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Evaluating the Perspectives of the Faculty of Dentistry Students on Pediatric Dentistry: A Survey Study

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Research Article

Acknowledgment
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History

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ABSTRACT

Objectives: *This study aims to evaluate the approach of the students of the faculty of dentistry who look after children in their internships to pediatric dentistry, which includes preventive dentistry.*
Materials and Methods: *A questionnaire consisting of 20 questions was prepared. The questionnaire was administered to the students online in a stress-free environment away from the exam environment. The data were coded and analyzed in a computer environment. Categorical divisions are expressed as numbers and percentages. The chi-square test was used to compare the evaluations of the participants according to their ancestry and class.*
Results*: 55.9% of the participants said they liked caring for pediatric patients. While 72.8% of them stated they were nervous when their child looked After graduation, 67.6% answered that they could think of treating pediatric patients routinely in their professional life. However, not very often, while 25% of them said yes, and 7.4% of them did not think unless it was necessary. Although women are more anxious when a child is sick, they prefer to look after a child more than men (p<0.05). There was no significant difference according to the class of the participants in choosing to treat the child or adult patient (p>0.05). There is no statistically significant difference in the participants' evaluations regarding the institutions that they think provide the best pediatric dentistry service according to class and gender (p>0.05). Dentistry faculties were the most frequent response for both classes and genders.*
Conclusions: *Despite the large population of children and young people in our country, it has been observed that future dentist candidates are not willing enough for these treatments. Increasing their knowledge and experience in treating pediatric patients during their education will help more pediatric patients be treated.*
Keywords: *Dentistry students, Pedodontics, Preventive dentistry.*

Diş Hekimliği Fakültesi Öğrencilerinin Çocuk Diş Hekimliğine Bakış Açısını Değerlendirmek: Anket Çalışması

Bilgi
 # Bu çalışma 22-24 Kasım 2022 tarihleri arasında düzenlenen 'Sivas Cumhuriyet Üniversitesi 2. Uluslararası Diş Hekimliği Kongresi'nde sözlü bildiri olarak sunulmuştur.

Süreç

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ÖZ

Amaç: *Bu anket çalışmasının amacı; stajlarda çocuk hasta bakan diş hekimliği fakültesi öğrencilerinin, koruyucu diş hekimliği de içerisine alan çocuk diş hekimliğine yaklaşımını değerlendirmektir.*
Gereç ve Yöntemler: *Amaca yönelik olarak 20 sorudan oluşan bir anket formu hazırlandı ve anket, öğrencilere sınav ortamından uzak stressiz bir ortamda online olarak uygulandı. Veriler bilgisayar ortamında kodlandı ve analiz edildi. Kategorik veriler, sayı ve yüzde olarak ifade edilmiştir. Katılımcıların insiyetlerine ve sınıflarına göre verilen sorulara ilişkin değerlendirmelerinin karşılaştırmasında ki-kare testinden yararlanılmıştır.*
Bulgular: *Katılımcıların %55,9'u çocuk hasta bakmayı sevdiklerini belirtmişlerdir. %72,8'i çocuk hasta bakarken tedirgin olduğunu belirtirken, %16,9'u çocuk, %83,1'i yetişkin hastayı tedavi etmeyi tercih etmektedir. Mezuniyet sonrasında meslek hayatlarında rutin olarak çocuk hasta tedavi etmeyi, %67,6'sı çok sık olmamakla birlikte düşünebilirim yanıtını verirken, %25'i evet, %7,4'ü ise mecbur kalmadıkça kesinlikle düşünmüyorum yanıtını vermiştir. Çocuk hasta bakarken kadınların daha tedirgin olmasına rağmen, çocuk hasta bakmayı erkelere göre daha çok tercih etmektedir (p<0,05). Çocuk veya yetişkin hastayı tedavi etmeyi tercih etme durumlarında katılımcıların sınıflarına göre anlamlı bir farklılık bulunmamaktadır (p>0,05). Katılımcıların sınıflarına ve cinsiyete göre çocuk diş hekimliği hizmetinin en iyi verildiğini düşündükleri kurumlara ilişkin değerlendirmelerinde istatistiksel olarak anlamlı bir farklılık bulunmamaktadır (p>0,05). Her iki sınıf ve cinsiyet için en sık verilen yanıt diş hekimliği fakülteleri olmuştur.*
Sonuçlar: *Ülkemizde çocuk ve genç nüfusunun fazla olmasına rağmen, geleceğin diş hekimi adayları, bu tedavilerde yeteri kadar istekli olmadıkları görülmüştür. Öğrenimleri süresince çocuk hastaları tedavi etmeye yönelik bilgi ve tecrübelerinin arttırılması, ileride daha çok sayıda çocuk hastayı tedavi edilebilmelerine yardımcı olacaktır.*
Anahtar Kelimeler: *Diş hekimliği öğrencileri, Pedodonti, Koruyucu diş hekimliği.*

