patient will help us to take appropriate

therapeutic care and to reduce the anxiety level of the patient. We found Corah's DAS reliable, easy to understand for everyone, and useful tool for measuring anxiety level in patients.

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