Maternal and Child Clinic, Dental School, University of Passo Fundo (UPF): patient profile

Clínica Materno-Infantil da Faculdade de Odontologia - Universidade de Passo Fundo (UPF): perfil dos pacientes

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ABSTRACT

Objective

Characterizing the profile of patients seen at the Maternal and Child Clinic from the University of Passo Fundo Dental School.

Methods

694 records were evaluated in the years 2000 to 2011. Demographic (gender, age and place of residency), clinical and therapeutic variables (previous dental experience, caries, reason for dental appointment, procedures performed, number of appointments and completion of treatment) were collected for descriptive statistical analysis and associations.

Results

There was a higher demand for treatment from male children (51.4%) aged 25 to 36 months (61.4%), being 86% of patients from Passo Fundo, Rio Grande do Sul. It was also found that 51% of patients had caries and the main reason for dental appointment was treating such lesion (43.2%). Among the most commonly performed procedures, the non-invasive treatments (49.4%) were the ones that occurred more frequently. Regarding the studied variables, there was an association between children aged 25 - 36 months, living in Passo Fundo, and caries treatment.

Conclusion

The evaluated and associated data allowed the definition of the profile of patients seen at the Maternal and Child Clinic. The great majority of patients were male subjects aged 25 -36 months, from Passo Fundo, and who had not undergone previous dental treatment, being caries the major reason for appointment. This study traces the profile of patients and reinforces the need for early preventive treatment and proposals for this age group, aiming at decreasing the need for treatment and reducing diseases in children.

Indexing terms: Community Dentistry. Epidemiology. Pediatric dentistry.

RESUMO

Obietivo

Caracterizar o perfil do paciente atendido na clínica materno-infantil da FO-UPF.

Métodos

Avaliaram-se 694 prontuários de 2000 a 2011. As variáveis demográficas (gênero, idade e procedência), clínicas e terapêuticas (experiência odontológica anterior, experiência de cárie, motivo da consulta, procedimentos realizados, número de consultas e conclusão do tratamento), foram coletadas para análise estatística descritiva, e associações.

Resultados

Observou-se maior procura de atendimento de crianças do gênero masculino (51,4%), com idade entre 25 a 36 meses (61,4%) e que 86% dos pacientes residiam em Passo Fundo-RS. Verificou-se também que, 51% apresentavam cárie e que o principal motivo das consultas foi tratamento da cárie dental (43,2%). Dentre os procedimentos mais realizados, os tratamentos não invasivos (49,4%) foram os mais verificados. Em relação as variáveis estudadas foi encontrada associação entre as crianças que residiam em Passo Fundo, possuíam entre 25 a 36 meses e buscaram atendimento para tratar lesões cariosas.

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Conclusão

Os dados avaliados e associados, permitiram definir o perfil dos pacientes atendidos na clínica materno-infantil: pertencem ao gênero masculino na sua maioria, estão na faixa etária dos 25 a 36 meses, residem na cidade de Passo Fundo, não possuíam experiência odontológica anterior, apresentavam experiência de cárie ao chegar à clínica e a cárie dentária, representou o principal motivo para as consultas. Este estudo traça o perfil do paciente e fortalece a necessidade de programas e propostas para o atendimento ainda mais precoce e preventivo nesta faixa etária, para que se consiga diminuir as necessidades de tratamento e a doença nestas crianças.

Termos de indexação: Odontologia comunitária. Epidemiologia. Odontopediatria.

INTRODUCTION

Dentistry is the science that studies and treats teeth, mouth and bones of the face. Pediatric Dentistry is one of the dental specialties focusing on prevention and aiming at early and non-invasive care for children, applying procedures with differential management and providing treatment compatible with the patient's needs [1]. For the Federal Council of Dentistry, this specialty should prevent, diagnose and treat the oral problems of babies, children and adolescents, promoting oral health education and integration with other health care professionals [2]. Baby dental care is increasingly inserted in the training of future dentists, prioritizing the promotion of oral health since the early years of life. However, the first appointment at the dentist occurs after the deciduous dentition is complete, around two and a half years of age. Thus, there are great difficulty in assisting these patients, since, at this time, there is already a demand for curative intervention besides the necessary preventive approach. In early childhood, dental caries is the main threat to oral health, besides being the most common chronic disease [3], more prevalent than asthma [4], being a public health problem worldwide [3]. The Maternal and Child Clinic from the University of Passo Fundo Dental School was founded in the year 2000, aiming at providing care for pregnant women and children aged 0-36 months (current service is focused on children up to two years of age). Its objective is to increase the student's knowledge, stimulating the good relationship with parents and/or the responsible for the children, integrating them to preventive actions, risk reduction, good treatment progress and maintenance of oral health of their children. Although the philosophy for early care is not fully widespread, there is an increase in the demand for dental care by the parents of children from this age group to initiate preventive treatment, avoiding, then, invasive treatment [5].