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Introduction

The American Academy of Pediatrics and the American Academy of Pediatric Dentistry recommend starting dentist visits one year with the eruption of teeth.[1,2]

To complete the permanent teeth eruption and ensure the dental arch's integrity, the primary teeth must remain healthy in oral planning. Regular visits to the dentist prevent children from needing more difficult and costly treatments at an early age.[3]

The traditional treatment of tooth loss caused by tooth decay and gingival diseases is symptomatic. It contributes little to oral health when the patient's oral hygiene problem is not resolved. However, if this treatment approach dominates the clinical process, long-term and costly treatment options will come to the fore due to continuous restoration repetitions. Preventive/protective applications that focus on the biological causes of the disease instead of such interventional approaches, on the one hand, target small-level interventional applications; on the other hand, a significant reduction in treatment time and costs is achieved. In this context, the "Minimal intervention" treatment concept in modern dentistry focuses on dentists' diagnosis, control, and protection concepts rather than intervention.[4-7]

To realize the importance of preventive/preventive approach in clinical dentistry practices and to be able to apply it in this clinic, it is essential that future dentist candidates have received the necessary training and practiced at a sufficient level on the "minimal intervention" treatment approach, which can be performed with minimal intervention in dentistry, before graduation.[8]

In our country, approximately one-third of the population comprises children in the '0-17' age group.[9]

According to the data of the Turkish Statistical Institute, while oral and dental health problems are seen in the first place in children aged 7-14, one of the most critical public health problems in children has been reported as dental caries.[10]

In light of these data, due to the lack of a sufficient number of pedodontists in our country, dentists must act more willingly in treating pediatric patients. However, it is seen that physicians mostly avoid treating children before school age.[11] Generally, this patient group is directed to pediatric dentists.[12]

The reasons for these should be investigated, and studies should be carried out.[3]

Survey studies are a fast, practical, and economical method of obtaining data on the adult population.[13] However, it will help us to see at what stage we are in the subject of such studies and to plan what we can do accordingly.[14]

Our aim in this study is to evaluate the approach of the students of the faculty of dentistry who look after children in their internships to pediatric dentistry, including preventive dentistry.

Materials and Methods

The universe of this study consisted of 4th and 5th-grade students studying at Fırat University Faculty of Dentistry and caring for patients. It was aimed to reach almost the entire universe. For this purpose, a questionnaire consisting of 20 questions was prepared, and the questionnaire was administered to the students online in a stress-free environment away from the exam environment.

Ethics Committee Approval

The research has received approval from the Clinical Research Ethics Committee of Fırat University (Date: 07.06.2022 No: 8998).

Statistics

This study used IBM SPSS Statistics (Version 22.0. Armonk, NY: IBM Corp.) for statistical analysis. Categorical data were expressed as numbers and percentages. The chi-square test was used to compare the participants' evaluations of the questions given according to their gender and class. The statistical significance level in the study was accepted as $p<0.05$.

