DR. SATU LAHTI (Orcid ID : 0000-0003-3457-4611)

Article type : Original Article

Dental students' and patients' perceived importance and knowledge of dental anxiety

Korpela I[1], Vaununmaa K[1], Tolvanen M[1, 2], Suominen A[1], Freeman R[3], Lahti S[1,4]

[1]Department of Community Dentistry, University of Turku, Finland

[2]Center for Life Course Health Research, Faculty of Medicine, University of Oulu, Finland

[3]Dental Health Services Research Unit, University of Dundee, Scotland

[4]Turku Clinical Research Centre, Turku University Hospital

Corresponding Author Email ID: satu.lahti@utu.fi

Running title Students' and patients' knowledge on dental anxiety

Key words: dental anxiety, importance, dental student, patient

Abstract

Aim To examine the perceived importance and knowledge of the dental students' in their treatment of dental anxiety according to their year of study and to find out patients' perceived importance of the dental students' knowledge of dental anxiety according to their level on dental fear.

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/eje.12460
This article is protected by copyright. All rights reserved.

Accepted Article

Accepted Article

Methods Dental students (N=219) at the University of Turku and non-probability convenience sample of 100 of patients attending the Dental Teaching Clinic were given questionnaires with multiple choice and open-ended questions. Students were categorized into three groups according to the year of study (1-3, 4, 5). Patients were categorised into three groups using the established cut points for Modified Dental Anxiety Scale (no fear=5-9, low fear=10-18, high fear=19-25). The differences between groups were evaluated using cross-tabulations and chi squared and Fisher's exact tests. The open-ended questions were subjected to content analysis.

Results Students' perceived importance of dental anxiety did not differ between three groups. Students with greater undergraduate education and clinical experience were more likely to have excellent or quite good knowledge ($p<0.001$). Patients' perceived importance of dental students' knowledge of dental anxiety was greater in patients with high level of fear. The overlapping category that emerged from the open-ended question analysis was communication skills. This appeared to be important for patients with dental anxiety and for dental students in their management of dental anxiety.

Conclusion Clinical communication skills should be part of dental anxiety management teaching. Dental students should be able to gain sufficient knowledge and skills in treating dental anxiety before graduating.

This article is protected by copyright. All rights reserved.

Accepted Article

Introduction

In Finland at least every third adult, women more often than men, suffer from dental anxiety. There has not been major change in dental anxiety prevalence between 2001 and 2011[1,2]. Those with high dental anxiety, avoid dental appointments, have poorer oral health[3,4], use routine dental services less frequently, access and attend more on emergency duty basis[5] than those with low dental anxiety. Therefore, when treating patients, it is important to take into account their dental anxiety and measure their level of dental fear.

There are studies about graduated dentists' views on treating fearful patients. A British study[6] evaluated dentists' needs in their treatment of anxious patients. According to this study, 91% of the dentists reported feeling stressed when treating dentally anxious patients. The lack of time with the patient and the lack of confidence due to inadequate training in the management of the dental anxious patient were the major problems highlighted when treating dental anxiety[6]. Female dentists, however, reported to have more self-confidence in treating these patients than male did[7]. A qualitative study found that treating patients with dental anxiety was an emotionally demanding process[8]. More than a half of the respondents in a Swedish study wanted more undergraduate training in dental anxiety[9]. In addition, some of the dentists treating fearful patients felt they this work was not appreciated by employers[7]. Of those undergraduate students who had received education on treating fearful patients, they were more likely to provide additional behavioural management than those who had not received such education[10]. Similar results were found in a study on dentists' training and willingness to treat adolescents with learning disabilities which showed that undergraduate education added positive attitudes and willingness to treatment[11]. These

This article is protected by copyright. All rights reserved.

results indicate that education on treating fearful patients is needed and should be provided as an undergraduate.

Studies among UK dental students' communication and psychosocial skills, which are needed in the treatment of dental anxiety, reported that of the final year students 84% considered behavioral sciences teaching important[12,13]. The quality of teaching and the frequency of being exposed to situations with patient with dental anxiety were associated with students' confidence of dental anxiety management[12]. However, there are no previous studies about the knowledge of dental students in the treatment of dental anxiety in relation to their year of study as an indication of their clinical experience.

