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Evaluation of Stress Factors Experienced by Students in the Pedodontics Clinic: Cross-Sectional Study

Pedodonti Kliniğinde Çalışan Öğrencilerin Stres Faktörlerinin Değerlendirilmesi: Kesitsel Çalışma

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ABSTRACT Objective: Dental students are exposed to multiple stressors during their education, including intensive examinations and demanding clinical training. Working in pediatric dentistry clinics may create additional stress due to direct patient interaction, procedural difficulties, time pressure. However, studies evaluating stress levels and related factors among dental students engaged in pediatric dentistry clinics are limited. This study aimed to assess stress levels among dental students working in pediatric dentistry clinics and to identify contributing factors. **Material and Methods:** This cross-sectional study was conducted between January 1-March 1, 2024, and included 243 fourth- and fifth-year dental students at Istanbul University Faculty of Dentistry. Stress levels were measured using the Pedodontics Practice Stress Scale (PPSS), a 29-item instrument scored on a 0–3 Likert scale. Students with total scores ≥71 were classified as stressed. Subscales of clinical practice, patient communication, academic workload, and social interaction were analyzed. Statistical analyses were performed using IBM SPSS Statistics version 22, with $p<0.05$ considered statistically significant. **Results:** Of the participants, 67.1% were female and 32.9% were male; 58.4% were fifth-year and 41.6% were fourth-year students. No significant differences were found between grade levels regarding total PPSS or subscale scores ($p>0.05$). Overall, 90.1% of students were classified as stressed, with the highest scores observed in the clinical practice and patient communication subscales. **Conclusion:** Pediatric dentistry clinics constitute a highly stressful environment for dental students, mainly due to clinical and patient-related factors. Educational programs, supervised clinical training, and stress management interventions may improve students' academic performance and well-being.

Keywords: Dental students; stress; pedodontics

ÖZET Amaç: Diş hekimliği öğrencileri, eğitim süreçleri boyunca yoğun sınavlar ve klinik uygulamaların zorlukları gibi çok sayıda stres faktörüyle karşılaşmaktadır. Pedodonti kliniklerinde çalışmak, doğrudan hasta etkileşimi, uygulama güçlükleri ve zaman baskısı nedeniyle ek stres yaratabilmektedir. Ancak pedodonti kliniğinde klinik faaliyet yürüten öğrencilerin stres düzeylerini ve buna etki eden faktörleri inceleyen çalışmalar sınırlıdır. Bu çalışmanın amacı, pedodonti kliniğinde çalışan diş hekimliği öğrencilerinin stres düzeylerini değerlendirmek ve stresin altında yatan spesifik faktörleri belirlemektir. **Gereç ve Yöntemler:** Bu kesitsel çalışma, 1 Ocak-1 Mart 2024 tarihleri arasında İstanbul Üniversitesi Diş Hekimliği Fakültesi 4. ve 5. sınıf öğrencilerinden oluşan 243 katılımcı ile gerçekleştirilmiştir. Öğrencilerin stres düzeyleri, her maddesi 0–3 puan arasında değerlendirilen 29 maddelik Pedodonti Pratiğinde Stres Ölçeği [Pedodontics Practice Stress Scale (PPSS)] kullanılarak ölçülmüştür. Toplam puanı ≥71 olan öğrenciler stresli olarak kabul edilmiştir. Klinik uygulama, hasta iletişimi, akademik yük ve sosyal etkileşim alt ölçekleri analiz edilmiştir. Veriler IBM SPSS Statistics 22 programı ile analiz edilmiş, istatistiksel anlamlılık düzeyi $p<0,05$ olarak belirlenmiştir. **Bulgular:** Katılımcıların %32,9'u erkek, %67,1'i kadındır; %41,6'sı 4. sınıf, %58,4'ü 5. sınıf öğrencisidir. Sınıflar arasında PPSS toplam ve alt ölçek puanları açısından anlamlı fark bulunmamıştır ($p>0,05$). Öğrencilerin %90,1'inde stres saptanmıştır. En yüksek puanlar klinik uygulama ve hasta iletişimi alt ölçeklerinde gözlenmiştir. **Sonuç:** Pedodonti klinikleri, özellikle klinik uygulamalar ve hasta ilişkilerine bağlı faktörler nedeniyle diş hekimliği öğrencileri için yüksek düzeyde stresli bir ortam oluşturmaktadır. Yapılandırılmış eğitim programları, denetimli klinik uygulamalar ve stres yönetimi müdahaleleri öğrencilerin akademik başarısını ve genel iyilik halini destekleyebilir.