Results

The findings of the research conducted with 136 participants are presented below. According to the results, 62.5% of the participants are in 4th-grade, and 37.5% are 5th-grade students. 46.3% of the participants are men, and 53.7% are women. (Table 1)

55.9% of the participants stated that they like caring for pediatric patients. Do you get nervous when the child is sick? 72.8% of the participants answered yes to the question. When the participants were asked whether they like to care for a child or an adult patient, 16.9% replied as children and 83.1% as adults. When asked whether they would routinely consider treating pediatric patients after graduation, 67.6% of them answered that they could think of it. However, not very often, while 25% of them answered yes and 7.4% of them said I don't unless they have to. (Table 2)

Do you think that fissure sealant is an effective preventive method against caries? To the question, 21.3% of the participants sometimes answered, and 78.7% said yes. Do you think fluoride applications are effective against caries? To the question, 39% of the participants responded sometimes, and 61% answered absolutely yes. (Table 3)

97.8% of the participants said they recommend other preventive methods to their patients and parents. When asked about the education they received in pedodontics, 53.7% of them found it sufficient, while 46.3% stated that it was not. While 46.3% of the participants indicated that they obtained professional knowledge about preventive dentistry from dental faculties, 23.5% said that they received it from books, and 15.4% from their colleagues.

77.2% of the participants think there will be environments where they can apply protective measures to pediatric patients after graduation. The rate of participants who stated the importance of brushing their teeth in pediatric patients and their parents was 77.9%.

While the rate of participants who think that pediatric dentistry service can be provided in the best hospitals and

dental faculties is 53.7%, the rate of participants who believe it can be supplied in practice is 44.9%. 66.9% of the participants stated they had dental treatment as a child. The rate of participants who positively described the dental experience they had as a child is 69.1%. The rate of participants who think that the physician's approach is effective in childhood dental experience is 82.4%. 69.1% of the participants use pre-treatment behavior guidance techniques.

There was no statistically significant difference between the participants' liking to care for pediatric patients according to their gender ($p>0.05$). 55.6% of male and 56.2% of female participants said they liked it. (Table 4)

There is a significant difference according to the gender of the participants in the state of being uneasy when the child is sick ($p<0.05$). The rate of those who stated that they were nervous is higher in women.

There is a significant difference according to the gender of the participants in terms of choosing to treat a child or adult patient ($p<0.05$). The rate of those who stated that they prefer to take care of children is higher in women.

According to the gender of the participants, there is no statistically significant difference between the status of thinking of treating pediatric patients routinely in their professional life after graduation ($p>0.05$). The answer given by male and female participants at the highest rate was I can think, although not very often.

There was no statistically significant difference between the patients and their parents recommending other preventive methods according to the gender of the participants ($p>0.05$). However, the answer given by female and male participants at the highest rate was yes.

There is a significant difference between the participants' status of seeing the education they have received in the field of pedodontics as sufficient ($p<0.05$). Male participants consider the training they receive to be more than enough than female participants.

According to the gender of the participants, there is no statistically significant difference between their thinking of improving themselves in the field of pedodontics after graduation ($p>0.05$).

There was no statistically significant difference in the status of the participants explaining the importance of tooth brushing to the pediatric patients they treated and their parents according to their gender ($p>0.05$). However, the most frequent answer for participants of both genders was yes.

There is no statistically significant difference in the participants' evaluations regarding the institution where the individual protection programs are best given according to their gender ($p>0.05$). For participants of both genders, the most frequent response was practice.

There is no statistically significant difference in the participants evaluations regarding the institutions they think provide the best dental service according to their gender ($p>0.05$). However, for respondents of both genders, the most frequent response was dental faculties.

There is a significant difference based on gender in the state of the participants thinking that there will be environments where they can apply protective methods to pediatric patients after graduation ($p<0.05$). In addition, female participants have a higher positive response rate.