The aim of the study, therefore, was to examine the perceived importance and knowledge of the dental students in their treatment of dental anxiety according to their year of study with the hypothesis that knowledge increases during education. Additional aim was to find out the patients` perceived importance on dental students` knowledge of dental anxiety according to their level on dental fear. Our hypothesis was that patients with higher dental anxiety perceive dental students` knowledge more important than patients who have no fear or low dental fear.

Material and methods

This was a cross-sectional survey based on questionnaires. The participation was voluntary, anonymous and participants were informed about the study. Responding was considered as the consent to participate. The Finnish Medical Research Act[14] and the Ethical principles by

Accepted Article

This article is protected by copyright. All rights reserved.

Accepted Article

the Finnish Advisory Board on Research Integrity[15] waive the need approval of such studies. The Dental Teaching Clinic (Oral and Dental Health Care at Turku) gave permission to conduct this study.

There were two separate populations in this study, dental students at the University of Turku and patients at Dental Teaching Clinic. All dental students (N=219) from first-year students to fifth-year students and a non-probability convenience sample of 100 adults (18+ year old) patients at Dental Teaching Clinic were invited to participate in the survey. The questionnaires were given to dental students while they were having an examination. Answering the questionnaire was voluntary and no personal information was collected to ensure confidentiality for the students. The number of student participants was 169 out of 219 students. The patient questionnaires were administered by dental undergraduates who were providing their patients' comprehensive dental treatment at Dental Teaching Clinic. The data were collected during one academic year. Students approached the patients with the information leaflet, consent form and the questionnaire.

Dental students' perceived importance and knowledge of dental anxiety were measured with three questions. The questions together with their response alternatives are presented in Table 1 and 2.

The students were also asked two open-ended questions: "What are the three most important things you have learned about dental anxiety by now?" and "What are the three most important treatment possibilities of dental anxiety in your opinion?". At the end of the questionnaire there were questions about students' background factors. Background factors were a year of study course, age in years and gender.

This article is protected by copyright. All rights reserved.

For further analyses the dental students were categorized into three groups according to the year of study. The first group (group 1) contained dental students from first year to third year, the second group (group 2) contained the fourth-year students and the third group (group 3) the fifth-year students. This categorization was based on the teaching of dental anxiety and clinical experience of the dental students. Group 1 had not received any teaching on dental anxiety. Group 2 had received some teaching about child dental anxiety at the time of the survey was conducted. Group 3 had received, in addition teaching on adult and child dental anxiety and they also had clinical experience as they were licensed to work in the public healthcare as a dentist during summer after four years of studies so they had also treated patients with dental anxiety.

Patients' perceived importance on dental students' skills and knowledge of prevalence, etiology and treatment possibilities of dental anxiety were measured by three questions (Table 3). There were also questions about patients' perception on dental students' knowledge of dental anxiety. The two questions for the patients were open-ended: "In your opinion, what are the three most important issues that a dentist should take into account while treating fearful patients?" and "In your opinion, what are the three most important issues that should be taught about dental anxiety to dental students?"

Dental anxiety of patients was measured with the Modified Dental Anxiety Scale (MDAS) consisting of 5 questions: "If you went to dentist tomorrow, how would you feel?", "If you were sitting in the waiting room, how would you feel?" and "If you were about to have a tooth drilled, how would you feel?", "If you were about to have your teeth scaled and polished, how would you feel?" and "If you were about to have a local anaesthetic injection in your gum, above an upper back tooth, how would you feel?". There were five response

This article is protected by copyright. All rights reserved.

Accepted Article

Accepted Article

alternatives to each question. The questions were answered on a scale from 1 ("not anxious") to 5 ("extremely anxious"). Patients were categorised into three groups using the established cut points for MDAS total score as follows: a score of 5 to 9 as "no fear", 10 to 18 as "low fear" and 19 or greater as "high fear"[16-18]. We used these cut-points to categorize patients into three groups. Patients were also asked their age and gender.

