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Original Article

Evaluation of pediatric dentistry approaches among trainee dentists at Kırıkkale University, in the academic year of 2022-2023: a questionnaire-based study

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Abstract

Background: This study aimed to evaluate the attitudes of trainee dentists who have completed pediatric dentistry internships and performed preventive, restorative, and pulpal treatments in pediatric patients to pediatric dentistry.

Methods: An 18-question questionnaire was designed for participants to complete. The questionnaire form, uploaded online via Google Forms, was distributed digitally via a link. The study data were reported using descriptive statistics (numbers and percentages). Analyses were performed in the IBM SPSS 25 program.

Results: It was observed that 85% of the trainee dentists participating in the study expressed concerns about caring for pediatric patients prior to receiving a pediatric dentistry internship. It was observed that in response to the question, "What is the treatment that you find the most difficult to treat in pediatric patients?" 85.5% of the trainee dentists responded that pulpotomy of primary teeth was the most challenging.

Conclusion: It was observed that most of the dental students who participated in the study were concerned about the care of pediatric patients and experienced stress while treating pediatric patients. It was found that this situation negatively affected their desire to specialize in this field. Increasing dental students' knowledge and experience in treating pediatric patients during their training and equipping them with behavioral techniques to establish good relationships with children will help them treat more pediatric patients.

Keywords: Questionnaire, Pediatric dentist, Trainee dentists

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Introduction

Caries is the demineralization caused by biofilm (plaque) in the enamel and dentin with the participation of saliva.[1] Primary tooth decay remains the most common chronic childhood disease despite progress made in preventive and therapeutic interventions.[2] Early childhood caries observed in primary teeth increase the risk of developing caries in permanent teeth in the future.[3]

Once carious lesions are identified in primary teeth, dentists have several options to restore the structure of the decayed tooth. The restorative treatment of primary teeth is carried out using various materials, including traditional glass ionomer cement, resin-modified glass ionomer cement, compomer (also known as polyacid-modified composite resin), resin composite, amalgam, and stainless steel crowns.[4-6] Pulp treatments such as capping, pulpotomy, and pulpectomy are common in the pediatric age group, allowing primary teeth to remain in place longer.[2]

The child's cooperation is crucial when administering these treatments to pediatric patients. Although this can occur at any age, dental anxiety usually occurs in childhood or adolescence; it is defined as the fear that terrible things will happen during dental treatment and the resulting loss of emotional control. Studies in different populations have reported a 5–28% prevalence of dental anxiety in children.[7] Dental anxiety in childhood persists into adulthood, leading to avoidance of dental treatment, with negative consequences for oral and dental health.[7,8]

Behavioral guidance in pediatric dentistry aims to reduce the patient's fear and anxiety, ensure a lasting change in the patient's behavior, obtain positive feedback, make the patient understand the importance of good oral health, and provide quality dental service. The relationship between the dentist and the child is a dynamic interaction created through dialogue, facial expressions, and tone of voice. With this relationship in place, the child's fear and anxiety can be reduced, the child can be taught how to manage these feelings, and it can be ensured that the child is relaxed, confident, and able to relate to the treatment.

The aim of these practices is not negotiate with the child but to make positive behavior permanent.[9]

Many dentists treat pediatric patients; however, it has been reported that as the patient's age decreases, the number of dentists willing to treat these patients also decreases as the procedures become more challenging.[10] Dentistry students are required to learn many subjects in different fields in a limited time, and not being able to meet these expectations causes them to experience stress.[11] It has been stated that providing dentists with fewer opportunities to treat young and uncompliant patients during their training may cause them to feel unconfident and inexperienced in treating these patients and subsequently refuse to perform the treatments.[12]

This study aimed to evaluate the attitudes to pediatric dentistry among trainee dentists who have completed pediatric dentistry internships and performed preventive, restorative, and pulpal treatments in pediatric patients.