There is a significant difference according to the classes of the participants in the state of being uneasy when the child is sick ($p<0.05$). The rate of those who stated they were nervous is higher among the participants in the 4^{th}- grade.

There was no statistically significant difference between the answers the participants gave to the other questions according to their classes ($p>0.05$).

Discussion

Many dentists prefer to treat older children than younger patients. Especially in children under the age of three, it has been observed that the number of dentists to treat patients in this age group has decreased because the procedures take more time, the financial return is low, and they are tiring.[15,16] It has been stated that dentists do not feel comfortable and experienced during the treatment of these patients and do not prefer to perform the treatment because less opportunity is given to treating young and maladaptive patients during their education.[12,15]

However, suppose students do not have clinical proficiency at graduation. In that case, they may be reluctant to treat pediatric dentistry patients later in their practice, thus placing a more significant burden on the small number of pedodontists.[12]

For this reason, we aim to evaluate the students' approach to pedodontics in our study.

Esra O.Z *et al.* observed that 10.8% of physicians were unwilling to treat pediatric patients. The rate of treating pediatric patients between the ages of 0-3 was 9.2%

In our study, 55.9% of the participants stated that they liked looking after a child patient, and 72.8% indicated that they were uneasy when looking after a child. It was observed that 16.9% of the students preferred to care for children and 83.1% for adult patients. After graduation, 67.6% answered that they could think routinely, although not very often, and 7.4% said they do not believe unless they have to. On the other hand, although women stated that they were more anxious while taking care of children, it was observed that women preferred to look after children more than men. In addition, there is a significant difference in the state of being uneasy when the child is looking at the patient according to the classes of the participants ($p<0.05$). The rate of those who stated they were nervous is higher among the participants in the 4^{th} grade. We think this is due to the lack of clinical experience of 4^{th} -grade students.

It is predicted that female dentists are more likely to treat pediatric patients. Our study supports this. In some studies, no differences were observed between the gender of the physicians and the age groups of the pediatric patients treated.[3,17]

Kayalıbay *et al.*[18] reported that young dentists applied more preventive treatment. It was also reported that it was used more frequently among physicians who graduated in the last five years compared to those who had previously graduated.[3,19]

Contrary to these studies, in a survey conducted in 2004, the relationship between the professional experience of physicians and fissure sealant applications was not found to be statistically significant.[17]

In our study, students who think that fissure sealant is an effective preventive method against caries answered 21.3% sometimes and 78.7% that. On the other hand, those who think that fluoride applications are really effective against caries gave the answer 39% sometimes and 61% definitely. Therefore, we believe that students do not fully integrate their knowledge of preventive dentistry into clinical practice.

In our study, 97.8% of the participants recommended other preventive methods to their patients and parents. We see that the rate is relatively high and promising. 77.2% of the participants think there will be environments where they can apply protective measures to pediatric patients after graduation. The rate of participants who stated that they told the importance of brushing their teeth to pediatric patients and their parents were 77.9%. Regarding where the individual-level protection programs can best be given, 46.3% of the participants answered practice, 41.9% in hospitals, and dentistry faculties.

While the rate of participants who think that pediatric dentistry service can be provided in the best hospitals and dental faculties is 53.7%, the rate of participants who believe it can be supplied in practice is 44.9%. In addition, the rate of participants who think that the physician's approach is effective in the dental experience they had as children is 82.4%. 69.1% of the participants use pre-treatment behavior guidance techniques. There was no difference according to gender and class.

In another study, it was determined that the students suggested brushing without asking about the teeth-brushing habits of the patients. Students think that preventive practices may affect the success of their operational treatment for their patients.[14] It shows parallelism with our study.

In a study, 63.5% of the students (n=99) stated that they obtained professional knowledge about preventive medicine from theoretical courses.[14] In our study, 46.3% of the students indicated that they received professional knowledge about preventive dentistry from dental faculties, % 23.5% stated that they obtained it from books, and 15.4% from their colleagues. In addition, male participants consider the training they receive to be more sufficient than female participants.

