MAURÍCIO ANTÔNIO DE OLIVEIRA

ASSOCIAÇÃO ENTRE EXPERIÊNCIAS ODONTOLÓGICAS NA INFÂNCIA E O MEDO FRENTE AO TRATAMENTO ODONTOLÓGICO ENTRE UNIVERSITÁRIOS BRASILEIROS DE ODONTOLOGIA, PSICOLOGIA E MATEMÁTICA

BELO HORIZONTE

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Dissertação apresentada ao Programa do Colegiado de Pós-Graduação em Odontologia, como requisito parcial para obtenção do título de mestre em Odontologia.

Área de concentração: Odontopediatria

Linha de Pesquisa: Epidemiologia e Controle das Doenças Bucais

Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra

Co-orientadora: Profa. Dra. Miriam Pimenta Parreira do Vale

BELO HORIZONTE

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DEDICATÓRIA

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e conheça todos os mistérios e toda a ciência;
ainda que eu tenha tamanha fé, a ponto
de transportar montanhas,
se não tiver amor, nada serei [...]
Agora, pois, permanecem a Fé,
A Esperança, e o Amor,
Estes três;
Porém, o maior deles é o Amor.
(I Coríntios, cro 13; 1, 13)

RESUMO

Associação entre experiências odontológicas na infância e o medo frente ao tratamento odontológico entre universitários brasileiros de odontologia, psicologia e matemática

RESUMO

Apesar do avanço científico e tecnológico, o medo frente ao tratamento odontológico ainda representa uma barreira aos serviços de saúde bucal e está associado com experiências anteriores do paciente. Diante disso, este estudo avaliou a prevalência do medo frente ao tratamento odontológico e sua associação com experiências odontológicas na infância, entre universitários da Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brasil. Foi realizado um estudo transversal, tipo censo, incluindo todos os estudantes matriculados nos três cursos de graduação. Os estudantes responderam à versão brasileira do *Dental Fear Survey* (DFS) e a um questionário, ambos autoaplicáveis, sobre experiências odontológicas anteriores. Participaram 1.256 universitários, 505 de odontologia (40,2%), 442 de psicologia (35,2%) e 309 de matemática (24,6%), com média de idade de 22,3 anos (desvio padrão=5,1) e predominância do gênero feminino (62,9%). A análise estatística foi realizada utilizando o programa *Statistical Package for the Social Sciences* (SPSS versão 17.0) e incluiu análise descritiva, bivariada (testes Qui-quadrado e Mann-Whitney) e multivariada (modelo de regressão de Poisson), com 5% de significância. O somatório do DFS foi fracionado em tercis para categorização dos grupos em baixo medo (DFS<27), moderado medo (27≤DFS<37) e alto medo (DFS ≥37). Foram realizadas associações entre os três grupos de DFS e os três cursos de graduação, e entre os três grupos de DFS de cada curso com experiências odontológicas anteriores. Universitários de psicologia apresentaram maior prevalência de alto medo

(52.0%) em relação aos de matemática (36.6%) e odontologia (17.6%), sendo esta diferença estatisticamente significativa (p<0,001). Experiências odontológicas negativas na infância foram associadas significativamente com alto medo na idade adulta, nos três cursos (odontologia, 95%CI=1.07-1.69; psicologia, 95%CI=1.21-1.50; matemática, 95%CI=1.12-1.74). Universitários que foram ao dentista para tratamentos curativos apresentaram maior prevalência de alto medo do que aqueles que foram para exame de rotina (p<0,05). Concluiu-se que universitários de psicologia e matemática apresentaram maior prevalência de alto medo frente ao tratamento odontológico do que os de odontologia, e as experiências odontológicas negativas na infância foram associadas à presença do medo frente ao tratamento odontológico na idade adulta.

Palavras chave: medo dental, pesquisa dental, comportamento, odontopediatria, fobia dental.

