

**PEDIATRIC DENTAL EMERGENCIES IN DENTAL EDUCATION: SERVICE
PROFILE AND STUDENTS' PERCEPTIONS**

***URGÊNCIA ODONTOPEDIÁTRICA NO ENSINO DA ODONTOLOGIA: PERFIL DOS
ATENDIMENTOS E PERCEPÇÃO DOS DISCENTES***

***URGENCIA ODONTOLÓGICA PEDIÁTRICA EN LA ENSEÑANZA DE LA
ODONTOLOGÍA: PERFIL DE ATENCIÓN Y PERCEPCIÓN DE LOS ESTUDIANTES***



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How to reference this article:

RODRIGUES GUEDES, F.; MOREIRA HERVAL, A.;
TURRIONI, A. P. Pediatric dental emergencies in dental education:
Service profile and students' perceptions. **Revista Ibero-
Americana de Estudos em Educação**, Araraquara, v. 19, n. 00,
e024009, 2024. e-ISSN: 1982-5587. DOI:
<https://doi.org/10.21723/riaee.v19i00.17718>



| Submitted: 11/02/2023
| Revisions required: 14/04/2023
| Approved: 19/10/2023
| Published: 17/01/2024

Editor: Prof. Dr. José Luís Bizelli

Deputy Executive Editor: Prof. Dr. José Anderson Santos Cruz

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ABSTRACT: The study aimed to analyze the profile of emergency care in Pediatric Dentistry and to identify the difficulties faced by undergraduate students at a Brazilian Federal University. This is a cross-sectional study with two strands, retrospective and prospective. In the retrospective aspect, dental records of children under 12 years old, between the years 2016 and 2019, were analyzed. In the prospective aspect, the students' difficulties during emergency pediatric dental procedures were evaluated, through the application of a questionnaire. 4,785 service records were included. The procedure most performed by students was simple tooth extraction (31.0%). A high degree of difficulty was observed for students in the 7th, 8th and 9th periods, especially in endodontic procedures and management of dental trauma. There was a need for greater monitoring and support for students in Pediatric Dentistry in the emergency services.

KEYWORDS: Educational assessment. Pediatric Dentistry. Students. Emergency service.

RESUMO: *O estudo teve o objetivo de analisar o perfil de atendimento de urgência em Odontopediatria, além de identificar as dificuldades enfrentadas pelos discentes de Graduação em uma Universidade Federal brasileira. Trata-se de um estudo transversal com duas vertentes, retrospectiva e prospectiva. Na vertente retrospectiva, foram analisadas fichas de atendimento a crianças menores de 12 entre os anos de 2016 e 2019. Na vertente prospectiva, foram avaliadas as dificuldades dos discentes durante os procedimentos odontopediátricos de urgência, por meio da aplicação de questionário. Foram incluídas 4.785 fichas de atendimento. O procedimento mais realizado pelos alunos foi a exodontia simples (31,0%). Observou-se alto grau de dificuldade para os alunos de 7º, 8º e 9º períodos, especialmente nos procedimentos de endodontia e manejo do traumatismo dentário. Verificou-se uma necessidade de maior acompanhamento e apoio aos alunos nos atendimentos em Odontopediatria no serviço de urgência.*

PALAVRAS-CHAVE: *Avaliação educacional. Odontopediatria. Discentes. Serviço de urgência.*

RESUMEN: *El objetivo de este estudio fue analizar el perfil de la atención de urgencia en Odontopediatria, además de identificar las dificultades enfrentadas por los estudiantes de graduación en una Universidad Federal de Brasil. Se trata de un estudio transversal con dos vertientes, retrospectiva y prospectiva. En el aspecto retrospectivo, se analizaron los registros de atención a menores de 12 años entre 2016 y 2019. En el aspecto prospectivo, se evaluaron las dificultades de los estudiantes durante los procedimientos odontológicos pediátricos de emergencia a través de la aplicación de un cuestionario. Se incluyeron un total de 4.785 historias clínicas. El procedimiento más frecuentemente realizado por los estudiantes fue la extracción dental simple (31,0%). Se observó un alto grado de dificultad en los estudiantes de los períodos 7º, 8º y 9º, especialmente en los procedimientos de endodoncia y manejo de traumatismos dentales. Era necesario un mayor seguimiento y apoyo a los estudiantes en la atención de odontopediatria en el servicio de urgencias.*