The response alternatives for students and patients were also dichotomised as "very important/quite important" vs "somewhat important/not so important/not important at all" and "excellent/very good" vs. "moderate/quite poor/poor". Additionally, a sum score of the perceived importance was calculated from three questions.

The differences between groups were evaluated using cross-tabulations and the statistical significance of the difference was assessed using chi squared and Fisher' exact tests with a two-sided significance limit of $p < 0.05$. The association between patients` and students perceived was assessed using sum scores comparing the means and 95% confidence intervals. The open-ended questions were reported with percentages. Questions on patients' perception on dental students' knowledge of dental anxiety were omitted from further analyses as most patients responded that they did not know.

Qualitative analysis

The open-ended questions were analysed using content analysis. To ensure trustworthiness of the analysis of the manifest content of the text data, the answers were read by two of the authors (IK and KV) independently. IK and KV read carefully and independently the open question texts. They searched the questions for words to identify codes and categories. Using this strategy ensured the dependability of their analysis. They, then, met to discuss the codes

This article is protected by copyright. All rights reserved.

Accepted Article

and categories they had each derived from the thick descriptions of the open question transcripts (Box 1). Where a difference occurred, IK and KV discussed their differences and this made sure that a consensus was reached. Thus, confirmability was realised. The authors have experience in dentistry and engagement with patients and students and RF acted as an expert thus ensuring that credibility of the data was attained.

Results

Of the 219 dental students 169 participated in the survey. A response rate was 77.2%. The mean age was 23.0 years (range 19 to 36 years old) and the majority were female (63.0 %). Of the patients 101 were participating in the survey but 98 reporting their age were included in the analyses. The mean age was 54.3 years (range 20 to 81 years old) and the majority were female (64.3%). Two of the patients did not report their gender and age.

Students' perceived importance and knowledge on prevalence, aetiology and treatment possibilities of dental anxiety in first-year to fifth-year-students are presented in Tables 1 and 2.

When comparing the dental students according to categorised year of study (groups 1-3), there were no statistically significant differences in students' perceived importance of different aspects of dental anxiety. Of students 80.0% (group 1), 89.7% (group 2) and 88.5% (group 3) considered it is very or quite important to know about the prevalence of dental anxiety. The corresponding percentages for aetiology were 82.0%, 92.3%, 88.5% and for treatment possibilities of dental anxiety 92.0%, 92.1% and 96.2%, respectively.

This article is protected by copyright. All rights reserved.

There were statistically significant differences in students' knowledge according to categorized year of study in all three aspects of dental anxiety (prevalence, aetiology, treatment possibilities). Those students who had received more education and had greater clinical experience were more likely to have excellent or quite good knowledge of the prevalence of dental anxiety than those with less education (group 1: 23.0%, group 2: 86.8%, group 3: 76.9%, $p<0.001$). The corresponding percentages for the knowledge on aetiology were 9.0%, 68.4% and 80.8%, $p<0.001$ and for the knowledge on treatment possibilities of dental anxiety 9.0%, 65.8% and 76.9%, $p<0.001$, respectively.

From thick description of the open-ended questions, 19 groups of key words were identified. These were: "fear is common", "impact of parents", "treatments/it is possible to get rid of fear", "fear develop during childhood", "a way of developing", "patient's feel of control", "proficiency of dentist", "fear may be serious", "fear is connected to pain", "negative experiences", "interaction", "hinder treatment/influence on the health of mouth", "sedative/pain relief ", "paying attention to fear", "peacefulness", "fear appears in every age groups", "positive experiences", "therapy/support of family", "individual/manifesting in many ways". These gave rise to a series of codes (e.g. knowledge) which were classified as two categories, [1] dental anxiety education (knowledge and awareness) and [2] dental anxiety management consisting of pharmacological and behavioural treatments.

On the average, students from group 1 were more likely to respond to open-ended questions. With regard to dental anxiety knowledge, most of the respondents said that the most important thing about dental anxiety they had learnt was that dental anxiety was very common, that dental anxiety was treatable and that they now were aware that dental anxiety affected patient oral health in a negative way : "At its worst, dental anxiety can block the

This article is protected by copyright. All rights reserved.