Anahtar Kelimeler: Diş hekimliği öğrencileri; stres; pedodonti

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The dental profession demands intensive and technical skills and is frequently associated with high levels of stress. Dentists encounter numerous challenges in their professional practice, which contribute to this stress.[1,2] Key stressors in the field of dentistry, from the student period to professional practice, include time management and appointments, dealing with uncooperative patients, the manual dexterity required, and pressures related to technical and technological issues. This profession-induced stress affects practicing dentists and dental students.[3]

Dental students are exposed to stressors during their training that are similar to those faced by professional dentists.[4] Additionally, they are subjected to the theoretical and clinical intensity of their training, numerous exams, the difficulty of clinical applications, and the stress of finding patients and meeting quotas.[3] These stress factors during the dental education process negatively impact students' academic performance and can also lead to psychological issues such as anxiety, depression, and obsessive-compulsive disorder. Anxiety and depression are particularly prevalent among dental students, and prolonged stress can result in severe consequences such as burnout syndrome.[5]

A limited number of studies have investigated the stress levels and factors experienced by students working in pediatric dentistry clinics. Given that pediatric dentistry involves additional challenges such as managing child behavior, communicating with parents, and performing procedures in time-constrained settings, the stress profile of students in this specialty may differ significantly from other clinical areas. Accordingly, this study aimed to measure the stress levels of students working in the pedodontics clinic and identify the specific factors contributing to their stress. Furthermore, understanding these stressors can help establish a structured feedback system and shape students' perceptions, enabling educators to provide targeted support and improve coping strategies. To the best of our knowledge, this is one of the few studies to focus specifically on the stressors encountered by dental students during their pediatric dentistry rotations, thereby contributing novel insights into an underexplored area of dental education research.

MATERIAL AND METHODS

This research was conducted at İstanbul University Faculty of Dentistry, Department of Pedodontics, between January 1, 2024, and March 1, 2024. Ethical approval for the study was obtained from the İstanbul University Faculty of Dentistry Clinical Research Ethics Committee (date: December 19, 2023; no: 160). The study was conducted in accordance with the rules of the Declaration of Helsinki.

In this cross-sectional study, which did not involve any interventional procedures, data on the sociodemographic characteristics of the participants were collected and the stress factors of students working in the pedodontics clinic were evaluated using the Pedodontics Practice Stress Scale (PPSS).

A total of 243 students, including 4th- and 5th-year students who had completed or were currently completing their internship at the İstanbul University Faculty of Dentistry, Department of Pedodontics, participated in the study. In the clinical workflow of our faculty, the internship duration of 4th- and 5th-year students in the pediatric dentistry clinic is approximately 1 month, and during their practical internship, students are asked various questions at various points during their practical internship. Students who had not completed their pedodontics internship or did not volunteer were excluded from the study. Before beginning the study, participants were provided with information about the study and their consent to partake was obtained. The questionnaire was developed using an online platform (Google Forms; Google LLC, Mountain View, CA, USA) and delivered online to all participants.

PPSS is a reliable and valid measure of stress among dental students in pedodontics clinics. The validity and reliability of this scale were established by Kırmızıgül et al. in 2020.[6]

The introductory section of the questionnaire collected the sociodemographic characteristics of the participants. The subsequent section contained 4 subdimensions that evaluated stress factors. The first subdimension comprised 10 questions assessing stress factors related to procedures performed while treating pediatric patients. The second sub-dimension, con-

sisting of 7 questions, examined stress factors related to treatment complications. The third sub-dimension included 5 questions focused on stress factors related to pediatric patients. The fourth sub-dimension consisted of 7 questions addressing parent-related stress factors. In total, the questionnaire contained 29 questions across these sub-dimensions.

Statistical analyses were performed using IBM SPSS Statistics version 22 (IBM Corp., Armonk, NY, USA). The conformity of the parameters to normal distribution was assessed using the Kolmogorov-Smirnov test, which confirmed that the parameters followed a normal distribution. Descriptive statistical methods (minimum, maximum, mean, standard deviation, frequency) and Student's t-test were used to compare quantitative data. For the comparison of qualitative data, continuity (Yates) correction was used. Cronbach's alpha coefficient was calculated to determine the reliability of the scale's sub-dimensions and total score. Significance was evaluated at the level of $p<0.05$.