ABSTRACT

Association between childhood dental experiences and fear towards dental treatment among dental, psychology and mathematics undergraduates in Brazil

ABSTRACT

Despite the scientific and technological advancements, dental fear is still a barrier to oral health services and is associated with the patient's past experiences. Thus, this study examined the prevalence of fear towards dental treatment and the association with dental experiences in childhood among undergraduate students from the Federal University of Minas Gerais (UFMG), Belo Horizonte, Brazil. A retrospective cross-sectional census type study was conducted with students enrolled in dentistry, psychology and mathematics at UFMG, from August to December 2010. A total of 1256 students participated, 505 of dentistry (40.2%), psychology 442 (35.2%) and 309 mathematics (24.6%), with a mean age of 22.3 years and female predominance (62.9%) who responded to the validated Brazilian version of the *Dental Fear Survey (DFS)* and other self-administered questionnaire with questions about past dental experiences. The statistical analysis was performed using the Statistical Package for Social Sciences (SPSS version 17.0) and included descriptive analysis, bivariate, by using the chi-square test and Mann-Whitney, and the Poisson regression model, with 5% significance. The sum of DFS was fractionated into terciles to categorize groups of low fear (DFS<27), moderate fear (27≤DFS<37) and high fear (DFS≥37). Associations were made between the three groups of DFS and three undergraduate courses, and between the three groups of DFS of each course with previous dental experiences. Psychology undergraduates had a higher prevalence of high-fear (52.0%) compared to mathematics (36.6%) and dentistry (17.6%), and this difference

was statistically significant ($p<0.001$). Negative dental experiences in childhood were significantly associated with high fear in adulthood in three courses (dentistry, 95% CI: 1.07-1.69; psychology, 95% CI: 1.21-1.50; mathematics, 95% CI: 1.12-1.74). Undergraduates who went to the dentist for operative treatments had a higher prevalence of high fear from those who were for routine examination ($p<0.05$). It was concluded that undergraduates of psychology and mathematics had a higher prevalence of high dental fear compared to dentistry, ant that negative dental experiences in childhood were associated with the presence of fear towards dental treatment in adulthood.

Key words: dental fear, behavior, dental surveys, pediatric dentistry, dental phobias

LISTA DE ABREVIATURAS

CI	*Confidence Interval*
COEP	Comitê de Ética em Pesquisa
DFS	*Dental Fear Survey*
FAFICH-UFMG	Faculdade de Filosofia e Ciências Humanas
FAPEMIG	Fundação de Amparo a Pesquisa de Minas Gerais
FOUFMG	Faculdade de Odontologia da Universidade Federal de Minas Gerais
ICB-UFMG	Instituto de Ciências Biológicas - UFMG
ICEx-UFMG	Instituto de Ciências Exatas-UFMG
MG	Minas Gerais
PR	*Prevalence Ratio*
SMSA-BH	Secretaria Municipal da Saúde-Belo Horizonte
SPSS	*Statistical Package for the Social Sciences*
SD	*Standard Deviation*
TCLE	Termo de Consentimento Livre e Esclarecido
UFMG	Universidade Federal de Minas Gerais

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SUMÁRIO

CONSIDERAÇÕES INICIAIS

1 CONSIDERAÇÕES INICIAIS

No passado, o medo frente ao tratamento odontológico foi associado com a dor durante o tratamento dentário, com as influências negativas da família, com traços de personalidade e com atitudes do dentista (Shoben e Borland, 1954 apud Kleinknecht *et al*.,1973; Lautch, 1971 apud Kleinknecht *et al*., 1973; Bernstein *et al*., 1979; Berggren e Meynert, 1984; Scott *et al*., 1984; Milgrom *et al*., 1988). Desde aquela época já havia uma relação significativa entre o medo diante do tratamento odontológico e a dor, as injeções e brocas, e as atitudes inadequadas do dentista (Bernstein *et al*., 1979; Milgrom *et al*., 1985). A maioria dos pacientes fóbicos, que evitava o tratamento odontológico por longos anos, relatava experiência dolorosa na infância, atendimento inadequado ou influências familiares negativas em relação ao dentista (Berggren e Meynert, 1984).