PALABRAS CLAVE: *Evaluación educativa. Odontopediatria. Estudiantes. Servicio de emergencia.*

Introduction

According to the National Oral Health Policy Guidelines (Brazil, 2004), in the context of Brazilian public services, oral health promotion and prevention actions are considered necessary and extremely important for the control of oral diseases, mainly for the children's audience. Despite the increase in preventive measures over the last few decades, there is still a high demand for emergency services for individuals under 12 years of age, as guardians tend to give priority to curative procedures (Flumiignan; Sampaio Neto, 2014).

Pediatric dental care in emergency services is challenging for the oral health team, as in addition to painful symptoms, a state of suffering and anxiety, it will often be necessary to adopt behavioral management techniques (Albuquerque, *et al.*, 2016). The child's behavior may vary depending on the type of treatment; therefore, more invasive procedures generate greater resistance and, consequently, a greater degree of stress and difficulty in behavioral management in individuals (Sanshotene *et al.*, 2017).

It is expected that the Dentistry student will acquire skills and abilities to deal with emergency dental situations in adults and children, and it is important to use teaching methodologies that favor the training of the student, resulting in the application of knowledge and appropriate techniques during the care of urgency in Pediatric Dentistry (Whitney, *et al.*, 2015). The teaching of emergency procedures within the undergraduate course is necessary due to the high demand for these services in Primary Health Care, in addition to being a reality present in the clinical life of the dental surgeon (Sanchez; Drumond, 2011).

It is important to highlight that, among the challenges encountered during clinical dental teaching, there is a lack of teacher preparation to share knowledge about clinical practice (Araújo; Batista; Gerab, 2011). This lack of preparation may be related to teacher training, with a greater focus on the development of scientific research to the detriment of teaching practice. Therefore, it is important to implement new pedagogical projects, learning methodologies and invest in teacher training so that they can transmit more applicable knowledge during clinical practice (Cardoso *et al.*, 2018).

According to the new National Curricular Guidelines for the Undergraduate Dentistry Course (DCNs), (Brazil, 2021), teaching-learning and student evaluation criteria should be based on the training of dental surgeons with a more generalist, humanist profile, critical, and reflective, with the ability to act at different levels of health care, based on technical-scientific knowledge. Therefore, the student must have a more integrated education and more focused on experience in the Unified Health System (SUS), resulting in a professional trained to meet the

different oral health demands in Brazil (Prado *et al.*, 2019).

Therefore, the objective of the study was to analyze the profile of emergency care provided to children under 12 years of age and the difficulties faced by students in providing pediatric dentistry care in an emergency service.

Methodology

Study Design and Ethical Aspects

Cross-sectional study carried out in two aspects (retrospective and prospective) to analyze emergency pediatric dental care in a university hospital. In the retrospective aspect, the attendance records of the Dental Emergency Room (PSO) of the Dental Hospital of the Federal University of Uberlândia (HO-UFU) were analyzed for children under 12 years of age, covering the years 2016 to 2019. In the prospective aspect, The difficulties faced by Dentistry students (fourth and fifth year of the course) in providing emergency pediatric dentistry care were assessed. The research protocol was submitted to ethical evaluation by the Research Ethics Committee (CEP) of the Federal University of Uberlândia. The research was carried out only after ethical approval (CAAE 59309616.6.0000.5152).

Study Setting

The research was carried out at the PSO, a dental emergency and urgent care service founded in 1982. The service operates 24 hours a day, seven days a week and there are no restrictions on age range or territorial coverage. Procedures are carried out in the areas of restorative dentistry, endodontics, extractions and management of dental trauma. These procedures are carried out by students in the 7th to 10th period of the undergraduate Dentistry course (last two years of the course), as part of the Supervised Internship in Emergency Dental Care (ESPAO) discipline. The subject is considered mandatory in the course's curriculum and is carried out under the supervision of professors from the Faculty of Dentistry of the Federal University of Uberlândia (FOUFU) who teach subjects and supervise clinics in different dental specialties.