Materials And Methods

This study was approved by the XXX University Non-Interventional Research Ethics Committee (decision No.: 2023.06.14).

The inclusion criteria for the study are as follows: Being a 4th or 5th-year student at XXX University Faculty of Dentistry in the 2022–2023 academic year, agreeing to participate in the study, having information about dental treatments, having taken the pediatric dentistry clinical practice course.

A 18-question survey, adapted from relevant studies in the literature [12-16] , was designed for participants to complete. The questionnaire was sent to five randomly selected experienced dentists with extensive clinical and teaching experience. The questions were evaluated for correct understanding, interpretation, and difficulty level. Based on their comments and feedback, minor changes in word choice and sentence structure were made to improve the clarity of the questionnaire. The questions were finalized based on the evaluations. The questionnaire was uploaded online via Google Forms and was distributed digitally via a link. Participants provided their consent by agreeing to participate in the survey. Individual results were not disclosed in any way to ensure privacy and confidentiality.

Power Analysis

Similar studies that could be used to calculate the sample size were reviewed, and the largest sample size calculation was selected based on the statistical methods used to support the main hypothesis. In this study, the sample size was calculated at a 95% confidence level using G*Power version 3.1.9.2.[17]

As a result of the analysis, *with* $\alpha = 0.05$, the standardized effect size was calculated to be 0.2147, based on a similar previous study. The minimum sample size was then calculated to be 171, with a theoretical power of 0.80.[18]

Statistical Analysis

Data is reported using descriptive statistics (numbers and percentages) in this study. The Pearson chi-square test was used to examine the relationship between categorical variables when the assumption of expected cell counts greater than 5 was met. In cases where it was not specified, Fisher's exact test was performed. The multiple chi-square test examined the relationships between multiple-choice categorical variables. Analyses were performed in the IBM SPSS version 25.

Results

Ninety-one (52.6%) of the students participating in the study were 4th-year students, and 82 (47.4%) were 5th-year students. Seventy-five participants were male, and 96 were female. The distribution of participants according to their answers to the questions is shown in Table 1.

It was observed that 85.0% of the trainee dentists participating in the study had concerns about caring for pediatric patients before receiving a pediatric dentistry internship. There was no statistically significant difference between genders and study years ($p = 0.959$ and $p = 0.595$, respectively). The trainee dentists indicated that the most challenging situations during their pediatric dentistry internship were isolation, administering anesthesia, and ensuring the child's cooperation. There was no statistically significant difference between gender and study year ($p = 0.959$ and $p = 0.562$, respectively). It was observed that in response to the question, "What is the treatment that you find the most difficult to treat in pediatric patients?" 85.5% of the trainee dentists responded that pulpotomy of primary teeth was the most challenging. A statistically significant difference was found between study years ($p < 0.005$) (Table 2). It was observed that most 4th-year students had difficulty in restorative treatments of primary teeth. No statistically significant difference was found in genders.

During their pediatric dentistry internship, 72.3% of the trainee dentists reported that they faced the most difficulty handling pediatric patients under the age of five. There was no statistically significant difference between genders and study years ($p > 0.005$).

It was observed that trainee dentists had difficulty reading radiographs in pediatric patients when determining indications. A significant gender difference was observed in responses to the question about the most challenging stage for pediatric patient indications ($p < 0.05$) (Table 3). It was found that the individuals who reported difficulty with reading pediatric radiographs and performing intraoral examinations of pediatric patients were predominantly female students. No significant difference was observed between study years in this question.

