



UNIVERSIDADE FEDERAL DE UBERLÂNDIA
FACULDADE DE ODONTOLOGIA



SAMARA MARTINS NASCIMENTO

**BEHAVIOR'S EVALUATION OF CHILDREN WITH AND
WITHOUT DISABILITIES AND MATERNAL DENTAL
ANXIETY AT THE FIRST DENTAL CARE**

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WITHOUT DISABILITIES AND MATERNAL DENTAL
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Trabalho de conclusão de curso apresentado à
Faculdade de Odontologia da UFU, como
requisito parcial para obtenção do título de
Graduado em Odontologia.

Orientadora: Prof^a. Dr.^a Fabiana Sodré de
Oliveira

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No dia quatro de julho de 2017, reuniu-se a Comissão Julgadora aprovada pelo Colegiado de Graduação da Faculdade de Odontologia da Universidade Federal de Uberlândia, para o julgamento do Trabalho de Conclusão de Curso apresentado pelo (a) aluno (a) **Samara Martins Nascimento**, COM O TÍTULO: **"BEHAVIOR'S EVALUATION OF CHILDREN WITH AND WITHOUT DISABILITIES AND MATERNAL DENTAL ANXIETY AT THE FIRST DENTAL CARE"**. O julgamento do trabalho foi realizado em sessão pública compreendendo a exposição, seguida de arguição pelos examinadores. Encerrada a arguição, cada examinador, em sessão secreta, exarou o seu parecer. A Comissão Julgadora, após análise do Trabalho, verificou que o mesmo encontra-se em condições de ser incorporado ao banco de Trabalhos de Conclusão de Curso desta Faculdade. O competente diploma será expedido após cumprimento dos demais requisitos, conforme as normas da Graduação, legislação e regulamentação da UFU. Nada mais havendo a tratar foram encerrados os trabalhos e lavrada a presente ata, que após lida e achada conforme, foi assinada pela Banca Examinadora.

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BEHAVIOR'S EVALUATION OF CHILDREN WITH AND WITHOUT DISABILITIES AND MATERNAL DENTAL ANXIETY AT THE FIRST DENTAL CARE

Child behavior and maternal dental anxiety

Keywords: Child behavior, disabled children, mothers, dental anxiety, dental care

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ABSTRACT

Purpose: To evaluate and compare the behavior of children with and without disabilities and maternal dental anxiety in the first dental care of their child.

Methods: The sample comprised 68 children under 36 months of age. The test group was composed of 28 children with disabilities and control group was composed of 40 children without disabilities. Demographic data were obtained using a questionnaire. The Ohio State Behavior Rating Scale was used to rate child behavior and the Corah Scale was applied to assess maternal dental anxiety.

Results: The category crying and disruptive movement was prevalent for children with (39.29%) and without disabilities (47.5%). The anxiety was low for mothers of children with (47.5%) and without disabilities (50.0%). No difference was observed between age and child behavior and maternal age, level of education and anxiety.

Conclusions: Behavior of children with and without disabilities and maternal dental anxiety in the first dental care were similar.

INTRODUCTION

The child's behavior is an important issue in pediatric dentistry.^{1,2} The factors that determine and influence the behavior during dental care are related to the child, the family and the professional.^{2,3}

In young children, the behavior is related to age⁴⁻¹⁰, psychological and psychomotor development^{4,6-8} and cognitive ability⁵. These factors compromise the establishment of an appropriate communication and comprehension and therefore make the dental care more complex.⁶

For disabled children, the dental care becomes even more critical.⁵ Developmental delay, mental/physical disability and acute or chronic disease and dental/medical experience are potential reasons for noncompliance during dental care.¹¹ Because of dental anxiety or a lack of understanding of dental care, children with disabilities may exhibit resistant behaviors. These behaviors can interfere with the safety of dental care.^{12,13}

In addition to the factors related to child's behavior, parents, especially mothers, who have had negative dental experience can transmit their own dental anxiety to the child.^{11,14,15}

Few studies have evaluated behavior of young children during dental care^{3,4,6,8,9,10,16} and there were no found in the literature studies evaluating the behavior of children under 36 months of age with disabilities during dental care. Therefore, the aims of this study were to evaluate and compare the behavior of children with and without disabilities and maternal dental anxiety in the first dental care of their children at a university-based dental clinic.