Data collect

For the first part of the research, PSO service records were included, stored in the HO-UFU billing department, which corresponded to services provided to patients up to 12 years of age, between the months of January 2016 and December 2019. The extracted data covered the following variables: age group (0 to 2 years, 3 to 5 years, 6 to 8 years, 9 to 12 years), sex (male, female), skin color (white, black, birth, not informed), type of pain (provoked, spontaneous, not informed), clinical diagnosis (edema or fistula, dental trauma, tooth decay, prolonged tooth retention, not informed), procedure performed (exodontia, coronary opening/abscess drainage, restoration provisional, fragment gluing/retention, oral hygiene, procedure not performed due to the child's behavior, not informed), affected region (anterior deciduous, posterior deciduous, anterior permanent, posterior permanent, soft tissues, not informed) and medication prescription (analgesic, antibiotic, anti-inflammatory, without prescription).

For the second aspect of the research, a questionnaire was applied to identify the difficulties faced by students from the 7th to the 10th period when undergoing emergency pediatric dental care. The questionnaire consisted of Likert-type questions relating to the degree of subjective difficulty (very low – score 1, low – score 2, moderate – score 3, high – score 4 and very high – score 5). The students' difficulties were assessed considering the following procedures: behavioral management, endodontic procedures, tooth extraction, trauma, dentistry and medication prescription. Additionally, students were able to respond freely about the subjective difficulty in providing emergency pediatric dentistry care at the PSO. The questionnaire was applied between March and June 2019. The answers to this question were categorized to allow statistical analysis.

Since the universe of students studied was approximately 160 students (40 students per period) and considering a significance level of 95%, a heterogeneity of 50% and a margin of error of 5%, a sample value of 114 students.

Data analysis

The collected data were tabulated and analyzed using SPSS version 18.0 (IBM®) software. Initially, all data were analyzed descriptively, considering frequency values (relative and absolute).

To analyze significant changes in the service profile over the years studied, the forms were divided according to the year of service (2016, 2017, 2018 and 2019). Subsequently, the

Chi-Square Test was applied, respecting the significance level of 5%.

To analyze the difficulties faced by students in emergency pediatric dental care, the responses to the questionnaires were organized according to the degree period in which the interviewee was (7th, 8th, 9th or 10th). The answers to the open question contained in the questionnaire were categorized into: 1- blank answers, 2- lack of a care protocol, 3- lack of devices for protective stabilization, 4- lack of help in management/care by teachers, 5- difficulty in communicating/managing with the child, 6- difficulty in handling materials, 7- difficulties with x-rays, 8- difficulty in avoiding contamination and 9- lack of play space/children's corner. The Kruskal-Wallis and Mann-Whitney tests were applied to compare the groups, assuming the student's training period as the outcome variable and respecting the significance level of 5%.

Results

Epidemiological data on social and clinical variables in the UFU dental emergency service

4785 service records were included in the study. Data regarding variables involving age group, sex and ethnicity can be seen in Table 1.

When considering data from all years (n=4785), it was possible to observe that the most prevalent age group was 6 to 8 years old (n=1638, 34.2%), with no gender predominance. Furthermore, **1599** patients (33.4%) declared their skin color as white, **1067** (22.5%) as brown and only 452 as black (9.4%). When comparing the years, there was a statistical difference in the proportions of age and skin color ($p < 0.05$), and for the gender variable, there was no variation between the different years ($p > 0.05$). Regarding age, there was a decrease in frequency for the age groups from 0 to two years (-1.5%) and 9 to 12 years old (-3.4%) and increase at frequency for the range age in 6 to 8 years (+3.3%). As for the skin color variable, there was a greater decrease in the frequency of care for white patients (-5.2%).

Table 2 presents data on the clinical diagnosis carried out by the student on duty, medication prescription, clinical procedures performed and the oral region most affected.