Table 1. Distribution of participants according to answers to questions

		n	%
Grade	4th grade	91	52,6
	5th grade	82	47,4
Gender	Male	75	43,4
	Female	96	55,5
	No answer	2	1,1
Do you have any concerns before taking on a pediatric dentistry internship?	Yes	147	85,0
	No	25	14,5
	No answer	1	0,6
What was the most difficult subject during your pediatric dentistry internship? (Multiple options can be selected)	Behavior guidance techniques for pediatric patients	30	17,3
	Ensuring the child's cooperation	73	42,2
	Parent expectation	20	11,6
	Treatment methods	7	4,0
	Anesthesia	77	44,5
	Isolation	78	45,1
	Taking anamnesis from the patient and parent	2	1.2
What was the most difficult treatment method during your pediatric dentistry internship?	Restorative treatment for primary teeth	19	11,0
	Pulpotomy	148	85,5
	Restorative treatment for permanent teeth	4	2,3
	Fissure Sealant	2	1,2
What is the most difficult age group in pediatric dentistry internship?	Under 5 years old	125	72,3
	5-10 years	45	26,0
	Over 10 years old	2	1,2
	No answer	1	0,6
What is the most challenging indication in pediatric patients? (Multiple options can be selected)	Anamnesis	20	11,6
	Difficulty reading radiographs	96	55,5
	Lack of information about treatment	36	20,8
	Intraoral examination difficulty	47	27,2
	No answer	1	0,6
I like filling children's teeth	I strongly disagree	28	16,2
	I disagree	30	17,3
	I am undecided	26	15,0
	I agree	76	43,9
	I strongly agree	13	7,5
I find filling children's teeth stressful	I strongly disagree	14	8,1
	I disagree	42	24,3
	I am undecided	36	20,8
	I agree	57	32,9
	I strongly agree	24	13,9
I would prefer to refer children to be treated by other colleagues	I strongly disagree	19	11,0
	I disagree	44	25,4
	I am undecided	45	26,0
	I agree	41	23,7
	I strongly agree	23	13,3
	No answer	1	0,6
I do not like to give local anesthesia to pediatric patients	I strongly disagree	15	8,7
	I disagree	27	15,6
	I am undecided	30	17,3
	I agree	56	32,4
	I strongly agree	44	25,4
	No answer	1	0,6
If decayed deciduous molars cause no symptoms, it is best not to treat them	I strongly disagree	64	37,0
	I disagree	60	34,7
	I am undecided	27	15,6
	I agree	18	10,4
	I strongly agree	4	2,3
I think there is no reason to fill primary teeth	I strongly disagree	90	52,0
	I disagree	61	35,3
	I am undecided	10	5,8
	I agree	6	3,5
	I strongly agree	6	3,5
Do you know behavior guidance techniques	Yes	162	93,6
	No	11	6,4
Which behavior guidance technique do you use most in pediatric patients?	Tell-Show-Do Method	155	89,6
	Distraction	42	24,3
	Direct observation	50	28,9
	Positive Encouragement Method	79	45,7
	Enhancing control	25	14,5
	Parental presence/absence	14	8,1
	Voice control	30	17,3
	Nonverbal communication	9	5,2
	I do not use behavior guidance techniques	5	2,9
Do you provide oral hygiene education to the patients and parents you treat?	Yes	148	85,5
	No	23	13,3
	No answer	2	1.2
Which treatment in pediatric dentistry interests you most	Restorative treatment for primary teeth	51	29,5
	Endodontic treatment for primary teeth	34	19,7
	Endodontic treatment for permanent teeth	9	5,2
	Space maintainers	25	14,5
	Preventive dental treatment	36	20,8
	dental treatment under general anesthesia	62	35,8
	Dental trauma	50	28,9
	No answer	1	0,6
Would you like to specialize in pediatric dentistry after graduation?	Yes	66	38,2
	No	107	61,8

Data are shown as n (%).