RESULTS

A total of 243 dentistry students aged between 21 and 28 (mean age: 22.74±1.05) years participated in the study. Among the students, 41.6% were in the 4th grade and 58.4% were in the 5th grade. Of the participants, 32.9% were male and 67.1% were female. It was observed that dentistry was the first choice of profession for 66.3% of the students (Table 1).

A score of 71.5 and above obtained from the stress scale was evaluated as indicating the presence of stress. Accordingly, it was determined that 90.1% of the students were experiencing stress (Table 2).

Participants' stress levels varied across different clinical procedures. Working with the aerator generated mostly low to moderate stress, with 21.8% rating it as 1 and 32.1% as 2. Stress increased during endodontic procedures, where 38.7% reported a score of 4 and 19.3% a score of 5. Emergency situations such as trauma or acute apical abscess produced the highest stress, with 39.1% assigning a score of 4 and 41.6% a score of 5. Radiography was the least stressful procedure, rated as 1 by 73.7% of participants.

TABLE 1: Demographic characteristics of participants

		n	%
Year of study	4th year	101	41.6
	5th year	142	58.4
Gender	Male	80	32.9
	Female	163	67.1
Dentistry 1st choice	Yes	161	66.3
	No	82	33.7
	Total	243	100

TABLE 2: Descriptive information on PPSS sub-dimensions and total scores

PPSS	Minimum	Maximum	X̄±SD	Cronbach's alpha
Dental procedure score	13	44	26.78±6.16	0.777
Complications score	10	35	27.15±4.72	0.781
Patient score	5	25	17.51±4.01	0.769
Parents score	7	35	23.16±6.29	0.871
Total score	45	135	94.60±16.14	0.897
State of stress	**n**	**%**		
Stressful (≥71.5)	219	90.1		
Not stressful (<71.5)	24	9.9		

PPSS: Pedodontics Practice Stress Scale; SD: Standard deviation

Stress levels related to complications were generally high. Allergic reactions were rated with the maximum score of 5 by 58% of participants, and foreign body aspiration by 64.2%. Local anesthesia complications also caused elevated stress, with 30.9% and 37.9% rating them as 4 and 5, respectively. Tooth perforation (40.7% rated 4) and pulp perforation (32.5% rated 4) were similarly stressful.

Regarding child-related factors, stress increased markedly when treating uncooperative children, with 32.5% rating the situation as 4 and 42.4% as 5. Working with children with intellectual disabilities resulted in high stress as well (30.9% rated 4, 30% rated 5), while treating physically disabled children was rated as 4 by 22.6% of participants.

Parental behaviors significantly influenced perceived stress. In the presence of overprotective parents, 36.6% of participants rated their stress as 4 and 32.9% as 5. With highly anxious parents, these rates were 32.1% for 4 and 38.7% for 5. A similar pattern was observed for overly demanding parents (33.7% rated 4, 28% rated 5). Conversely, overly permissive parents were associated with lower stress levels, with most responses falling within the 1-3 range.

Overall, the highest stress levels were associated with emergency situations, severe complications, uncooperative or special needs children, and challenging parental behaviors, whereas routine procedures such as radiography and infiltrative anesthesia were linked with the lowest stress levels.

There was no statistically significant difference between 4th and 5th-grade students in terms of the PPSS sub-dimension and total mean scores (p>0.05) (Table 3).

The mean PPSS total score of the female students was found to be statistically significantly higher than that of male students for each sub-dimension (p=0.001 and p<0.05, respectively) (Table 4).

TABLE 3: Evaluation of PPSS sub-dimension and total score by grade

	4th grade X̄±SD	5th grade X̄±SD	p value
Dental procedure score	27.20±6.44	26.49±5.96	0.376
Complications score	27.02±5.18	27.24±4.38	0.721
Patient score	17.85±3.96	17.26±4.04	0.258
Parents score	23.26±6.06	23.10±6.47	0.847
Total score	95.33±17.86	94.08±14.84	0.568