METHODS

This research protocol was submitted and approved by the Human Research Ethics Committee of (track omitted for the peer-review process) (#CAAE track omitted for the peer-review process) in accordance with the ethical standards of the Declaration of Helsinki. All mothers or legal guardians of study participants received adequate information regarding the study's objectives and provided written informed consent.

Study population

The sample comprised 68 children aged under 36 months. The test group was composed of 28 children with disabilities and control group was composed of 40 children without disabilities. The exclusion criteria were children with previous dental experience and the presence of pain of dental origin.

Data Collection

Information of children's age, sex and classification of disability according International Association for Disabilities and Oral Health and mother's age and level of education were obtained using a structured questionnaire.

Assessment of Maternal dental anxiety

The Corah Dental Anxiety is a reliable, valid and useful tool to use in research projects for measuring anxiety of dental procedures.¹⁷ The scale was applied to the mothers before the dental care of the child by means of an interview. The Corah Dental Anxiety Scale has four questions about dental situations: 1 - "if you had to go to the dentist tomorrow, how would you feel?; 2 - "When you are in the waiting room of the clinic,

waiting to be called by the dentist, how do you feel?"; 3 - "When you are in the dentist's chair waiting for him to start the local anesthetic procedures, how you feel?", and 4 - "You are the dentist's chair, already anesthetized. While waiting for the dentist get the instruments start the procedure, how does it feel? For each question, there are five answer options. The anxiety was classified into four categories: without anxiety; low level of anxiety; moderate level of anxiety; and high level of anxiety.

Assessment of the child's behavior

The assessment of the child's behavior was carried out in the first dental care during three moments: patient positioning, oral examination and oral cleaning (standard protocol of procedures of initial preventive dental care). The children were examined in the knee-to-knee position) by undergraduate students in dentistry.

The Ohio State Behavior Rating Scale was used to rate each child's behavior into one of four categories: 1 - quiet; 2 - crying only; 3 - disruptive movement only; 4 - crying and disruptive movement.¹⁸For the purpose of standardizing the analysis time, the behavior was assessed during the period of 5 minutes and data were recorded in a specific record. The behavior was classified according to the category more prevalent during the three moments.

All behavior assessments were performed by a trainer examiner.

Data Analysis

The data was analyzed using Statistical Package for Social Sciences (SPSS 16.0 for Windows). Child's age and behavior and mother's

age, education level, and maternal dental anxiety were compared using Mann-Whitney U test ($\alpha < 0.05$).

RESULTS

Table 1 shows the age and child behavior of children with and without disabilities. The percentage of each of the four categories was similar among children with and without disabilities. The category crying and disruptive movement was the most prevalent, 39.29% and 47.5% for children with and without disabilities, respectively.

Table 2 shows the age, level of education and maternal dental anxiety of mothers of children with and without disabilities. The age and education level were similar among mothers of children with and without disabilities. Although mothers of children with disabilities showed higher percentage of high level of anxiety, there was no difference between the groups. The classification of low levels of anxiety was the most prevalent, 46.43% and 50.0% for mothers of children with and without disabilities, respectively.

There was no difference between child's age and behavior and mother's age, level of education and maternal dental anxiety (Table 3).

DISCUSSION

Considering the importance of child's behavior during dental care this study evaluated and compared the young children's behavior with and without disabilities and the influence of maternal dental anxiety at the first dental care.