Table 2. Correlation and cross-tabulation students' gender with their survey responses

			Male	Female	Test Statistics	*p*
What is the most challenging indication in pediatric patients? (Multiple options can be selected)	Anamnesis	n	13	7	15.743**	0.003*
		%	65.0	35.0		
		%G.	17.3	7.4		
	Difficulty reading radiographs	n	34	60		
		%	36.2	63.8		
		%G.	45.3	63.2		
	Lack of information about treatment	n	20	16		
		%	55.6	44.4		
		%G.	26.7	16.8		
	Intraoral examination difficulty	n	15	32		
		%	31.9	68.1		
		%G.	20.0	33.7		
I like filling children's teeth	I strongly disagree	n	16	12	10.068	0.039*
		%	57.1	42.9		
		%G.	21.3	12.5		
	I disagree	n	19	11		
		%	63.3	36.7		
		%G.	25.3	11.5		
	I am undecided	n	9	17		
		%	34.6	65.4		
		%G.	12.0	17.7		
	I agree	n	27	47		
		%	36.5	63.5		
		%G.	36.0	49.0		
	I strongly agree	n	4	9		
		%	30.8	69.2		
		%G.	5.3	9.4		

*$P<0.05$. **Multiple Chi Square test and G.: Gender

A statistically significant relationship was found between gender and the responses to the statement "I like filling children's teeth" ($p < 0.05$) (Table 3). It was found that students who answered, "I am undecided," "I agree," and "I strongly agree" were primarily female, while those who answered "I disagree" were predominantly male. A statistically significant relationship was found between the responses to the statement "If decayed primary molars cause no symptoms, it is best not to treat them" and the study year ($p < 0.05$) (Table 2). It was found that the students who answered, "I strongly disagree" and "I am undecided" were mostly 4th-year students, and the students who answered "I disagree" were mainly 5th-year students.

According to the answers to "I find filling children's teeth stressful," most students find filling children's teeth stressful. There was no statistically significant difference in terms of study year and gender ($p > 0.005$). To the statement "I would prefer to refer children to be treated by other colleagues," 45 people answered that "I am undecided," 44 answered "I disagree," and 41 answered "I agree." It was observed that most of the participants did not like to perform local anesthesia on pediatric patients. It was observed that most participants responded with "I strongly disagree" or "I disagree" to the statement, "I think there is no reason to fill primary teeth."

In response to the question, "Do you know behavior guidance techniques?" A statistically significant relationship was found between the answers to this question and the study year, with 93.6% of the answers being "Yes" ($p < 0.05$) (Table 2). It was observed that the people who answered "Yes" were mostly 4th-year students, and those who answered "No" were mostly 5th-year students. There was no significant difference in terms of gender in this question.

In response to the question, "Which behavior guidance technique do you use most in pediatric patients?" 89.6% used the Tell-Show-Do method, and 45.7% used the Positive Reinforcement Method. A statistically significant relationship was found between the answers to this

Table 3. Correlation and cross-tabulation students' grade with their survey responses

			4th Grade	5th Grade	Test Statistics	*P*
What was the most difficult treatment method during your pediatric dentistry internship?	Restorative treatment for primary teeth	n	16	3	10.512**	0.005*
		%	84.2	15.8		
		%C.	17.6	3.7		
	Primary tooth pulpotomy	n	73	75		
		%	49.3	50.7		
		%C.	80.2	91.5		
	Restorative treatment for permanent teeth	n	2	2		
		%	50.0	50.0		
		%C.	2.2	2.4		
	Fissure Sealant	n	0	2		
		%	0.0	100.0		
		%C.	0.0	2.4		
If decayed deciduous molars cause no symptoms. it is best not to treat them.	I strongly disagree	n	39	25	12.732	0.013*
		%	60.9	39.1		
		%C.	42.9	30.5		
	I disagree	n	21	39		
		%	35.0	65.0		
		%C.	23.1	47.6		
	I am undecided	n	19	8		
		%	70.4	29.6		
		%C.	20.9	9.8		
	I agree	n	10	8		
		%	55.6	44.4		
		%C.	11.0	9.8		
	I strongly agree	n	2	2		
		%	50.0	50.0		
		%C.	2.2	2.4		
Do you know behavior guidance techniques?	Yes	n	89	73	5.582	0.018*
		%	54.9	45.1		
		%C.	97.8	89.0		
	No	n	2	9		
		%	18.2	81.8		
		%C.	2.2	11.0		
Which behavior guidance technique do you use most in pediatric patients?	Tell-Show-Do Method	n	80	75	18.457***	0.030*
		%	51.6	48.4		
		%C.	87.9	91.5		
	Distraction	n	18	24		
		%	42.9	57.1		
		%C.	19.8	29.3		
	Direct observation	n	20	30		
		%	40.0	60.0		
		%C.	22.0	36.6		
	Positive Encouragement Method	n	36	43		
		%	45.6	54.4		
		%C.	39.6	52.4		
	Enhancing control	n	16	9		
		%	64.0	36.0		
		%C.	17.6	11.0		
	Parental presence/absence	n	5	9		
		%	35.7	64.3		
		%C.	5.5	11.0		
	Voice control	n	17	13		
		%	56.7	43.3		
		%C.	18.7	15.9		
	Nonverbal communication	n	4	5		
		%	44.4	55.6		
		%C.	4.4	6.1		
	I do not use behavior guidance techniques	n	5	0		
		%	100.0	0.0		
		%C.	5.5	0.0		