Student t-test; PPSS: Pedodontics Practice Stress Scale; SD: Standard deviation

TABLE 4: Evaluation of PPSS sub-dimension and total score by gender

	Male X̄±SD	Female X̄±SD	p value
Dental procedure score	23.38±5.59	28.45±5.74	0.001*
Complications score	24.86±4.74	28.27±4.3	0.001*
Patient score	16.26±4.54	18.12±3.58	0.002*
Parents score	21.01±6.71	24.22±5.81	0.001*
Total score	85.51±15.93	99.06±14.31	0.001*

Student t-test; *p<0.05; PPSS: Pedodontics Practice Stress Scale; SD: Standard deviation

TABLE 5: Comparison of PPS scores by students' preference for dentistry as a career choice

	First choice X̄±SD	Not the first choice X̄±SD	p value
Dental procedure scores	26.61±6.20	27.11±6.09	0.555
Complications score	27.12±4.80	27.21±4.58	0.889
Patient score	17.52±3.89	17.49±4.26	0.959
Parents score	23.24±6.03	23.02±6.81	0.805
Total score	94.48±15.99	94.83±16.54	0.875

Student t-test; PPSS: Pedodontics Practice Stress Scale; SD: Standard deviation

There was no statistically significant difference in the PPSS sub-dimension and total score averages between students who chose dentistry as their first choice and those who did not (p>0.05) (Table 5).

DISCUSSION

Dentistry is recognized as a highly challenging and stressful profession, with stress beginning during the student years.[7-9] Numerous studies in the literature focus on the stress factors affecting dental students, their stress levels, and the impact of stress on their well-being. These studies aim to identify the causes of stress, enhance students' coping abilities, reduce anxiety and stress, and positively influence their academic and social lives.[7,10-12] However, there are relatively few studies that specifically determine and evaluate the stress factors experienced by students interning in the pedodontics clinic, which is known for its high-stress environment. The PPSS, which was developed to address this gap, is considered a reliable tool for assessing the stress factors encountered by students working in pedodontics clinics.[6]

In the study conducted by Lugassy et al., the overall prevalence of depression, anxiety, and stress was reported as 52%, 57%, and 55%, respectively. Similarly, Fang et al. evaluated the mental health status of final-year undergraduate dental students in China and found that 17.9% of participants exhibited symptoms of stress, with 4.9% reporting their symptoms as "severe" or "very severe." In comparison, our study revealed a considerably higher prevalence, with 90.1% of the students experiencing stress.[10,11]

The literature also includes studies that investigate stress levels based on sex. In our study, it was observed that women were more stressed than men. This result aligns with numerous studies investigating the effect of stress factors on students.[7,12-16] In the study conducted by Basudan et al., female students reported higher levels of stress and anxiety, which was attributed to internal psychological differences between the sexes and women's greater ability to express their emotions and fears.[7] Similarly, Barbería et al. found that women were more stressed than men, attributing this to cultural factors.[12] The study sug-

gested that women experienced higher stress levels due to their roles in social life and at home.

In our study, when comparing the stress levels between 4th and 5th-grade students, it was found that 5th-grade students exhibited higher stress levels than 4th-grade students, although the difference was not statistically significant. This finding contrasts with existing literature, which shows mixed results: some studies indicate that 5th-grade students experience more stress, whereas others suggest that stress levels decrease as students progress to the 5th grade.[12-17] For instance, Barbería et al. reported that 3rd-grade students exhibited significantly higher levels of anxiety compared with their 5th-grade counterparts.[12] This study noted that stress tended to increase when students began clinical practice and interacted with patients, primarily due to feelings of insufficient knowledge and concerns about clinical performance. Similarly, Aishwarya and Gurunathan found that 3rd-grade students, who were caring for patients for the first time, were the most stressed and insecure group.[14] These students reportedly struggled with learning clinical skills both theoretically and practically, particularly when treating pediatric patients. These studies highlight a pattern where students caring for patients for the first time experience high stress levels due to their initial clinical experiences.[12-14] However, our study differs in that 5th graders exhibited higher stress levels than 4th graders. In line with our findings, Acharya reported that students in the final years of dental school were more stressed due to anxiety about their future careers, supporting the results of our study.[17]

When comparing the stress levels of students for whom dentistry was their first choice and those for whom it was not, no statistically significant difference was observed between the 2 groups. This finding aligns with the study by Kırmızıgül et al., which also found no statistically significant difference between the groups.[6] However, in the study by Basudan et al., students whose first choice was dentistry were found to be less stressed.[7] The difference was attributed to the satisfaction levels of students; those who did not initially choose dentistry were less satisfied with pursuing a career they were not interested in, leading to higher stress levels. In contrast, students for whom dentistry was their first choice were more motivated and enthusiastic about their education, which reduced their stress levels. Thus, the results from Basudan et al. differ from our study, highlighting the impact of initial career preference on stress levels among dental students.[7]

