

ORIGINAL ARTICLE

Fear of stomatological treatment in eight and nine year old children

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ABSTRACT

Introduction: fear is a common problem that Stomatology Specialists face daily, it can affect patient management and treatment effectiveness.

Objective: to characterize fear before stomatological treatment in eight and nine year old children.

Methods: a cross-sectional descriptive study was carried out at the “Chiqui Gómez” Polyclinic from January to September 2020. A sample of 162 children selected through simple random sampling was obtained. A Scale of Dental Fears in Children and an Observation Guide were applied.

Results: fear predominated in nine-year-old male children. It was shown that the greater the fear, the greater the frequency of attitudes associated with this emotion.

Conclusions: it was shown that more fear was associated with older age, and that the male sex was more fearful. There was a significant relationship between fear and associated attitudes.

Key words: children; fear; stomatological treatment

RESUMEN

Introducción: el miedo es un problema común que los Especialistas en Estomatología enfrentan a diario, puede afectar el manejo del paciente y la efectividad de los tratamientos.

Objetivo: caracterizar el miedo ante el tratamiento estomatológico en niños de ocho y nueve años.

Métodos: se realizó un estudio descriptivo transversal en el Policlínico “Chiqui Gómez” en el período comprendido de enero a septiembre de 2020. Se obtuvo una muestra de 288 niños seleccionada a través de un muestreo aleatorio simple. Se les aplicó una Escala de miedos dentales en niños y una Guía de observación. Se empleó la estadística descriptiva y la prueba de Pearson Chi cuadrado.

Resultados: predominó el miedo en los niños de nueve años del sexo masculino. Se demostró que a mayor miedo se presentó una mayor frecuencia de actitudes asociadas a esta emoción.

Conclusiones: se evidenció que en el sexo masculino y a mayor edad más miedo, además de mayor frecuencia de expresiones, conductas, posturas y actitudes asociadas al miedo.

Palabras clave: niños; miedo; tratamiento estomatológico

INTRODUCTION

The human being, by instinct of conservation, shows defensive and rejection behaviors before any attempt to access its inner space through any of its cavities; these behaviors can go from an attitude of avoidance to a manifestation of fear, anxiety or phobia.⁽¹⁾ Fear is an emotion characterized by an intense unpleasant sensation caused by the perception of a danger, real or supposed, present, future or even past. It is always originated by an external cause. It manifests itself with different quality and intensity and can be viewed from a double perspective: on the one hand, as a learned fear reaction, conditioned or both, by a previous experience or social learning and, on the other hand, as a disproportionate and irrational response.⁽²⁾

Numerous studies agree that the greatest problem faced by the Pediatric Dentistry Specialist in order to successfully carry out actions to improve oral health in childhood is the fear of dental treatment, so it is necessary to deepen in these aspects.^(3,4,5,6)

In Cuba, although the issue of fear of pediatric stomatological treatment has been the subject of previous research, it is not sufficient for an adequate management of the child. It is one of the common problems that pediatric professionals encounter on a daily basis; it can affect the management of the patient, as well as the effectiveness of treatments, and lead to consequences that can persist into adulthood and constitute a barrier between the professional and the patient. Hence, it is important that children with fear be identified as early as possible and provided with appropriate interventions.⁽⁷⁾

The present investigation aims to characterize fear before stomatological treatment in eight- and nine-year-old children.

METHODS

A cross-sectional descriptive study was carried out to characterize the fear before stomatological treatment in eight and nine year-old children assisted in the Department of Stomatology of the "Chiqui Gómez" Polyclinic of Santa Clara City, Villa Clara Province, during the period from January to September 2020.

The population under study consisted of eight and nine year old children belonging to the health area. A sample of 162 children selected through simple random sampling was obtained.

A scale of dental fears in children was applied to them. Each item was assigned a score: no fear 1, little fear 2 and much fear 3. The scores obtained were added up and a minimum of 15 and a maximum of 45 points and an observation guide were obtained, for the selection ten response options were established through a Lickert scale in which the dimensions to evaluate the presence of fear are: no fear, score from 1 to 3; little fear, score from 4 to 6 and much fear, score from 7 to 10.