*$P<0.05$, **Fisher's Exact test, ***Multiple Chi Square test and C.: Class

question and the study year ($p < 0.05$) (Table 2). It was observed that the students who used behavior guidance techniques, such as Distraction, Direct Observation, and Parental Presence/Absence, were mostly 5th-year students. In contrast, the students who used the Enhancing Control method were mostly 4th-year students. There was no significant difference in terms of gender in this question.

In response to the question, "Do you provide oral hygiene education to the patients and parents you treat?" 86.5% answered "Yes," and 13.5% answered "No;" no significant differences were found in terms of gender or study year.

When asked, "Which treatment in pediatric dentistry interests you most?" 34.3% responded with "dental treatment under general anesthesia," and 30.8% with "dental trauma management." There were no statistically significant differences between the study years and genders ($p > 0.05$).

It was found that 61.8% of the students who participated in our survey did not wish to specialize in pediatric dentistry after graduation, while 38.2% did. There were no statistically significant differences between study years and genders ($p > 0.05$).

Discussion

This study aimed to evaluate the attitudes to pediatric dentistry among trainee dentists who had completed their pediatric dentistry internship and performed preventive, restorative, and pulpal treatments on pediatric patients. According to the survey results used in this study, evaluating trainee dentists' attitudes to pediatric patients and dentistry will help us plan to address the issues they find challenging in pediatric dentistry.

It has been observed that most trainee dentists have concerns before commencing their pediatric dentistry internship. These concerns of the trainee dentists may stem from the fact that the patient group consists of children. The pediatric dental triangle, comprising the child patient, parents, and the dental team, influences pediatric dental care.[16] The frequent occurrence of negative and unexpected behaviors in pediatric patient groups, the difficulty in communicating with the child, and securing cooperation from anxious pediatric patients are considered to be some of the most challenging issues in pediatric dentistry.[19, 20] It can be stressful for clinicians to overcome children's behaviors such as crying, anger, and avoidance.[21] In addition, children's behavior can be influenced by their parents in many ways, and these parental attitudes can have consequences that make the dentist's job very difficult.[19-22] Trainee dentists are exposed to high levels of stress in the pediatric dentistry clinic due to their limited experience and confidence in communicating with children and their parents, as well as in providing treatment and behavioral guidance.[21] Due to the above reasons, trainee dentists often become anxious before visiting the pediatric dentistry clinic. To establish a good relationship with the pediatric patient, the trainee dentist must be equipped with self-confidence, treatment knowledge, and behavior guidance techniques before treatment.