Accepted Article

Accepted Article

dental treatment", "It can lead patient to avoid going to the treatment" and "It causes problems when teeth are not treated because of the dental anxiety". The second category of dental anxiety management was mentioned by fewer students. Of those who did, they most often raised the management of dentally anxious patients in relation to conscious sedation, local anaesthetic administration and pain management as the most important pharmacological management techniques they had learnt so far. Students considered that the most important ways to manage dental anxiety were the use of behavioural management including, professional skills, good interaction with the patient: "How one is encountering the patient has a huge impact on the development of dental anxiety", "Listening to patient", "Talking about the situation", "Talking about the fear", "Calming the patient down", "Giving the patient as sense of control" and "Telling to the patient what dentist will do" were mentioned by students. More clinically experience dental students mentioned that giving a control to the patient was important (groups 2 and 3).

Patients' perceived importance on dental student's knowledge of prevalence, aetiology and treatment possibilities of dental anxiety according to their dental fear are described in Table 3. Patients with high level of fear considered dental students' knowledge on prevalence of dental fear more often very or quite important (87.5%) than patients with moderate or no or low fear (100%, 79.1%; p=0.048).

The patients' texts from the open-ended were sorted into 12 initial word groups. These were: "the dentist tells me what (s)he is doing", "calmness of dentist", "proficiency of dentist", "[*dentist*] listening to patient", "[*dentist*] talking with the patient", "[*dentist*] asking about feelings", "empathy", "kindness", "treatment of pain", "meeting the patient", "detection of fear", "taking fear seriously". The 12 word groups, gave rise to a number of

This article is protected by copyright. All rights reserved.

Accepted Article

codes (e.g. informing). These patterned out into two categories, [1] Communication consisting of information providing, verbal and non-verbal and [2] Treatment.

The communication category was composed of first information providing and secondly communication non-verbal and verbal. Therefore, the patients' most frequent responses, for information providing, were that the dentist should explain or 'tell' the patient about the clinical procedures to be done. Patients wanted: "Telling what is going on all the time", "Telling what is happening while treating", "Explaining the procedure beforehand" and "Giving enough information about the upcoming procedure". For non-verbal and verbal communication, patients wanted the dentist to be calm, empathetic and kind (non-verbal). They wished the dentist to listen to them, to talk with them, to ask how they felt (verbal) and that they should take communication into account when treating patients with dental anxiety.

With regard to the treatment category, the patients stated that they required good pain management with local anaesthesia that dentists should know how to make the patient calm and relaxed and how to assist the fearful patient. These were the main categories and themes that the patients felt were important for dental students to know in their care of dentally anxious patients.

Discussion

Students' knowledge of dental anxiety developed with the years of study. The attitude of students was clearly positive; all students considered it important to know about the issues related to dental anxiety irrespective of year of study. Patients' perceived importance of dental students' knowledge of dental anxiety was higher in patients with high level of fear than patients with no fear or low fear.

This article is protected by copyright. All rights reserved.

The results of our study were similar to those of previous studies on graduated dentists' views. Skills and knowledge of dental anxiety develop according to amount of clinical experience and education. Also among the UK dental undergraduates the frequency of being exposed to situations with patient with dental anxiety were associated with students' confidence of dental anxiety management[12]. However, in our study dental students had positive attitude towards dental anxiety no matter how much they had received instructions of it unlike in study of graduated dentists that showed that those who had received education on treating fearful patients were more likely to put effort on treating patients with dental anxiety[10]. Even students in group 1 with no clinical experience and no undergraduate education in dental anxiety reported that it was important to know about the backgrounds of dental anxiety and treatment possibilities of it. It may be proposed that this finding allows the suggestion to be made that the dental students would be willing to put effort in treating patients with dental anxiety in the future.