As injeções, brocas, exodontias e experiências dolorosas ainda são os objetos e situações geradoras de temor durante o tratamento odontológico e recebem destaque nos relatos de pacientes medrosos (Kleinknecht *et al*., 1973; Berggren e Meynert, 1984; Weinstein *et al*., 1992; Quteish Taani, 2002; Moraes *et al*., 2004; Quteish Taani *et al*., 2005; Tunc *et al*., 2005; Bottan *et al.*, 2007; Yoshida *et al*., 2009).

As experiências odontológicas negativas na infância têm sido consideradas as causas primárias do medo, porém, pacientes que se tornaram medrosos na idade adulta, consideraram o comportamento adverso do dentista mais importante do que a dor na etiologia do medo e da evasão ao tratamento dentário (Kleinknecht *et al.* 1973; Bernstein *et al.,* 1979; Berggren e Meynert, 1984; Scott *et al.,* 1984; Milgrom *et al.,* 1995; Eli *et al*.,1997). Estudos com crianças demonstraram que aquelas com

mais idade e com mais experiências odontológicas, ou que tiveram atendimento de urgência e tratamentos restauradores, apresentaram-se duas vezes ou mais temerosas quando comparadas com as mais novas e as que não tinham cárie (Milgrom *et al.*, 1995; Singh *et al*., 2000). A injeção e o temor da dor durante o tratamento odontológico foram as principais fontes de medo entre as crianças (Moraes *et al*., 2004; Quteish Taani *et al*., 2005). O medo das mães ou responsáveis pela criança e os conflitos familiares também foram considerados fatores geradores de medo (Milgrom *et al*., 1995; Moraes *et al*., 2004).

Porém, existem fatores preditivos de medo, tais como as variáveis sociodemográficas (idade, gênero, nível de educação, emprego, renda). Os indivíduos se tornam mais medrosos à medida que envelhecem e acumulam mais experiências negativas de saúde; o gênero feminino geralmente apresenta níveis mais elevados de medo e fobias; um nível de educação inferior e uma condição financeira mais baixa dificultam o acesso aos serviços regulares de saúde bucal (Domoto *et al.,* 1988; Milgrom *et al.* 1988; Moraes *et al*.,1994; Milgrom, *et al*., 1995; Singh *et al*., 2000; Quteish Taani, 2002, 2005; Tunc *et al.,* 2005; Armfield *et al.,* 2007; Bottan *et al*., 2007; Coolidge *et al.,* 2008a,b; Hittner e Hemmo, 2009; Milgrom *et al.,* 2010). Além disso, as variáveis psicossociais (*locus* de controle interno de saúde, grau de satisfação com a vida, autocontrole, autoconhecimento, constrangimento) (Berggren e Meynert, 1984; Locker *et al.,* 2003; Moore *et al.,* 2004; Hittner e Hemmor, 2009), os traços de personalidade (temperamento, sensibilidade, grau de ansiedade, fobias) (Eli *et al*. 1997; Milgrom, *et al.*,2010) e as atitudes inadequadas do dentista (Berggren e Meynert, 1984; Milgrom *et al.,* 1985; Weinstein *et al.,* 1992; Eli *et al.* 1997; Klaassen *et al,* , 2003; Bottan *et al*. 2007), podem estar

interrelacionados e aumentar o risco de alto medo diante do tratamento odontológico.

O alto medo frente ao tratamento odontológico em adultos tem sido associado significativamente com longos intervalos entre as consultas, atrasos, faltas e cancelamentos crônicos, o que pode agravar os problemas bucais. Esse comportamento caracteriza uma série de repercussões do medo, em que os sentimentos de constrangimento, vergonha ou culpa contribuem para aumentar mais ainda o medo e evitar o tratamento, estabelecendo-se assim um ciclo vicioso: o sentimento de medo leva os indivíduos a evitar o atendimento odontológico regular, com consequente deterioração das condições bucais (Berggren e Meynert, 1984; Milgrom *et al*., 1988; Kent *et al*., 1996; Singh *et al*., 2000; Locker, 2003; Moore *et al*., 2004; Armfield *et al*., 2007; Bottan *et al.*, 2007; Hittner e Hemmo, 2009; Kumar *et al*., 2009; Luoto *et al*., 2009; Milgrom *et al.*, 2010). Cerca de um em cada três indivíduos com medo de dentista se encaixa no perfil de um ciclo vicioso de medo frente ao tratamento odontológico: adiamento de consultas, agravamento dos problemas dentários e tratamentos sintomáticos (Armfield *et al.,* 2007).