The information obtained from the observation was contrasted with that obtained by means of the Dental Fear Assessment Scale.

Compliance with the principles of health research ethics was taken into account in carrying out this study. The different variables were operationalized and a data file created in Microsoft Excel was designed. The data were exported to the IBM SPSS Version 21 statistical program.

Descriptive statistics were performed with absolute and relative frequency distribution. The hypothesis test for the independence of variables was applied and the value of the χ^2 statistic and its associated significance p . The information was presented in contingency tables.

RESULTS

A total of 288 children were studied, among them, 174 (60.4%) were nine years old and 114 (39.6%) were eight years old. For the evaluation of little fear, there were 18 eight-year-old children (66.7%); however, the evaluation of afraid and very afraid was more frequent in nine-year-old children (61.1% and 68.7%, respectively). Out of 36 children, 20 of the nine-year-old group were evaluated without fear (55.6%). There was a significant relationship between evaluation and age (Table 1).

Table 1. Fear of stomatological treatment in eight- and nine-year-old children according to age

Evaluation	Age				Total	
	8 years		9 years		n	%
	n	%	n	%		
Much afraid	31	31.3	68	68.7	99	34.4
Some fear	49	38.9	77	61.1	126	43.8
Little fear	18	66.7	9	33.3	27	9.4
No fear	16	44.4	20	55.6	36	12.5
Total	114	39.6	174	60.4	288	100

Percentage with respect to evaluation
 $\chi^2=11.4938$; $p\chi^2=0.0093$

In Table 2 the results of the evaluation of fear of stomatological treatment according to sex are shown. A total of 158 (54.9%) boys and 130 (45.1%) girls were studied.

Table 2. Fear of stomatological treatment in eight- and nine-year-old children according to sex

Evaluation	Sexo				Total	
	Feminine		Masculine		n	%
	n	%	n	%		
Much afraid	31	31.3	68	68.7	99	34.4
Some fear	51	40.5	75	59.5	126	43.8
Little fear	20	74.1	7	25.9	27	9.4
No fear	28	77.8	8	22.2	36	12.5
Total	130	45.1	158	54.9	288	100

Percentage with respect to evaluation
 $\chi^2=33.3632$; $p\chi^2=0.0000$

The highest percentage of evaluation in the dimensions of no fear and little fear corresponded to the female sex, being higher than 70%. In the male sex, out of 126 individuals, 75 (59.5%) were evaluated with fear and 68 (68.7%) with a lot of fear. There was a significant relationship between evaluation and sex.

As shown in Table 3, all the aspects evaluated showed a significant relationship with the study ages.

Facial expressions were detected in 131 patients with a lot of fear of which 62.6% corresponded to nine-year-old children; 8 out of 10 were identified in eight-year-old children with no fear and 13 out of 21 nine-year-old children with little fear.

Body postures were modified in 100% of eight-year-old children without fear, 63.2% of children with little fear and 65.4% of nine-year-old children.

Regarding behaviors and expression, 83.3% of the eight-year-old children were without fear and 59.4% with little fear. There were 80.2% of nine-year-old children with a lot of fear.

The attitude towards the treatment performed was identified in more than 70% of the children evaluated with no fear or little fear at the age of eight years and in 81.4% of the children of nine years with a lot of fear.

Attitude towards the Stomatology Specialist, the observers and other people in the office was better represented in eight year olds with no fear (62.5%) and in children with little (57.1%) and a lot of fear (66.7%) of nine year olds.

Table 3. Fear of stomatological treatment in eight- and nine-year-old children by age according to the Observational Guide