Regarding the clinical diagnosis made, the most prevalent was dental caries (n=2,476, 51.7%) followed by dental trauma (n=733, 15.3%) and prolonged tooth retention (n=647, 13.5%). In the vast majority of consultations (n=4,512, 94.3%) there was no medication prescription, with antibiotics being the most prescribed type of medication (n=147, 3.0%). Regarding the procedures performed, there was a prevalence for extractions/sutures (n=1484,

31.0%), followed by oral hygiene/guidance (n=798, 16.7%) and coronary opening/drainage (n=784, 16, 4%). The most affected teeth were the posterior primary teeth (n= 2227, 46.5%), followed by the anterior primary teeth (n= 919, 19.2%).

When comparing the years, it was possible to observe a statistical difference between the proportions for all variables mentioned in Table 2 ($p<0.05$), except for prescription medications ($p>0.05$). With regard to oral problems recorded after clinical examination, diagnoses related to edema/fistulas, trauma, prolonged retention showed a decrease in frequency between 2016 and 2019 (-2.0%, -4.0% and -2.5% respectively). Caries-related diagnoses showed an increase in frequency (+12.5%).

Regarding data related to registered dental procedures, extractions/sutures and oral hygiene/guidance showed a decrease in frequency between 2016 and 2019 (-5.8% and - 9.3% respectively). Procedures related to coronary opening/abscess drainage, provisional restoration, fragment gluing/retention and procedures not performed due to poor child behavior showed an increase in frequency (+7.7%, +2.5%, +1.8% and +2.4% respectively).

Regarding the affected teeth, the “anterior deciduous” and “posterior permanent” groups showed a decrease in frequency between the years (-4.7% and -3.5%, respectively) and the “posterior deciduous” group showed an increase in frequency (+7.5%).

Analysis of the difficulties in emergency pediatric dental care highlighted by students

As for the students, 132 were included, 30 (22.73%) students from the 7th period, 33 (25.00%) students from the 8th period, 31 (23.48%) students from the 9th period and 38 (28.79%) students in the 10th period.

In Table 3, the level of difficulty reported by undergraduate students (Likert Scale) is observed in relation to “Behavioral management”, “Endodontics”, “Exodontics”, “Trauma”, “Dentistry” and “Medication prescription” comparing the different periods. According to the results shown in Table 3, it was observed that the procedures with the greatest degree of difficulty were endodontics, extraction and trauma treatment in all periods evaluated.

When the degree of difficulty for each procedure was compared between the different periods, it was observed that for behavioral management, medication prescription and endodontics, the degree of difficulty only decreased in the 10th period ($p<0.05$). For Exodontia, Dental Trauma and Dentistry procedures, there was a decrease in the degree of difficulty from the 8th period onwards ($p<0.05$).

The procedures that showed the greatest difference in degree of difficulty, between the

7th and 10th periods were Exodontics (decrease by 1.6 on the scale, $p < 0.05$) and Dentistry (decrease by 1.8 on the scale, $p < 0.05$).

In Figure 1, the results for the variable “Other difficulties encountered” can be seen, comparing the periods of the UFU Dentistry Degree (7th, 8th, 9th, and 10th).

When comparing the pattern of responses to the variable “Other difficulties encountered” during pediatric dental care in the emergency service, it was observed that, in the 7th, 8th, and 9th periods, there was no difference. Students in the 10th period presented a different pattern of responses for this variable.

The response categories generated according to the students' reports were: 1- blank answers, 2- lack of a pediatric dentistry care protocol, 3- lack of devices for protective stabilization, 4- lack of help from teachers in management/care pediatric dentistry, 5- difficulty in communicating/managing with the child, 6- difficulty in handling materials, 7- difficulty in performing x-rays, 8- difficulty in avoiding contamination and 9- lack of a children's space/children's corner.

In general, there was a large number of blank responses for all periods, except for the 10th period. And the lack of help in management/service by teachers was a response reported with high frequency, in all periods.