Dentistry for babies is increasing the inclusion of children aged 0 - 24 months in the public and private health services presenting good results. However, to consolidate a good health care model, it is necessary that

the population and the professionals invest on educational and preventive actions and believe that the focus is early treatment [6]. To propose this model, it is necessary to study the population and the result of the epidemiological investigation should be used to show the etiology of diseases, evaluating the consistency of the data, providing bases for practices in the public health management. Therefore, this study aims at characterizing the profile of patients seeing at the Maternal and Child Clinic from the University of Passo Fundo Dental School, tracing their socio-demographic characteristics, identifying procedures performed and showing treatment needs.

METHODS

This is a retrospective cross-sectional study conducted to justify the offering of a specialization course to meet the undergraduate level demand. The sample comprised 694 children from age 0 to 36 months, seeing at the Maternal and Child Clinic from the University of Passo Fundo Dental School, in the year 2001 to 2011. Records improperly fulfilled were excluded from the sample.

Before starting the research study, the Free and Informed Consent form, describing what would be addressed in the study, was given to the head professor from the Maternal and Child Clinic. After having the professor's authorization, the research project was submitted and approved by the Research Ethics Committee from the University of Passo Fundo, protocol no. 130/2012.

For the accomplishment of the study, all medical records were evaluated by a single researcher and the data were registered. Qualitative variables (gender, place of residency, previous dental experience, reason for dental appointment, procedures performed and whether treatment was finalized or not) and quantitative variables (age, caries experience (DMFT index) and number of appointments) were collected from the charts completed by the undergraduate students and reviewed by the professor.

To facilitate the reading and the comprehension of the text, the variables were divided according to the place of residency, demographic (gender and age), clinic (previous dental experience, number of appointments, caries, reason for having the appointment with the dentist), and therapeutic variables (performed procedures, cases in which there was no need for treatment, and whether the treatment was completed or not).

The information was listed in a spreadsheet, making it easier the organization and the visualization of the data. The final content was entered in a database for subsequent statistical analysis. After obtaining and organizing the data, using the software Statistical Package for Social Science (SPSS) version 20.0, the descriptive statistical analysis was performed showing the absolute and relative frequencies of each variable collected, as well as the chi-square test, to verify the association between the variables.

RESULTS

According to Table 1, 694 children were seen at the Maternal and Child Clinic from the University of Passo Fundo Dental School, in the year 2000 to 2011. Out of these children, 357 (51.4%) were male subjects, 426 (61.4%) were aged 25 - 36 months and 597 subjects (86%) were from Passo Fundo, Rio Grande do Sul.

Table 1. Characteristics of the sample according to the demographic variables of patients seen at the Maternal and Child Clinic of the University of Passo Fundo Dental School. Passo Fundo (RS), 2000 - 2011.

	n	n	(%)	P Value**
Level 1 - Demographic variables				
Gender	694			p=0.4477
Male		357	(51.4)	
Female		337	(48.6)	
Age	694			p= 0.0001
0-12 months		82	(11.8)	
13-24 months		186	(26.8)	
25-36 months		426	(61.4)	
Place of residency	694			p<0.0001
Passo Fundo		597	(86)	
Carazinho		13	(1.9)	
Sertão		9	(1.3)	
Soledade		7	(1.0)	
Other		68	(9.8)	

^{**}p: result of the chi-square test.

In Table 2, the clinical variables showed that 406 patients (58.5%) had not undergone dental treatment

previously and 354 of these patients (51%) had caries. Evaluating 300 children (43.2%) and the initial examination in 240 children (34.6%), it was verified that dental caries was the most frequent reason to seek treatment.