A prevalência do alto medo frente ao tratamento odontológico varia de 5,3 a 30% entre as crianças (Moraes *et al*., 2004; Quteish Taani *et al*., 2005; Bottan *et al.,* 2007). Em adultos essa prevalência é de 3,3 a 31,8% (Moraes *et al.,* 1994; Quteish Taani *et al.,* 2002; Tunc *et al.,* 2005; Locker*,* 2003 ; Armfield *et al.* 2007).

Devido à importância do medo na prática odontológica, vários questionários e escalas foram elaborados para sua mensuração e ainda têm despertado interesse de muitos pesquisadores (Kleinknecht *et al*., 1973, 1984; Newton e Buck, 2000; Jaakkola *et al.,* 2009; Armfield, 2010). O *Dental Fear Survey* (DFS) é um desses instrumentos e foi desenvolvido e validado nos Estados Unidos (Kleinknecht *et al.*

1973, 1984; Milgrom *et al*.,1988). Posteriormente, o DFS foi adaptado transculturalmente e validado para uso em universitários brasileiros (Cesar *et al.,* 1993), com resultados semelhantes aos dos USA e Cingapura (Kleinknecht *et al.,* 1984). Atualmente, o DFS tem sido validado e utilizado em diversas populações (Tunc *et al.,* 2005; Coolidge *et al.*, 2008a,b; Jaakkola *et al*., 2009; Yoshida *et al.,* 2009; Milgrom *et al*., 2010; Lueken *et al.*, 2011). Por sua vez, não tem sido utilizado frequentemente no Brasil. Um levantamento bibliográfico realizado em junho de 2011, na base de dados PubMed (*National Library of Medicine*), revelou que no Brasil apenas dois estudos utilizaram o DFS (Cesar *et al*., 1993; Moraes *et al*., 1994) (http://www.ncbi.nlm.nih.gov/pubmed/).

Além de ser uma medida para pesquisas epidemiológicas, o DFS tem aplicabilidade clínica na predição da indicação para sedação de pacientes portadores de alto medo e no estudo de reações específicas de fóbicos em relação ao tratamento odontológico (Milgrom *et al*., 2010; Lueken *et al.*, 2011).

O DFS foi desenvolvido e validado para avaliar o medo diante do tratamento odontológico na idade adulta. Estudos anteriores foram realizados com adolescentes e adultos jovens, principalmente universitários, incluindo estudantes de psicologia (Kleinknecht *et al.,* 1973, 1984; Bernstein *et al.,*1979; Cesar *et al*., 1993; Moraes *et al.*, 1994). Dessa forma, julgou-se importante mensurar o medo odontológico entre universitários, com o intuito de investigar se existe diferença em relação ao medo entre aqueles que freqüentam cursos de graduação de diferentes áreas do conhecimento.

Diante do exposto, desenvolveu-se este estudo com o objetivo de avaliar a associação entre experiências odontológicas na infância e o medo mensurado pelo DFS, entre universitários brasileiros de odontologia, psicologia e matemática.