Patients' opinions on dental anxiety treatment were mostly related to interaction between dentist and patient. Telling about the procedures and what is going on, talking and listening to patient and asking how they feel were considered important issues while treating a fearful patient. Communication skills seems to be the central part for patients with dental anxiety in their treatment. Also majority of dental students thought that the most important ways to manage dental anxiety are good interaction with the patient. However, learning these skills was not as often reported by the students as learning the knowledge that dental anxiety is common, treatable and affects oral health in a negative way. This might be due to the fact that students did not feel as confident with their skills as with their knowledge. Both patients and dental students felt that effective communication was important in the management and treatment of dental anxiety. This result is supported in the literature. Hally et al[19], using video

This article is protected by copyright. All rights reserved.

Accepted Article

recordings, showed that if a dentist discussed the patient's MDAS result with the patient during the first few minutes of the appointment the extremely dentally anxious patient was less anxious 3 months later[19]. Therefore, the dentist's awareness and knowledge of dental anxiety together with effective communication skills allows the dentist to speak to the patient about their fears, make the treatment alliance and reduce dental anxiety. It may be suggested that clinical communication skills should be taught as part of behavioural management of dental anxiety to undergraduate students.

Besides education, experience added undergraduate's willingness to treat adolescents with learning disabilities[11]. This could be applied on treatment of dental anxiety patients. To strengthen dental students' skills of communication with patients with dental anxiety it is necessary to include practical teaching in treatment of patient with dental anxiety on dental teaching clinics. Both students and clinical teachers could assess dental anxiety, plan and conduct treatment and teachers could teach and support students with their first patient with dental anxiety. Only asking patients about their dental anxiety seems to reduce it[19]. This supports the important role of communication skills. Thus, students should have enough practice in applying dental anxiety questionnaires to their patients.

Treating patient with dental anxiety requires hard work and makes the situation stressful for many dentists.[7] To treat dental anxiety appropriately, it is necessary to identify fearful patient and the level of patient's fear. Secondly, dentist should ask in the beginning of appointment how the patient wants to be informed about the upcoming procedure. It is also worthwhile to tell that dentist will take a brake whenever patient wants to have one. Predictability, trust, information, control and mostly communication are the most relevant

This article is protected by copyright. All rights reserved.

Accepted Article

things while handling a fearful patient. This requires that the dental students get enough education of dental anxiety, treatment of fearful patients and how to use different measures to evaluate their patients fear. There are both simple and complex techniques to manage the dental anxiety. The right choice of techniques depends especially on the identified level of anxiety and are individualized in every patient.[20]

The response rate of students was good (77.2 %), so the results are generalizable among students of this University. The dental anxiety of patients was measured by MDAS which is a valid dental anxiety scale[16,17]. The questions about importance and knowledge were tested with few people. However, the question for the patients assessing the knowledge of students in treating dental anxiety was not good as most patients chose the response alternative “I don’t know” and thus, that question was left out of analysis. Looking at the results of dental students; the older the class of study was, the less students answered for the open-ended questions.

Conclusion

It is important to educate the dental students about the etiology, identification, management practices and the multidimensionality of dental anxiety to ensure they have the appropriate skills and knowledge to manage and treat dentally anxious patients. Communication should be part of dental anxiety management teaching. Dental students should have sufficient knowledge and skills in treating dental anxiety before graduating. Giving time to fearful patients, in the first few moments of the appointment, allows the patient to ventilate their anxieties and [19] will reduce dental anxiety. The reduction in dental

This article is protected by copyright. All rights reserved.

Accepted Article

Accepted Article

anxiety assists in forming the treatment alliance and promotes trust between the dentally anxious patient and the dentist. In the other words, dentists should consider dental anxiety issues important, already as an undergraduate.

Authors declare no conflict of interest.

References

1. Lahti S, Vehkalahti MM, Nordbald A, Hausen H. Dental fear among population aged 30 years and older in Finland. *Acta Odontol Scand*. 2007;65:97-102.
2. Liinavuori A, Tolvanen M, Pohjola V, Lahti S. Changes in dental fear among Finnish adults: a national survey. *Community Dent Oral Epidemiol.* 2016;44:128-134.
3. Pohjola V, Lahti S, Vehkalahti MM, Tolvanen M, Hausen H. Association between dental fear and dental attendace among adults in Finland. *Acta Odotol Scand.* 2007;65:224-230.
4. Armfield JM, Slade GD, Spencer AJ. Dental fear and adult oral health in Australia. *Community Dent Oral Epidemiol.* 2009;37:220-230.
5. Schuller AA, Willumsen T, Holst D. Are there differences in oral health and oral health behavior between individuals with high and low dental fear? *Community Dent Oral Epidemiol.* 2003;31:116-121.
6. Hill KB, Hainsworth JM, Burke FJT, Fairbrother KJ. Evaluation of dentists' perceived needs regarding treatment of the anxious patient. *Br Dent J.* 2008;204:E13.
7. Brahm CO, Lundgren J, Carlsson SG, Nilsson P, Corbeil J, Hägglin C. Dentists' views on fearful patients. Problems and promises. *Swed Dent J.* 2012;36:79-89.