In the literature are cited some scales to evaluate the behavior of children during dental care.^{6,8,18-20} In this study, The Ohio State University Behavior Rating Scale was used to rate child's behavior¹⁸

because it involves four categories recorded by means of observation of the movements of the head and limbs, crying and physical resistance and it was operationally define and extremely reliable as evidenced by the high rater test/test reliability.³

Studies that have evaluated the behavior of healthy young children used other scales in different clinical situations.^{4,6-10,16} Usually the studies classify the behavior in two or three categories being cooperative, uncooperative or cooperative with reserve^{4,6,8-10} and different types of dental situation, especially in dental trauma, influenced the child behavior⁹. Therefore, it is not possible to a direct comparison of results.

In previous studies^{4,6-10} the behavior was directly influenced by children's age and the characteristics related to age as psychomotor development a cognitive ability. The results showed a predominance of cooperative behavior (when the children do not cry and react favorably to the procedures or children cry but do not impair the procedures) in children from 0 to 6 months of age and from 31 to 36 months. In children with ages ranging from 7 to 30 months, a significant increase in the number of children with uncooperative behavior was observed, however, the percentage of uncooperative children was lower than the number of cooperative patients.

Despite the differences of experimental design, the results of this study for the children without disabilities were similar to those reported by previous studies.^{4,6-8,10} Almost half of the children without disabilities assessed present behavior of crying with movements of interruption. The average age of this group was 14 months. In this age, the children psychologically become aware of their body, together with their motor capability, a greater interaction with the environment occur which

results in opposing reactions to dental care, therefore these reactions cannot be considered non-cooperative behavior⁸ but inherent in child development.

In this study, all the four categories of behavior were observed for children with and without disabilities. The predominant behavior of children with disabilities was also of crying with movements of interruption. Comparing the results between the groups, there was no significant difference. Possible explanations for these results is that children differ from individual to individual and disabled children are no different⁵ and behavior of younger children is directly influenced by their difficulty in communication and therefore does not depend on the condition of children who have disabilities.

Regarding maternal dental anxiety, although studies have shown the influence of the child's behavior during dental care^{15,21-24}, in this study, the majority of mothers had low levels of anxiety. Although it was expected a higher level of anxiety in mothers of children with disabilities no differences were observed between the groups.

For all young children, with or without disabilities, early preventive dental care is fundamental to the promotion of oral health. It is hoped that this study will contribute with information about the behavior of the young child with disabilities during dental care. Other studies, with the greater number of children and with longitudinal design should be performed to confirm these results.

CONCLUSIONS

Behavior of children with and without disabilities and maternal dental anxiety in the first dental care were similar.

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Tables

Table 1 - Age and child behavior of children with disabilities (test group) and without disabilities (control group).

	Children with disabilities (n = 28)	Children without disabilities (n = 40)
Age and child behavior		
Age in months	1 to 36	5 to 24
(mean and SD)	(mean = 19; SD = 12)	(mean = 14; SD = 5)
Behavior		
Quiet	8 (28.57%)	9 (22.5%)
Crying only	4 (14.29%)	9 (22.5%)
Disruptive movement only	3 (10.71%)	3 (7.5%)
Crying and disruptive movement	11 (39.29%)	19 (47.5%)

Table 2 - Age, level of education and maternal dental anxiety of mothers of children with and without disabilities.

Mother's characteristics	Children with disabilities (n = 28)	Children without disabilities (n = 40)
Age in years (mean and SD)	17 to 44 (mean = 33; SD = 6)	22 to 40 (mean = 30; SD = 5)
Level of education		
< 8 years	7 (25.0%)	13 (32.5%)
> 8 years	21 (75.0%)	27 (67.5%)
Dental Anxiety		
Without anxiety	2 (7.14%)	6 (15.0%)
Low level	13 (46.43%)	20 (50.0%)
Moderate level	7 (25.0%)	10 (25.0%)
High level	6 (21.43%)	4 (10.0%)

Table 3 - Variables analyzed and probabilities for children and mothers.

Variables	α value
Children's age	0,0586
Child behavior	0,1157
Mother's age	0,5891
Level of education	0,1848
Maternal dental anxiety	0,6147

Mann-Whitney U test ($\alpha < 0.05$).

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