Table 2. Characteristics of the sample according to the clinical variables of the patients seen at the Maternal and Child Clinic of the University of Passo Fundo Dental School. Passo Fundo (RS), 2000 - 2011.

	n	n	(%)	P Value**
Level 2 – Clinical variables				
Previous dental experience	694			p=0.0001
Yes		288	(41.5)	
No		406	(58.5)	
Caries Experience	694			p= 0.6217
Dmft index $= 0$		340	(49)	
Dmft index ≠ 0		354	(51)	
Reason for appointment	694			p<0.0001
Urgency		65	(9.4)	
Trauma		37	(5.3)	
Inicial Examination		240	(34.6)	
Referral*		32	(4.7)	
Orthodontics		5	(0.7)	
Caries		300	(43.2)	
Others		15	(2.1)	
Number of appointment	694			p<0.0001
1 appointment		233	(33.6)	
Between 2 - 4 appointments		297	(42.8)	
5 or more appointments		164	(23,6)	

^{**}p: result of the chi-square test.

Results also showed a total of 2,180 appointments considering the 694 patients seeing at the Maternal and Child clinic, with an average of three appointments per patient. According to the results in Table 1, there was an association between children from Passo Fundo and age 25 - 36 months. In Table 2, the association of variables with the profile of the children seen at the clinic showed p value significant for previous dental experience, reason and number of appointments, thus, reinforcing that these variables are associated with the profile of the children studied in here (Table 1 and Table 2).

Table 3 presents the therapeutic variables. The number of procedures performed totaled N of 1764. Non-

invasive treatments were the most performed procedures totaling 871 children (49.4%), being followed by clinical examinations, totaling 528 children (30%). Considering finishing treatment, a total of 514 patients (74.1%) have finalized it, which is a very significant number.

Table 3. Characteristics of the sample according to the therapeutic variables of patients seen at the Maternal and Child Clinic of the University of Passo Fundo Dental School. Passo Fundo (RS), 2000 - 2011.

	n	n	(%)
Level 3 - Therapeutic variables			
Procedures performed	1764		
Clinical examination		528	(30)
Non-Invasive treatment		871	(49.4)
Restorations		277	(15.7)
Surgery		5	(0.2)
Endodonthics		73	(4.1)
Treatment of oral diseases		10	(0.5)
Finished treatment	694		
Yes		514	(74.1)
No		180	(25.9)

^{**}p: result of the chi-square test.

DISCUSSION

Pediatric Dentistry is the specialty that assists children, solving their dental problems, recognizing their profile and understanding their family environment and how it affects the health-disease process [7-10].

The profile of the population assisted by the Maternal and Child Clinic was traced aiming at emphasizing the need to find ways to improve the quality of services provided to the population and helping to plan services to benefit patients, as well as assisting the learning process of students, corroborating with the commitment of the University of Passo Fundo, which is offering differentiated training for future dental surgeons.

In the present study, 86% of the assisted children are from the city where the clinic operates, Passo Fundo, Rio Grande do Sul. The remainder patients (14%) are from other neighboring cities. In the nearby towns, there are no public services to treat babies, which makes the Maternal and Child Clinic from the University of Passo Fundo Dental School a reference for oral care services when treating children over 16 years of age. Additionally, there is the undeniable fact that the University and the Dental School

are a reference in providing dental care to the population of the region.

According to the literature, the ideal age for a child to have his/her first dental appointment is between 6 - 12 months of life [11]. This concept is based on the health proposal, in which the objectives are the establishment of dietary and hygiene habits, as well as monitoring the cranio-facial growth and development of subjects. The present study showed that many children treated at the Maternal and Child Clinic from the University of Passo Fundo Dental School were over 1 year old (612 / 88.2%) and had caries (354/51%) due to the delay in seeking treatment.

The Maternal and Child Clinic of the University of Passo Fundo Dental School was created to provide treatment to pregnant women and children aged 0-36 months. Currently, treatment is focused on pregnant women and children up to two years of age. Children who require more complex assistance are directed to the postgraduate clinic. This change represents the incorporation of a new approach when treating oral diseases, strongly focused on a preventive approach, reinforcing the importance of the early control of dental caries with etiological factors [5].

According to the data found in this research study, most of the children treated at the Maternal and Child Clinic of the University of Passo Fundo Dental School had caries (51%), they were over 1 year of age (88.2%) and had never seen a dentist (58.5%). These results justify the need to inform the population about the importance of prevention rather than treating the disease. Therefore, it is fundamental to encourage the population to have the child's first dental appointment in the first year of life [5,10,11,14]. Walter & Issáo [12] reported that if the first appointment occurs before the first year of life, there is a 96.2% chance the child will not have caries. However, when the appointment occurs when the child is aged 24 - 36 months, this probability is reduced by 51%. Finally, if the appointment occurs when the child is 48 months or more, the chance of the child not having caries is even lower, reaching 25%.