This article is protected by copyright. All rights reserved.

Accepted Article

8. Gyllensvärd K, Qvarnström M, Wolf E. The dentist's care-taking perspective of dental fear patients – a continuous and changing challenge. *J Oral Rehabil.* 2016;43:598-607.
9. Brahm CO, Lundgren J, Carlsson SG, Nilsson P, Hultqvist J, Hägglin C. Dentists' skills with fearful patients: education and treatment. *Eur J Oral Sci.* 2013;121:283-291.
10. Tay KM, Winn W, Milgrom P, Hann J, Smith T, Weinstein P. The effect of Instruction on Dentists' Motivation to Manage Fearful Patients. *J Dent Educ.* 1993;57:444-448.
11. Coyle CF, Humphris GM, Freeman R. Dentists' training and willingness to treat adolescents with learning disabilities: the mediating role of social and clinical factors. *Community Dent Health.* 2013;30:263-268.
12. Pine CM, McGoldrick PM. Application of behavioural sciences teaching by UK dental undergraduates. *Eur J Dent Educ.* 2000;4:49-56.
13. Aalboe JA, Schumacher MM. An Instrument to Measure Dental Students' Comunication Skills with Patiens in Six Specific Circumstances: An Exploratory Factor Analysis. *Eur J Dent Educ.* 2016;80:58-64.
14. Medical research act: http://www.finlex.fi/en/laki/kaannokset/1999/19990488 (cited 19.11.2018)
15. National Advisory Board on research Ethics, Helsinki 2009: Ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review: http://www.tenk.fi/sites/tenk.fi/files/ethicalprinciples.pdf
16. Humphris GM, Morrison T, Lindsay SJ. The Modified Dental Anxiety Scale: validation and United Kingdom norms. *Community Dent Health.* 1995;12:143-150.

This article is protected by copyright. All rights reserved.

17. Humphris GM, Freeman R, Tuutti H, Desouza V. Further evidence for the reliability and validity of the Modified Dental Anxiety Scale. *Internationl Dental Journal.* 2000;50:367-370.
18. Yuan S, Freeman R, Lahti S, Lloyd-Williams F, Humphris G. Some psychometric properties of the Chinese version of the Modified Dental Anxiety Scale with cross validation. *Health and Quality of Life Outcomes.* 2008; 6:22.
19. Hally J, Freeman R, Yuan S, Humphris G. The importance of acknowledgement of emotions in routine patient psychological assessment: The example of the dental setting. *Patient Education and Counseling.* 2017;2102-2105.
20. Armfield JM, Heaton LJ. Management of fear and anxiety in the dental clinic: a review. *Australian Dental Journal.* 2013;58:390-407.

Accepted Article

This article is protected by copyright. All rights reserved.

Box 1 Thick description: students' open-ended question responses relating to dental education.

Open-ended text	Codes	Category
Very common Fear in every age group Fear develops in childhood Fear serious Fear connected to pain Fear linked to negative experiences	knowledge	dental education
Dental anxiety treatable Pay attention to fear Can affect patient negatively Can manifest in many ways Avoidance and leads to problems with teeth	awareness	

Accepted Article

This article is protected by copyright. All rights reserved.