ARTIGO CIENTÍFICO

ARTIGO CIENTÍFICO

Association between childhood dental experiences and dental fear among dental, psychology and mathematics undergraduates in Brazil

Dental fear and negative dental experience in childhood

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(ANEXO C)

Abstract - Objective: The aim of this study was to evaluate the association between dental experience in childhood and dental fear in adulthood among undergraduate students in dentistry, psychology and mathematics. Methods: A census type cross-sectional study was developed with 1,256 students from the city of Belo Horizonte, Brazil. Students answered the Brazilian version of the Dental Fear Survey (DFS) and a questionnaire about previous dental experience, both self-administered. Associations were tested using descriptive analysis, bivariate and Poisson regression model, with 5% significance level. Results: Psychology undergraduates had a higher prevalence of high dental fear (52.0%) than mathematics (36.6%) and dentistry (17.6%), this difference was statistically significant ($p<0.001$). Negative dental experiences in childhood were significantly associated with high dental fear in adults, in all the three courses (dentistry, 95% CI: 1.07-1.69; psychology, 95% CI: 1.21-1.50; mathematics, 95% CI: 1.12-1.74). Undergraduates who had been to the dentist in their childhood for operative treatments had a higher prevalence of high dental fear than those who had been for routine examination ($p<0.05$). Conclusions: Although students from the three undergraduate courses presented dental fear, psychology students showed a higher prevalence of high dental fear. The negative dental experiences in childhood were associated with high dental fear in adults.

Keywords: dental fear, behavior, dental surveys, pediatric dentistry, dental phobias.

Introduction

Fear is considered a basic emotion present in all ages, cultures, races or species and is related to a real and external triggering stimulus that causes an escape behavior, fight or postponement towards threatening situations (1-4). It is described as an apprehensive and uncomfortable feeling, and may be associated with physical symptoms such as tachycardia, difficulty breathing, dizziness and sweating, caused by a sense of danger (2-4).

It is not unusual to detect dental fear among patients and this may represent a barrier for them to seek for dental care (3, 5-7). Painful and traumatic or negative dental experiences, especially in childhood, are considered important determinants of dental fear (1, 6, 8-14, 16).

Individuals with high dental fear may postpone or cancel appointments, resulting in a vicious cycle of fear, characterized by avoidance, therefore aggravating their dental problems and symptomatic treatments, besides their feeling of guilt, shame and inferiority (5, 9, 10, 13-16).

Due to the importance of fear in dental practice, several instruments were developed to measure it and have attracted attention of many researchers (2, 8, 17-19). The Dental Fear Survey (DFS) is one of those instruments that has been developed and validated in the USA (8, 10, 18). DFS was also adapted and validated for use in Brazilian students (20, 21). Studies showed that DFS was validated and applied in many populations in different countries (13, 17, 22-26). In a search of the PubMed bibliographic database provided by the US National Library of Medicine, it was revealed that in Brazil only two studies with convenience samples had applied DFS to measure dental fear (20, 21). As there was no found in the literature a study

carried out with a big sample size and comparing different groups of individuals, the objective of the present study is to fill this gap in the literature. So, the aim of this study was to measure dental fear among undergraduate students in order to investigate if there were differences from the different fields of study and to associate with negative dental experience in childhood.

Materials and Methods

Population and Study Design

A census type of study was conducted with dentistry, psychology and mathematics undergraduate students enrolled at the Universidade Federal de Minas Gerais (UFMG) from August to December 2010. Students were residents in the city of Belo Horizonte, Minas Gerais, located at southeastern Brazil. The survey was conducted on Pampulha campus, created in the 40s. UFMG is one of the most traditional and largest public educational institution in Brazil offering 75 undergraduate and 247 postgraduate courses (27).

All the students enrolled in the three undergraduate courses were included, from the first to the last year of the course, totaling 1,565 individuals. From those, 1,256 students participated in the main study, with a response rate of 80.25%. The main reasons for the non response rate were the refusal of seven students (0.45%) and the absence of 302 students (19.30%) in the days for data collection. Three attempts were made to approach students who were absent.

Data Collection

Following authorization from the Human Research Ethics Committee of the UFMG, the undergraduates were contacted to participate during their lecture class. Informed consent forms were signed by undergraduate students, and after that, they self-completed the DFS and a questionnaire.

The dental fear was measured by applying the Brazilian version of the DFS, which was validated among psychology undergraduate students in the state of São Paulo, Brazil (20). The DFS has 20 items about dental treatment. The response options follow a Likert scale ranging from “not at all" (score1) to "very much" (score 5). The total for DFS scores could range from 20 to 100, and a high score indicates high dental fear.