Conclusions

Despite the high population of children and young people in our country, it has been observed that future dentist candidates are not willing enough for these treatments. Therefore, increasing their knowledge and experience in treating pediatric patients during their education will help them treat more pediatric patients.

Acknowledgments

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Conflicts of Interest Statement

There is no conflict of interest with this manuscript's research results and publication.

This study was presented as an oral presentation at the 2nd International Dentistry Congress of Sivas Cumhuriyet University Faculty of Dentistry (22-24 September 2022) with the title of **"Evaluating the Pediatric Dentistry Perspective of the Faculty of Dentistry Students: Survey Study."**

Table 1: Demographic characteristics of participants

		F	%
Grade	4th- grade	85	62.5
	5th -grade	51	37.5
Gender	Male	63	46.3
	Female	73	53.7

Table 2: General views of the participants -1

		f	%
Do you love treating child patients?	Yes	76	55.9
	No	60	44.1
Do you get nervous while treating a child patients?	Yes	99	72.8
	No	37	27.2
Do you prefer to treat a child patient or an adult patients?	Child	23	16.9
	Adult	113	83.1
Do you think of treating pediatric patients routinely in your professional life after graduation?	I can think about it, although not very often	92	67.6
	Yes	34	25.0
	I definitely don't think so unless I have to	10	7.4

Table 3: General views of the participants -2

		f	%
Do you think that fissure sealant is an effective preventive method against caries?	Sometimes	29	21.3
	Definitely yes	107	78.7
Do you think fluoride applications are really effective against caries?	Sometimes	53	39.0
	Definitely yes	83	61.0
Would you recommend other preventive methods to your patients and their parents?	Yes	133	97.8
	No	3	2.2
Do you consider the education you have received in the field of pedodontics sufficient?	Yes	77	56.6
	No	59	43.4
Do you plan to develop yourself more in the field of pedodontics after graduation?	Yes	73	53.7
	No	63	46.3
From which sources do you get professional information about preventive dentistry?	Dental faculties	63	46.3
	The internet	15	11.0
	Books	32	23.5
	My colleagues	21	15.4
	Social media	2	1.5
	Meetings and congresses	3	2.2
Do you think there will be environments where you can apply protective methods to your pediatric patients after graduation?	Yes	105	77.2
	No	31	22.8
Do you explain the importance of tooth brushing to the pediatric patients you treat and their parents?	Sometimes	27	19.9
	Yes	106	77.9
	No	3	2.2
Where can individual protection programs best be delivered?	Oral and dental health centers	16	11.8
	Dentistry faculties in hospitals	57	41.9
	Private clinics	63	46.3

Table 4: Comparison of the opinions of the participants by gender

			Gender		Total	p
			Male	Female		
Do you love treating child patients?	Yes	N	35	41	76	0.540
		%	55.6%	56.2%	55.9%	
	No	N	28	32	60	
		%	44.4%	43.8%	44.1%	
Do you get nervous while treating a child patients?	Yes	N	38	61	99	0.002*
		%	60.3%	83.6%	72.8%	
	No	N	25	12	37	
		%	39.7%	16.4%	27.2%	
Do you prefer to treat a child patient or an adult patients?	Child	N	5	18	23	0.009*
		%	7.9%	24.7%	16.9%	
	Adult	N	58	55	113	
		%	92.1%	75.3%	83.1%	
Do you think of treating pediatric patients routinely in your professional life after graduation?	I can think about it. although not very often	N	44	48	92	0.779
		%	69.8%	65.8%	67.6%	
	Yes	N	14	20	34	
		%	22.2%	27.4%	25.0%	
	I definitely don't think so unless I have to	N	5	5	10	
		%	7.9%	6.8%	7.4%	

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