National data describe a high number of preschool children who have never had an appointment with a dental surgeon.9,13 Results of a cross-sectional study carried out in Canoas, Rio Grande do Sul, showed that only 4.3% of children under 2 years of age, 11.2% of children between 2 and 3 years of age and 26.2% of children older than 3 years of age had already had an appointment with a dentist

Ferreira et al. [14] conducted a cross-sectional study to investigate the prevalence and severity of caries in 1787 preschool children from Canoas. According to the results, 40% of the children had caries (dmft index ≥ 1) and the increased occurrence of caries was seen between the second and the third year of life. In the current research study, it was found that 51% of the children seen at the Maternal and Child Clinic from the University of Passo Fundo Dental School had some type of lesion, as shown in table 2. Additional crosssectional studies conducted in Brazil evaluating the age group from 3 to 4 years of age, applying the DMFT index, reported a prevalence of caries ranging from 20% [15] to 48% [16]. Contrary to previous studies [7], 83% of the patients seen at the Dental School Pediatric Clinic of the Lutheran University of Brasil, in Canoas, had caries. In turn, Cangussu et al. (2001)17 found a similar prevalence of caries (84 %) in children from 2 to 6 years of age seem at the Pediatric Clinic of the Federal University of Bahia. It is important to emphasize that Dental Schools are centers of reference for high complex cases, thus, presenting higher rates of the disease when compared to epidemiological studies conducted with populational samples.

However, even if intervention is properly conducted [18] and dental caries prevented and controlled [17], it can worsen if the children do not undergo dental care during early childhood. According to Kramer et al. [9] 13.3% is the demand for pediatric dentistry, and, according to Camargo et al. [20], the demand for dental treatment increases to 37 % considering 5-year old children. Thus, the American Academy of Pediatric Dentistry (2015a, b, c, d) reinforces the need to work on the prevention of caries in early childhood and indicates the implementation of preventive programs since pregnancy [21-24]. The frequency of caries indicates the need for preventive strategies, with shorter intervals between the appointments, making dental care appointment part of the child's routine and educating the population about the importance of dental health [25].

Regarding the reasons to have a dental appointment, the main ones were to treat caries (43.2%) and routine exams (34.6%), as shown in Table 2. Thus, there was a need to treat caries in 51% of the cases. Previous researches described that a smaller proportion (20.3%) of treated patients had caries as the reason for dental appointment. However, it was reported that

in 33.8% of the cases caries was the main reason for dental appointment in children aged 0-6 years [10].

In addition, the data showed that 694 children underwent dental care and the average of procedures per patient was three appointments, considering the years of 2000 to 2011. In this retrospective study, Silva & Pagnoncelli [26] also observed an average of three appointments per patient at the Clinic of Pediatric Dentistry of the Pontifical Catholic University of Rio Grande do Sul, in Porto Alegre.

Not surprisingly, the demand for dental services is often fallowed by anxiety, fear and behavioral problems, being the child and the family affected by the situation.10 Thus, in this age group, the child's behavior in the dental environment is not positive and, often, there is a need for treatment with stabilizing restraint. Due to this fact, many mothers do not progress with the child's treatment after the pain ceases. In the present study, 25% of the children did not finalize treatment. Then, this percentage represents the number of children who need more complex invasive treatment, as in the association of variables, the profile of assisted children had caries as the reason for dental appointment (table 2 / p < 0,0001).

If a child does not finish treatment or miss the appointment, his/her clinical condition may worsen, demanding complex treatment that may require exodontics and endodontics, not to mention pain, as seen in previous studies [8,27,28].

Therefore, it is the role of dental surgeons to make the population aware of the importance of oral health for preschool children and assist in the prevention of oral diseases.

CONCLUSION

Thus, the data collected in this retrospective study made it possible to trace the profile of patients seen at the Maternal and Child Clinic from the University of Passo Fundo Dental School in the year 2000 -2011. Most of patients were male subjects from Passo Fundo, ranging in age from 25 to 36 months, with caries as the main reason for the dental appointments. The average number of appointments was three per patient, being clinical examination, oral hygiene instruction and prophylaxis the most common activities.

This present research study suggests the establishment of strategies to inform the population

about the importance of the first dental appointment for babies before the first year of life, aiming at being successful to apply the preventive philosophy proposed by the Maternal and Child Clinic of the University of Passo Fundo Dental School, as well as guiding the health care actions of the mentioned institution.

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Collaborators

LCB PAVINATO directed and supervised the data collection. J BERVIAN and EG o PATUSSI organized and revised the text. M CARDOSO and GS PINTO organized the results and analysis of the data.

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