Most of the students in this study applied behavior guidance techniques. In response to "Do you know behavior guidance techniques?" it was observed that 4th-year students were more likely to answer "Yes" to this question. As 4th year students have just started clinical training, they may be more enthusiastic and more likely to choose this option. It was observed that 89.6% of the students employed the Tell-Show-Do method, and 45.7% used the Positive Reinforcement method. A statistically significant relationship was determined between the behavior guidance technique and study year. It was observed that the students who used the behavior management techniques of Distraction, Direct observation, and Parental Presence/Absence were mostly 5th-year students. In contrast, those who used the Enhancing Control Method were mostly 4th-year students. These results are similar to studies in the literature indicating that behavior guidance techniques such as Tell-Show-Do and Positive Reinforcement are often preferred.[14, 23, 24] At the same time, the tell-show-do technique has the highest parental acceptance in studies.[25]

Trainee dentists reported that the most challenging situations during their pediatric dentistry internship were isolating a child's teeth, administering anesthesia, and ensuring cooperation. Children with nausea-vomiting reflexes may be uncomfortable with the cotton rolls placed on the lingual area for isolation purposes, making it difficult to isolate a child's teeth[26]. It was observed that 57.8% of the trainee dentists agreed with the statement, "I do not like giving local anesthesia to pediatric patients." These results are consistent with the findings of other studies in the literature, which report that administering local anesthesia to a pediatric patient is the most difficult and stressful dental task for trainee dentist.[14, 16, 21, 27] Most children are afraid of needles. The anatomical differences of children, as well as fear of needles, cause local anesthesia to be administered differently compared to adults.

Oz et al reported that 10.8% of clinicians did not want to treat pediatric patients[12]. AlazmAh et al reported that 54% of students were quite stressed when providing dental care to preschool children (under five years of age).[16] In our study, it was observed that 72.3% of the trainee dentists had the most difficulty with children under the age of 5. Rønneberg et al reported that the rate of dentists reporting that the treatment is more difficult decreases as the age of the pediatric patient increases.[28]

The reason for these results may be the difficulty in controlling behavior in children under the age of 5. It has been observed that the number of dentists treating

pediatric patients has decreased, particularly for children under the age of three. This is because the procedures become more difficult, time-consuming, less financially rewarding, and tiring than treating older children. However, many dentists still treat children in this age group [12-15]. Additionally, children between the ages of 3 and 6 tend to have higher levels of fear and anxiety, making cooperation during dental procedures more challenging. This difficulty in cooperating with child patients under the age of 5 has also contributed to the decrease in dentists' willingness to treat pediatric patients. [29]

In response to the statement, "I find filling children's teeth stressful," 32.9% of students said, "I agree," 13.9% said, "I strongly agree," and 20.9% of the students answered, "I am undecided." When trainee dentists were asked which treatments they performed on children were the most difficult, 85.5% reported difficulty with primary tooth pulpotomy in children. AlazmAh et al reported that 51.1% of students found performing pulpal treatments quite stressful.[16] Performing pulp treatment in children can be challenging, particularly when the child is anxious. This can increase stress levels for trainee dentists who lack experience in such procedures, often leading to difficulties during treatment.

Nineteen trainee dentists reported difficulties with restorative treatments of primary teeth, and it was observed that the people who gave this answer were mostly 4th-year students. This may be because 4th-year students are seeing patients clinically for the first time, primary and permanent teeth are different, and using matrices in restorative procedures can be challenging for inexperienced students due to these differences. According to our study, trainee dentists found fissure sealants and permanent tooth fillings to be the least challenging treatments to perform. The ease with which trainee dentists perform restorative procedures on permanent teeth could be due to their experience performing similar procedures on adults. Aishwarya et al found that students were less stressed during restorative treatments.[14]

In our study, we observed that the most challenging stage for trainee dentists in determining treatment indications in children was the difficulty in interpreting radiographs in pediatric patients. A statistically significant relationship was found between gender and the answers to the question on the most challenging stage when making an indication in pediatric patients. Our study found that female students, in particular, had difficulty reading radiographs and performing intraoral examinations in pediatric patients. The presence of both primary and permanent teeth in pediatric patients can make it challenging to read radiographs and conduct intraoral examinations during the indication stage. In our study, when responses to the statement "I enjoy filling children's teeth" were examined by gender, it was found that most students who agreed with the statement were female. The students who disagreed with the statement were male, with a statistically significant difference. Although the students who reported difficulties with reading radiographs and intraoral examinations in pediatric patients were predominantly female, it was observed that female students showed a greater interest in pediatric dentistry than their male counterparts.