Discussion

The emergency dentistry service is of great importance for the population, as it is the most frequent way of accessing dental care, meaning, in some cases, as the patient's “gateway” to the system (Cassal; Cardozo; Bavaresco, 2011). A quality service must be offered to the population, and it is important to evaluate the profile of the service provided within a higher education center. This research sought to collect epidemiological data on social and clinical variables in the emergency dental service at UFU, from 2015 to 2019, as well as analyze the students' perception of emergency pediatric dental care. Since there is a scarcity of studies with this focus, the objective was to better understand the demand and define possible improvements in the quality of the teaching work.

Regarding the age group, a lower frequency of care was observed for children aged 0 to 2 years, and the occurrence of cavities and trauma for this age group is still lower when compared to older children. Furthermore, oral hygiene for younger children is carried out by their parents and/or guardians, leading to a lower rate of need for dental care when compared

to older children (Amorim, *et al.*, 2007). In a study that analyzed the predominance of the age group in children in emergency care, the following were obtained: from 0 to 3 years old (9.3%), 4 to 6 years old (27.9%) and 7 to 12 years old (62,%), also demonstrating that children of younger ages had a lower demand for pediatric dental emergency services (Paschoal, *et al.*, 2010).

Another point is access to the service according to socioeconomic aspects. A large part of the lower social class population does not have easy access to oral prevention services, reflecting a greater demand for curative care (Figueiredo *et al.*, 2013). Thus, public emergency care, including pediatric patients, presents greater demand for people of lower socioeconomic status (Kazeminia *et al.*, 2020). Considering skin color, it was not possible to establish a relationship with the demand for the service, as a large percentage of the sample did not report ethnicity. However, it is important to highlight that there are different biases that determine access to health services, with reports indicating that the black Brazilian population presents epidemiological and social vulnerabilities that imply difficulties in accessing health services (Almeida *et al.*, 2022).

The most commonly performed procedure was simple tooth extraction, which may indicate that the majority of cases diagnosed with carious lesions involved extensive lesions. For oral hygiene procedures/guidelines, these corresponded to 16.7% of the procedures performed at the PSO, an indication that patients still seek the dental emergency service in the wrong way. Thus, the procedure that should be carried out in Primary Health Care services is often carried out in emergency care, which can alter and harm the direction of care service (Yang *et al.*, 2021).

Another important factor is the child's uncooperative behavior, which most of the time interferes with the procedure to be performed. Even though the frequency of procedures not performed due to bad behavior has decreased, they still have a high prevalence (15.3% in 2019). It is noteworthy that pediatric dentistry care requires more time to allow the child to adapt to the environment, as well as to create bonds of trust between the professional and the patient. Therefore, appropriate behavioral management techniques are fundamental to the success of the procedure (Prado *et al.*, 2019).

The major limitation of the study was related to the inadequate completion of the PSO forms, generating incomplete data and often a lack of information. Despite this obstacle, it was observed that the public emergency service analyzed in this study is of great importance for the care of child patients, since, in many cases, it is the only access to the emergency service in

Pediatric Dentistry.

The importance of developing studies that consider the difficulties and perception of undergraduate students (7th to 10th period) during emergency pediatric dentistry care is noted, as difficulties, such as emotional stress and insecurity, influence the approach to patients in emergency procedures (Whitney *et al.*, 2015). This assessment allows adjustments to the quality of teaching and consequent improvements in services.

In general, it was observed that students in the 7th period had a greater degree of difficulty in carrying out the procedures, when compared to the other periods. Endodontic procedures, trauma management and extractions corresponded to the variables in which the students had the most difficulty. Furthermore, the reports highlighted the lack of cooperation from teachers during pediatric dentistry care. It is necessary to highlight the challenges that are encountered when applying the appropriate management technique during pediatric dentistry care. The difficulty becomes even more complex due to the presence of painful symptoms and feelings such as fear and anxiety during the emergency situation (Sanshotene *et al.*, 2017). The lack of preparation/training of the student (especially in the 7th period) for behavioral management and even the lack of manual dexterity to carry out the procedure quickly and effectively must be considered.

According to the current curriculum of the Dentistry course under analysis, in the 7th period, students are beginning their clinical experience with curative procedures in Pediatric Dentistry. Therefore, these students may not yet be adequately prepared for the management of pediatric dentistry urgency, and emergencies. Preventive procedures require less technical skill compared to curative procedures, showing greater difficulty in carrying out these procedures in emergencies for 7th period students.