Many studies have examined the stress that dental procedures performed on pediatric patients cause in dental students. In our study, the most stressful situations for the students were procedures requiring emergency interventions, endodontic procedures, and mandibular anesthesia. Specifically, 80% of the students reported experiencing high stress during endodontic procedures, 58% during emergency interventions, and 39% while administering mandibular anesthesia. These findings are consistent with Kırmızıgül et al.'s study using the PPSS scale, which reported that 66% of students experienced high levels of stress during endodontic procedures, 53% during emergency interventions, and 22.5% during mandibular anesthesia.[6] Similarly, a study conducted by Almalik et al. found that the most stressful situations for pedodontics residency students were those requiring emergency interventions, aligning with our findings.[16] However, a study by Aishwarya and Gurunathan showed different results, indicating that local anesthesia application and tooth extraction were the most stressful procedures for students.[14] Additionally, Aishwarya and Gurunathan emphasized that the mixed dentition period increased stress due to its complexity, suggesting a need to enhance students' theoretical knowledge in this area.[14] These findings highlight the necessity for targeted educational interventions to better prepare students for high-stress procedures, particularly in emergency situations and endodontic treatments. Improving theoretical knowledge and practical skills in these areas could potentially reduce stress levels among dental students.

Complications are a significant source of stress for both dentists and dental students. The lack of experience among students can exacerbate this stress. Foreign body aspirations and allergic reactions were identified as the most stressful complications, with 64% of the students evaluating foreign body aspirations and 58% evaluating allergic reactions as high-level stress factors.[18] Similarly, a study conducted by

Gazal et al. reported that complications such as pulp perforation, tooth/root fracture during removal, and harm to the patient were high-stress factors.[19] These findings align with the results of our study, highlight the need for enhanced training and preparation to manage such stressful situations effectively.

In our study, it was observed that treating maladaptive child patients and child patients with mental disabilities were high stress factors. Seventy percent of the students reported that maladaptive child patients posed a high-stress factor, and 61% reported the same for child patients with mental disabilities. Dentists' attitudes and behavior management skills are crucial for calming children and reducing their anxiety levels by providing them with a positive experience.[20] Considering the high stress associated with maladaptive child patients in our study and the positive impact of behavior guidance techniques on maladaptive pediatric patients in other studies, it is essential that behavior guidance techniques are effectively taught to dental students. Applying these techniques while working in the pedodontics clinic could help students perform dental treatments more effectively and reduce their stress levels.[14,20]

In our study, it was observed that parents who exhibited overly stressed and overprotective behavior caused high stress in the students. Seventy-one percent of the students evaluated overly stressed parents and 69% evaluated overprotective parents as high-risk factors. These results emphasize the importance of parents' attitudes and behaviors in the dental treatment process of children. In the literature, it has been reported that children learn dental anxiety by observing their parents' stress and fears. When children develop dental anxiety or fear due to their parents' influence, they can exhibit maladaptive behaviors that negatively affect the treatment environment.[21-23] There is no clear consensus on the effects of parental presence or absence on a child's behavior during dental procedures.[24] In our study, it was found that having a parent stay in the clinic during the procedure was less stressful for 34% of the students, whereas it was highly stressful for 36% of the students. According to Tokgöz's study, dental students were found to be the least stressed group in the parent-related factors section. Tokgöz attributed this result to the sense of security dental students experience while under the supervision of an academician during clinical education, knowing that they will receive assistance when needed.[25] These findings suggest that with more research and application on this subject, the impact of this factor can be understood more clearly.

In light of these findings, it becomes evident that addressing psychological well-being in dental education requires not only awareness but also structured and sustainable interventions. Despite the clear and well-documented need for stress management strategies among dental students, as emphasized in previous systematic reviews, there remains a paucity of evidence demonstrating the effective and systematic integration of such strategies into dental curricula.[13-26] Over the past decade, only six intervention studies addressing this issue have been identified, representing a limited response to a widespread concern. Furthermore, most of these interventions were isolated initiatives rather than being embedded across multiple stages of dental education, with only one study describing a curriculum-integrated approach.[27] Given the progressive refinement of both cognitive and clinical competencies required throughout dental training, the incorporation of structured stress management programs early and consistently within the curriculum appears essential. Moreover, since all reviewed interventions were conducted in high-income countries, disparities in resource allocation may restrict the generalizability of these findings.