Aspects observed	No fear		Little fear		Much afraid	
	n	%	n	%	n	%
Facial expressions ($X^2=7.0579$; $pX^2=0.0293$)						
8 years old	8	80.0	8	38.1	49	37.4
9 years old	2	20.0	13	61.9	82	62.6
Total	10	100	21	100	131	100
Body postures ($X^2=25.4341$; $pX^2=0.0000$)						
8 years old	13	100	7	36.8	45	34.6
9 years old	0	0.0	12	63.2	85	65.4
Total	13	100	19	100	130	100
Manifest behaviors and expression ($X^2=34.0321$; $pX^2=0.000$)						
8 years old	10	83.3	38	59.4	17	19.8
9 years old	2	16.7	26	40.6	69	80.2
Total	12	100	64	100	86	100
Attitude towards the treatment performed ($X^2=53.2154$; $pX^2=0.000$)						
8 years old	27	79.4	19	73.1	19	18.6
9 years old	7	20.6	7	26.9	83	81.4
Total	34	100	26	100	102	100
Attitude towards the Stomatology Specialist, observers and other people in the practice ($X^2=6.9750$; $pX^2=0.0306$)						
8 years old	15	62.5	18	42.9	32	33.3
9 years old	9	37.5	24	57.1	64	66.7
Total	24	100	42	100	96	100

DISCUSSION

The analysis of the relationship between fear and age in the present investigation revealed that the older the age, the greater the fear. These results coincide with those of other studies which indicate that fear increases with age^(2,3,8,9) and are in contrast to others.^(8,10)

In a sample of children aged four to eleven years, it was found that fear increased with age, which coincides with the result of this research.⁽¹¹⁾

A study in Finnish children noted that fear is not lower among older children, but fluctuates between the different ages.⁽¹²⁾

In a study of children aged five to eight years the authors found that the greatest fear of stomatological treatment was found in eight-year-olds.⁽¹³⁾ In a study conducted in Peru the majority of children (72.8%) between seven and nine years of age reported low fear.⁽¹⁴⁾ In India the highest level of fear was found in children aged nine to eleven years,⁽¹⁵⁾ results that coincide with those of the present study, in which nine-year-olds were the most frequently fearful of stomatological treatment.

It is considered that children in the age range between six and nine years old go through the process of third childhood with similarities of morphological and psychological characteristics.⁽¹⁶⁾ These last results were confirmed in the present study, in which fear was found more frequently in the studied ages, which were eight and nine years old.

The influence of age could be explained by the immaturity of children's psychological development, which limits their ability to cope with stomatological procedures, therefore, they could be more prone to the acquisition of fears and behavioral management problems during the visit to the Stomatology Specialist.⁽⁸⁾

The above results should be an element to consider for stomatological treatment in this population of school children and to take into account the importance of their immediate attention because it becomes more difficult to attenuate fear before stomatological treatment when it is present at higher levels and at older ages.

Regarding sex, there is a predominance of girls with fear before stomatological treatment, with no difference in relation to boys,^(2,12,13,16,17) results that contrast with those obtained in this research. Fonseca⁽⁸⁾ reported in his work that the greatest affectation by fear before stomatological treatment was presented in the male sex.

Fear of stomatological treatment in children has shown variations according to the population studied, the researchers and the use of different diagnostic criteria.

Authors consulted who used the Dental Fear Assessment Scale in children observed more frequently moderate fear of stomatological treatment in their respective samples.^(8,18) These results differ from those of this research, in which children with a lot of fear predominated.

They also differ from the results of other investigations: one found a low level of fear (87.57%) of the children studied before stomatological treatment⁽¹⁹⁾ and another reported a low level of fear (28.8%) among the children.^(8,16)

6.7% of the children did not report fear of stomatological treatment, a frequency much lower than that found in this study.⁽¹⁶⁾

The presence of fear of stomatological treatment in children is a problem that remains to be solved. The results recorded by several researchers confirm this opinion.^(10,15,16,19,20)

There were no studies in the literature in which observation was used from the perspective of this study to evaluate fear of stomatological treatment, so it was not possible to compare the results obtained in this regard.

CONCLUSIONS

It was evidenced that the male sex and increasing age are more fearful, in addition to a higher frequency of expressions, behaviors, postures and attitudes associated with fear.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

CONTRIBUTION OF THE AUTHORS

ACD: conceptualization, formal analysis, research, methodology, project management, validation, writing the initial draft, writing (review and editing).

MESL: formal analysis, research, methodology, writing initial draft, writing (review and edit).

DHG, JCPD: formal analysis, methodology, data curation, validation.

MCRG: conceptualization, formal analysis, research, methodology, supervision.

ISC: initial drafting, writing (review and editing).