In the present study, endodontic procedures, trauma management and extractions presented a high degree of difficulty in all periods. On the other hand, dental procedures were reported to have a lower degree of difficulty, and this difficulty decreased even more for students in the 10th period. These results may be directly related to the curriculum of FOUFU undergraduate students, as they begin their clinical experience in surgery and endodontics (in adults) only from the 5th period and in dentistry from the 4th period. It is worth remembering that the student's clinical experience in Pediatric Dentistry only begins in the 7th period, that is, concomitantly with the beginning of the ESPAO discipline.

The lack of help in management or assistance from teachers is another relevant factor that was reported with high frequency in all undergraduate periods in which the study was

applied. This data can be explained by a series of factors: 1- the student body views the teacher as a holder of knowledge in the learning process and often does not exercise the active search for knowledge and critical skills to face clinical situations, 2- the The choice of method adopted by the teacher becomes a mechanism that facilitates or hinders the learning process and 3- the teacher-student relationship can also generate positive or negative attitudes that end up influencing the quality of teaching/service. Therefore, teachers who are willing to update themselves and teach end up positively influencing the teaching-learning process (Lazzarin; Najama; Cordonni, 2007).

The didactic-pedagogical training of teachers, in most cases, only takes place during Master's and Doctorate courses, creating a deficiency in their training to practice teaching. Furthermore, the teacher, still seen as the center of the teaching-learning process, results in more passive students who are increasingly distant from reality. Therefore, students do not feel safe or have the critical capacity to deal with situations, facing difficulties in making decisions during care (Noro *et al.*, 2015).

The students presented several suggestions (of possible applicability) that can be used to improve the teaching process and emergency pediatric dental care, such as: the definition of pediatric dental care protocols, the acquisition of devices for protective stabilization and the creation of a playful environment in the waiting room. The other difficulties reported (communication with the child, handling of materials, radiographic images) are directly related to the acquisition of previous experience by these students in the Pediatric Dentistry disciplines prior to their inclusion in the internship in dental emergency. Important factors were highlighted that suggest the need for new approaches to improve pediatric dentistry emergency teaching at FOUFU and consequent efficiency in the behavioral management of children.

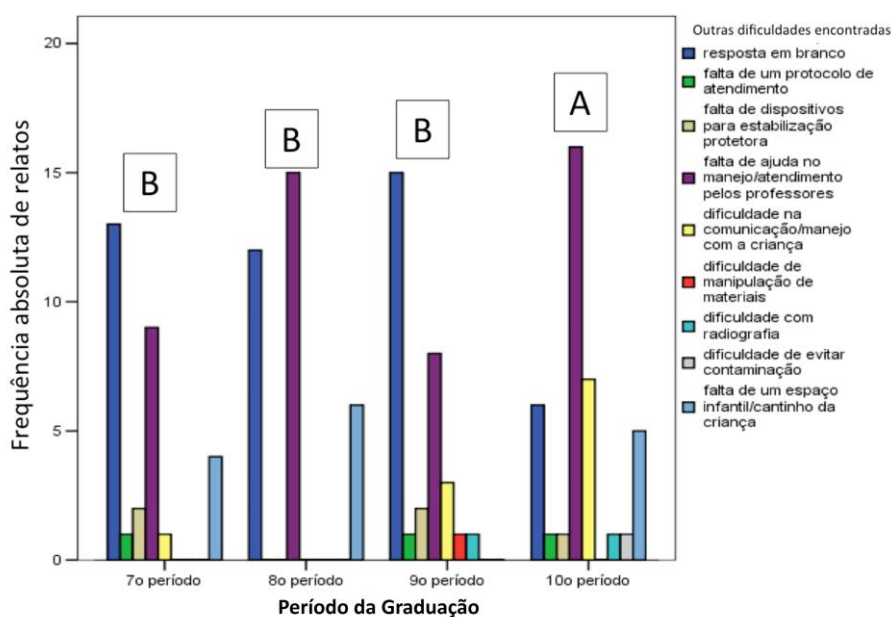
The need to make changes both in the pedagogical plan and in the methodologies to improve teaching in pediatric dental care in the emergency service was revealed. These changes can be made through the development of active learning methodologies, the didactic and pedagogical training of teachers and the review of the pedagogical plan for Dentistry at UFU. The importance of evaluation methods is highlighted in order to measure the degree of efficiency of new methods and consequent continuous improvement in the quality of teaching and care in the pediatric dental emergency service.