A statistically significant relationship was found between the responses to the statement "If decayed primary molars cause no symptoms, it is best not to treat them" and the study year. It was found that those who answered, "I strongly agree" and "I am undecided" were mostly 4th-year students, and those who answered "I disagree" were mostly 5th-year students. In response to the statement, "I think there is no reason to fill primary teeth," 52% of students said, "I strongly disagree," and 35.3% said, "I disagree." Upon examining the responses to these two questions, it can be concluded that students in years 4 and 5 are aware of the need to treat primary teeth as permanent teeth and recognize the importance of doing so.

When asked about the most interesting treatments in pediatric dentistry, 35.8% of trainee dentists chose dental treatment under general anesthesia, while 28.9% said dental trauma management was the most interesting treatment. The fact that trainee dentists do not perform dental trauma management and dental treatment under general anesthesia during the pediatric dentistry internship period may have contributed to the curiosity of most trainee dentists in this area.

In our study, the number of trainee dentists providing oral hygiene education to their patients and parents is relatively high. Improving oral health is possible by creating social awareness. Good oral and dental health can only be achieved through education, oral care, and regular check-ups, starting in childhood.[30]

In our study, we found that 61.8% of trainee dentists did not want to specialize in pediatric dentistry after graduation. Various difficulties in treating pediatric patients explain the low preference for specialization in pediatric dentistry. Only 44 females and 22 males expressed interest in specializing in pediatric dentistry. However, this gender difference was not found to be statistically significant. Studies show that those who prefer pediatric dentistry are mostly female. [31, 32] However, one survey found that male trainee dentists were more interested in pediatric dentistry than female trainee dentists, with a statistically significant difference.[33]

Limitations of the study include the inclusion of students from a single academic term, the fact that it is a single-centre study, and the lack of comparison of approaches with other departments.

Conclusion

Our study was designed to examine the attitudes of

4th- and 5th-year students toward pediatric dentistry and treatment methods. The high number of children and adolescents in our country, combined with the fact that future dentist candidates are not willing to provide these treatments and the limited number of dentists who want to specialize in pediatric dentistry, all increase the workload of pediatric dentists. Therefore, increasing dental students' knowledge and experience in treating pediatric patients during their training and equipping them with behavioral techniques to establish a good relationship with the child patient will help them treat more pediatric patients.

Human Ethics and Consent to Participate declarations

Before inclusion in the study, a written consent form stating that parents agreed to participate was obtained. This study was conducted following the ethical standards outlined in the Declaration of Helsinki (1964) and its subsequent amendments.

Authors' Contribution

Conceptualization: Esra HATO, Büşra ÇELİK.
Data curation: Esra HATO.
Investigation: Esra HATO.
Formal analysis: Esra HATO.
Methodology: Esra HATO.
Project administration: Esra HATO.
Supervision: Esra HATO.
Software: Esra HATO, Büşra ÇELİK.
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Validation: Esra HATO, Büşra ÇELİK.
Visualization: Esra HATO, Büşra ÇELİK.
Writing–original draft: Esra HATO, Büşra ÇELİK.
Writing–review & editing: Esra HATO, Büşra ÇELİK.

Competing Interests

The authors declare no conflict of interest while conducting this study and preparing the manuscript.

Data Availability Statement

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethical Approval

The study protocol was approved by the Kırıkkale University Clinical Research Local Ethics Committee (Decision No: 2023.06.14).

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