TABLE 1
Distributions (%) of dental student's perceived importance on prevalence, etiology and treatment possibilities of dental anxiety according to year of study

How important you think is to know…	Year of study					
	1 n=22	2 n=39	3 n=39	4 n=39	5 n=26	Total n=165
Prevalence of dental anxiety						
Very important	40.9	38.5	38.5	53.8	50.0	44.2
Quite important	50.0	30.8	46.2	35.9	38.5	39.4
Somewhat important	4.5	23.1	12.8	7.7	11.5	12.7
Not so important	4.5	7.7	2.6	0.0	0.0	3.0
Not important at all	0.0	0.0	0.0	2.6	0.0	0.6
Etiology of dental anxiety						
Very important	45.5	46.2	46.2	53.8	53.8	49.1
Quite important	36.4	30.8	41.0	38.5	34.6	36.4
Somewhat important	9.1	12.8	7.7	5.1	11.5	9.1
Not so important	9.1	10.3	5.1	2.6	0.0	5.5
Not important at all	0.0	0.0	0.0	0.0	0.0	0.0
Treatment possibilities of dental anxiety						
Very important	50.0	56.4	66.7	68.4	69.2	62.8
Quite important	40.9	41.0	20.5	23.7	26.9	29.9
Somewhat important	4.5	2.6	10.3	5.3	3.8	5.5
Not so important	4.5	0.0	2.6	0.0	0.0	1.2
Not important at all	0.0	0.0	0.0	2.6	0.0	0.6

Accepted Article

This article is protected by copyright. All rights reserved.

TABLE 2
Distributions (%) of dental student's perceived knowledge on prevalence, etiology and treatment possibilities of dental anxiety according to year of study

How sufficient is your knowledge on…	Year of study					
	1 n=22	2 n=39	3 n=39	4 n=39	5 n=26	Total n=165
Prevalence of dental anxiety						
Excellent	0.0	2.6	5.0	13.2	15.4	7.3
Quite good	9.1	26.3	20.0	73.7	61.5	39.0
Moderate	36.4	39.5	50.0	10.5	19.2	31.7
Quite poor	45.5	26.3	22.5	2.6	3.8	18.9
Poor	9.1	5.3	2.5	0.0	0.0	3.0
Etiology of dental anxiety						
Excellent	0.0	0.0	0.0	13.2	11.5	4.9
Quite good	0.0	7.9	15.0	55.3	69.2	29.3
Moderate	18.2	47.4	37.5	28.9	11.5	31.1
Quite poor	50.0	36.8	37.5	2.6	7.7	26.2
Poor	31.8	7.9	10.0	0.0	0.0	8.5
Treatment possibilities of dental anxiety						
Excellent	0.0	0.0	0.0	10.5	15.4	4.9
Quite good	0.0	13.2	10.0	55.3	61.5	28.0
Moderate	13.6	34.2	35.0	23.7	19.2	26.8
Quite poor	54.5	34.2	40.0	10.5	3.8	28.0
Poor	31.8	18.4	15.0	0.0	0.0	12.2

Accepted Article

This article is protected by copyright. All rights reserved.

TABLE 3
Distributions (%) of patient's perceived importance on dental student's knowledge of prevalence, etiology and treatment possibilities of dental anxiety according to their level of dental fear

How important you think is that dental student knows…	No fear/low fear n=67	Moderate fear n=23	High fear n=8	Total n=98
Prevalence of dental anxiety				
Very important	56.7	73.9	75.0	62.2
Quite important	22.4	26.1	12.5	22.4
Somewhat important	11.9	0.0	12.5	9.2
Not so important	4.5	0.0	0.0	3.1
Not important at all	4.5	0.0	0.0	3.1
Etiology of dental anxiety				
Very important	49.3	56.5	50.0	51.0
Quite important	28.4	39.1	50.0	32.7
Somewhat important	11.9	4.3	0.0	9.2
Not so important	7.5	0.0	0.0	5.1
Not important at all	3.0	0.0	0.0	2.0
Treatment possibilities of dental anxiety				
Very important	61.2	69.6	75.0	64.3
Quite important	23.9	26.1	25.0	24.5
Somewhat important	7.5	4.3	0.0	6.1
Not so important	4.5	0.0	0.0	3.1
Not important at all	3.0	0.0	0.0	2.0

Accepted Article

This article is protected by copyright. All rights reserved.