Conclusion

The children treated in the emergency service of the Uberlândia Dental Emergency Room were, for the most part, white and aged between 6 and 8 years. The main reason for seeking care was pain caused by caries in primary teeth and the most common treatment was simple tooth extraction. The variables “complaint”, “clinical diagnosis”, “procedure” and “affected tooth” showed a significant difference between the years.

In relation to FOUFU students, there is a high degree of difficulty in carrying out emergency pediatric dentistry procedures, with the degree of difficulty differing between the undergraduate periods and the students' opinion/perception can contribute to the improvement of emergency teaching pediatric dentistry.

Figure 1 – “Other difficulties encountered”, comparing the periods of the UFU Dentistry Degree.



Source: Written by the author

Table 1 – Analysis of the demographic characteristics of children seen by students in the dental emergency service

Variables	Sample	2016	2017	2018	2019	p-value
		n (%)	n (%)	n (%)	n (%)	
Total	4785	1170 (22.2)	1248 (23.7)	1247 (23.6)	1120 (21.2)	
Age range						
0 to 2 years	387	97 (8.3)	122 (9.8)	92 (7.4)	76 (6.8)	0.000
3 to 5 years	1333	320 (27.4)	348 (27.9)	357 (28.6)	308 (27.5)	
6 to 8 years	1638	376 (32.1)	414 (33.2)	435 (34.9)	413 (36.9)	
9 to 12 years old	1427	377 (32.2)	364 (29.2)	363 (29.1)	323 (28.8)	
Sex						
Masculine	2146	497 (42.5)	597 (47.8)	553 (44.4)	499 (44.6)	0.119
Feminine	2638	673 (57.5)	651 (52.2)	693 (55.6)	621 (55.4)	
Ethnicity						
White	1599	416 (35.5)	436 (34.9)	408 (32.7)	339 (30.3)	0.000
Black	452	113 (9.7)	119 (9.5)	124 (9.9)	96 (8.6)	
Brown	1067	262 (22.4)	262 (21.0)	277 (22.2)	266 (23.8)	
Uninformed	1668	379 (32.4)	432 (34.5)	438 (35.1)	419 (37.4)	

* Chi -square test (5% significance), n=4,785

**Frequency relative to the total number of patients seen each year

Source: Written by the author

Table 2 – Analysis of clinical characteristics and procedures performed by students on children treated in the emergency dental service

Variables	Sample	2016	2017	2018	2019	p-value
		n (%)	n (%)	n (%)	n (%)	
Total	4785	1170 (22.2)	1248 (23.7)	1247 (23.6)	1120 (21.2)	
Clinical Diagnosis						
Edema/Fistula	312	85 (7.3)	88 (7.0)	79 (6.3)	60 (5.3)	0.001
Dental Trauma	733	205 (17.5)	194 (15.5)	183 (14.7)	151 (13.5)	
Dental cavity	2476	540 (46.1)	630 (50.5)	650 (52.1)	656 (58.6)	
Nothing noteworthy	139	38 (3.2)	36 (2.9)	35 (2.8)	30 (2.7)	
Prolonged tooth retention	647	172 (14.7)	173 (13.9)	165 (13.2)	137 (12.2)	
Uninformed	478	130 (11.1)	127 (10.2)	135 (10.8)	86 (7.7)	
Prescription						
Analgesic	115	33 (2.8)	25 (2.0)	24 (1.9)	33 (2.9)	0.341
Anti-inflammatory	15	1 (0.1)	1 (0.1)	4 (0.3)	-	
Antibiotic	147	44 (3.8)	36 (2.9)	27 (2.2)	40 (3.6)	
Corticosteroid	5	2 (0.2)	2 (0.2)	-	1 (0.1)	
There was no	4,512	1090	1184	1192	1046	