Our findings, indicating that 90.1% of students experienced stress-particularly those training in pediatric dentistry clinics-underscore the urgency of implementing comprehensive, evidence-based stress management frameworks within dental education. Embedding such strategies longitudinally throughout the curriculum may not only alleviate students' stress levels but also enhance their psychological resilience, academic performance, and quality of patient care.

In future research, designing the study as longitudinal rather than cross-sectional, and including a broader range of schools and students at both national and international levels, will yield more accurate and comprehensive results. A limitation of this study is

the potential timing-related bias, as the questionnaire was administered at different stages of the students' clinical internship. This may have influenced stress levels, and future studies should use standardized or repeated measurements to minimize this effect. In addition, since stress was measured using the PPSS, only the average stress levels were assessed, and a process-oriented evaluation could not be conducted.

CONCLUSION

The findings of this study indicate that students completing their clinical training in the pediatric dentistry clinic experience notably high levels of stress, as measured by the PPSS. Several stress factors related to the clinical environment, patient management, and students' perceived competencies were identified. These results highlight the need for targeted interventions to improve students' clinical experiences and reduce stress levels.

To enhance students' clinical performance, confidence, and overall well-being, it is essential to implement strategies aimed at reducing stress and strengthening coping skills. Structured mentorship, increased clinical exposure to pediatric patients, and reinforcement of theoretical knowledge may contribute to lowering stress levels. Additionally, optimizing communication and collaboration with assistants and faculty members may further support students during their clinical training.

Creating a supportive and well-structured educational environment is crucial not only for improving student outcomes but also for ensuring high-quality patient care. Future studies involving longitudinal designs and repeated measures are recommended to better understand how stress evolves throughout clinical training and to evaluate the effectiveness of stress-reduction interventions.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Elif Bahar Tuna İnce, Erenay Alpayçetin, Alara Şahin;* ***Design:*** *Elif Bahar Tuna İnce, Erenay Alpayçetin, Alara Şahin;* ***Control/Supervision:*** *Elif Bahar Tuna İnce;* ***Data Collection and/or Processing:*** *Alara Şahin;* ***Analysis and/or Interpretation:*** *Mehmet Güven Günver;* ***Literature Review:*** *Alara Şahin;* ***Writing the Article:*** *Alara Şahin, Erenay Alpayçetin;* ***Critical Review:*** *Elif Bahar Tuna İnce.*

REFERENCES

1. Atkinson JM, Millar K, Kay EJ, Blinkhorn AS. Stress in dental practice. Dent Update. 1991;18(2):60-4. [PubMed]
2. International Journal of Dental Sciences and Research. 2020;8(1):17-21. [Crossref]
3. Thornton LJ, Stuart-Buttle C, Wyszynski TC, Wilson ER. Physical and psychosocial stress exposures in US dental schools: the need for expanded ergonomics training. Appl Ergon. 2004;35(2):153-7. [Crossref] [PubMed]
4. Braz-José C, Morais Caldas I, de Azevedo Á, Pereira ML. Stress, anxiety and depression in dental students: Impact of severe acute respiratory syndrome-coronavirus 2 pandemic. Eur J Dent Educ. 2023;27(3):700-6. [PubMed] [PMC]
5. Freeman RE. Dental students as operators: emotional reactions. Med Educ. 1985;19(1):27-33. [Crossref] [PubMed]
6. Kırmızıgül İ, Demir P, Botsalı MS, İnceoğlu F. Pedodonti Pratiğinde Stres Ölçeği'nin geliştirilmesi: geçerlilik ve güvenilirlik çalışması [Development of the "Pedodontics Practice Stress Scale": validity and reliability study]. İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Dergisi. 2021;9(1):292-306. [Crossref]
7. Basudan S, Binanzan N, Alhassan A. Depression, anxiety and stress in dental students. Int J Med Educ. 2017;8:179-86. [Crossref] [PubMed] [PMC]
8. Myint K, See-Ziau H, Husain R, Ismail R. Dental students' educational environment and perceived stress: the University of Malaya experience. Malays J Med Sci. 2016;23(3):49-56. [Crossref] [PubMed] [PMC]
9. Pöhlmann K, Jonas I, Ruf S, Harzer W. Stress, burnout and health in the clinical period of dental education. Eur J Dent Educ. 2005;9(2):78-84. [Crossref] [PubMed]
10. Lugassy D, Ben-Izhack G, Zissu S, Shitrit Lahav R, Rosner O, Elzami R, et al. Anxiety, stress, and depression levels among dental students: gender, age, and stage of dental education related. Psychol Health Med. 2025;30(7):1394-408. [PubMed]