		(93.2)	(94.9)	(95.6)	(93.4)	
Procedures						
Exodontia/suturing	1484	393 (33.6)	399 (31.9)	380 (30.5)	312 (27.8)	
Coronary opening/drainage	784	150 (12.8)	191 (15.3)	214 (17.2)	229 (20.5)	
Provisional Restoration	656	155 (13.2)	161 (12.9)	164 (13.1)	176 (15.7)	
Fragment Bonding/Containment	115	19 (1.6)	21 (1.7)	37 (3.0)	38 (3.4)	0.000
Oral hygiene/guidance	798	230 (19.6)	241 (19.3)	211 (16.9)	116 (10.3)	
Unrealized	647	151 (12.9)	160 (12.8)	165 (13.2)	171 (15.3)	
Uninformed	301	72 (6.1)	75 (6.0)	76 (6.1)	78 (6.9)	
Affected Region						
Anterior Deciduous	919	240 (20.5)	258 (20.7)	244 (19.6)	177 (15.8)	
Posterior deciduous	2227	515 (44.0)	562 (45.0)	573 (45.9)	577 (51.5)	
Previous Permanent	193	48 (4.1)	58 (4.6)	45 (3.6)	42 (3.7)	0.001
Posterior Permanent	489	134 (11.4)	133 (10.6)	137 (11.0)	85 (7.9)	
Soft tissue	276	71 (6.0)	70 (5.6)	73 (5.8)	62 (5.5)	
Uninformed	681	162 (13.8)	167 (13.4)	175 (14.0)	177 (15.8)	

* Chi -square test (5% significance), n=4,785

** Frequency relative to the total number of patients seen each year

Source: Written by the author

Table 3 – Level of difficulty reported by undergraduate students (Likert Scale) in relation to “Behavioral management”, “Endodontics”, “Exodontics”, “Trauma”, “Dentistry” and “Medication prescription”, comparing the different periods

Variable	Period			
	7th (n=30)	8th (n=33)	9th (n=31)	10th (n=38)
Management	3.7 (1.1) a*	3.5 (0.9) a	3.6 (0.8) a	2.9 (0.9) b
Endodontics	4.5 (1.0) a	4.5 (0.8) a	4.3 (0.9) ab	3.9 (1.1) b
Exodontics	4.4 (1.2) a	3.8 (0.8) b	3.8 (1.0) b	2.8 (0.9)c
Trauma	4.6 (0.9) a	4.0 (1.1) b	4.0 (0.9) b	3.6 (1.0)b
Dentistry	4.1 (1.4) a	3.4 (0.9) b	2.7 (0.9)c	2.3 (0.8)c
Prescription	3.8 (1.6) a	3.4 (1.1) a	3.7 (1.2) a	2.7 (1.1) b

*Values represent mean (standard deviation) of scores. Different letters indicate a statistically significant difference between periods (Mann-Whitney, p<0.05).

Source: Written by the author

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CRediT Author Statement

Acknowledgments: Thanks to the entire team involved and also to the Federal University of Uberlândia, where we had the support of the students involved and access to the medical records of the patients participating in this work.

Funding: To the National Council for Scientific and Technological Development – CNPq, the Minas Gerais Research Support Foundation – FAPEMIG and the Coordination for the Improvement of Higher Education Personnel – CAPES.

Conflicts of interest: There is no conflict of interest.

Ethical approval: The research was carried out after ethical approval (CAAE 59309616.6.0000.5152).

Availability of data and material: When data is requested from the authors.

Author contributions: As the author of the manuscript, I participated in the construction and formation of this study, contributing throughout the production of the article, from field research, data collection, data analysis and interpretation, text writing and submission. The other authors contributed throughout the work, mainly in the analysis and interpretation of the data, in addition to writing the text.

Processing and editing: Editora Ibero-Americana de Educação.
Review, formatting, standardization, and translation.