11. Fang Y, Yang M, Huang W, Zhang Y, Gao X, Chen Y, et al. The evaluation of depression, anxiety, and stress among undergraduate dental students in graduation year in Mainland China: a cross-sectional study. BMC Med Educ. 2025;25(1):543. [Crossref] [PubMed] [PMC]
12. Barbería E, Fernández-Frías C, Suárez-Clúa C, Saavedra D. Analysis of anxiety variables in dental students. Int Dent J. 2004;54(6):445-9. [Crossref] [PubMed]
13. Alzahem AM, van der Molen HT, Alaujan AH, Schmidt HG, Zamakhshary MH. Stress amongst dental students: a systematic review. Eur J Dent Educ. 2011;15(1):8-18. [Crossref] [PubMed]
14. Aishwarya AS, Gurunathan D. Stress level in dental students performing pedodontic procedure. J Adv Pharm Edu Res 2017;7(1):34. [Link]
15. Uraz A, Tocak YS, Yozgatligil C, Cetiner S, Bal B. Psychological well-being, health, and stress sources in Turkish dental students. J Dent Educ. 2013;77(10):1345-55. [PubMed]
16. Almalik M, Alnowaiser A, El Meligy O, Sallam J, Balkheyour Y. Clinical anxiety among Saudi postgraduate pediatric dentistry students in Jeddah city. Int J Dent. 2018;2018:5863869. [Crossref] [PubMed] [PMC]
17. Acharya S. Factors affecting stress among Indian dental students. J Dent Educ. 2003;67(10):1140-8. [PubMed]
18. Çolak C, Günay B. Evaluation of stress levels among pedodontics clinic students at Bezmialem Vakıf University Faculty of Dentistry. Bezmialem Science. 2025;13(Suppl 2):S66. [Link]
19. Gazal G, Allazqani AM, Fareed WM, Alolayan AB, Omar E, Nassani MZ. Clinical anxiety among junior dental students: trainers and students' perspective. Saudi J Oral Dent Res. 2016;1(3):108-12. [Link]
20. Buldur B. Angel or devil? Dentists and dental students conceptions of pediatric dental patients through metaphor analysis. J Clin Pediatr Dent. 2018;42(2):119-24. [Crossref] [PubMed]
21. Cardoso CL, Loureiro SR, Nelson-Filho P. Pediatric dental treatment: manifestations of stress in patients, mothers and dental school students. Braz Oral Res. 2004;18(2):150-5. [Crossref] [PubMed]
22. Wu L, Gao X. Children's dental fear and anxiety: exploring family related factors. BMC Oral Health. 2018;18(1):100. [PubMed] [PMC]
23. Klingberg G, Broberg AG. Dental fear/anxiety and dental behaviour management problems in children and adolescents: a review of prevalence and concomitant psychological factors. Int J Paediatr Dent. 2007;17(6):391-406. [Crossref] [PubMed]
24. Chundamala J, Wright JG, Kemp SM. An evidence-based review of parental presence during anesthesia induction and parent/child anxiety. Can J Anaesth. 2009;56(1):57-70. [PubMed]
25. Tokgöz Kaplan T. Stress levels amongst Turkish dental students, general dentists and paediatric dentists during performing paediatric dentistry: a questionnaire-based cross-sectional study. Eur Arch Paediatr Dent. 2024;25:811-20. [Crossref]
26. Alzahem AM, Van der Molen HT, Alaujan AH, De Boer BJ. Stress management in dental students: a systematic review. Adv Med Educ Pract. 2014;5:167-76. [Crossref] [PubMed] [PMC]
27. Brondani MA, Ramanula D, Pattanaporn K. Tackling stress management, addiction, and suicide prevention in a predoctoral dental curriculum. J Dent Educ. 2014;78(9):1286-93. [PubMed]