The testing of the methods and administration of the questionnaires were carried out in a pilot study involving 80 undergraduate students attending the last semester of the three courses in the first half of 2010. These students did not participate in main study, because at the time of data collection for the main study they had graduated. The pilot study proved it was not necessary to make changes in the methodology proposed.

The students answered a self-administered questionnaire to collect socio-demographic information and items related to dental experience in childhood.

Variables

Dental fear was the main outcome measured by the sum of DFS items and was categorized to create three fear groups. The DFS scores were divided among

terciles. The first tercile was composed by individuals with low level of dental fear (Low fear group, DFS<27). The second tercile had individuals with moderate level of dental fear (Moderate fear group, 27≤DFS<37) and the third tercile was composed by those who has high level of dental fear (High fear group, DFS≥37).

The independent variables were selected from the self-administered questionnaire, such as gender, age at the first visit to the dentist, negative dental experience in childhood and reason for first dental visit. The "age of first childhood visit to the dentist" was dichotomized using the mean as cut-point (≤ 6 years and> 6 years). The “negative dental experience in childhood" was dichotomized into two alternatives: "yes" and "no." The category "yes" was the result of an association between certain types of clinical procedures such as tooth extraction, dentist’s aggressive behavior, fear of anesthetic needle and drill, and prolonged use of orthodontic’s appliance. The "reason for first dental visit" was categorized as a routine, urgency (consisting of reports of toothache and fractures) and dental caries.

Statistical methods

Data organization and statistical analysis were performed using the Statistical Package for the Social Sciences (SPSS for Windows, version 17.0, SPSS Inc., Chicago, IL., USA).

Data analysis involved descriptive statistics and associations between the independent variables and the outcome was tested by bivariate and multivariate analysis. The Kolmogorov-Smirnov test revealed that the normality of the data could not be confirmed. Therefore, the Chi-square test was used for bivariate analyses.

To avoid errors by multiple comparisons, the significant level was divided by the number of comparisons (28). As there were two independent variables that had three categories each, and the outcome also had three groups of dental fear (low, moderate and high level of dental fear), it was necessary to perform multiple comparisons with Bonferroni corrections. Partitions were carried out for “undergraduate courses” and “reason for first dental visit” and generated nine multiple comparisons. The p-values that were less than 0.006 were considered statistically significant in this case. This p-value was resulted from 0.05/9. For the “negative dental experience in childhood” variable, the partition generated three multiple comparisons, and the p-value considered statistically significant for this variable was less than 0.017 (0.05/3).

The Poisson regression model with robust variance was used to determine the adjusted prevalence ratios. The independent variables were introduced into the model, one by one, based on their statistical significance (p<0.20) and/or epidemiological importance. The significance level was set at 5%.

Results

From the total of enrolled undergraduates, there was participation of 505 among 551 of the dentistry course (91.6%), 442 among 680 psychology (65%) and 309 among 334 from mathematics (92.5%). Of the 1,256 students participating, the highest proportion was dentistry (40.2%), followed by psychology (35.2%) and mathematics (24.6%) students. The students’ ages ranged from 18 to 65 years with an average of 22.3 years (SD=5.1). There was a female predominance (62.9%) over

male (37.1%) in the total population. However, the mathematics course had a higher proportion of male students (63.8%) (Table 1).

The majority of the students (76.5%) did not remember their age at the first dental visit. Among those who remembered, most reported that their first visit to the dentist was before the age of six (65.5%). The dental and psychology undergraduates visited the dentist for the first time, more often between four and six years old, and the mathematics undergraduates between seven to ten years old. The highest percentage of students in all the three courses (76.6%) did not have any negative dental experience in childhood, but the psychology students had a higher frequency of negative dental experience comparing to mathematics and dentistry. The routine exam was the most reported reason for the visit to the dentist in the three majors (76.5%), but the math undergraduates reported a higher demand for dental treatment due to caries (20.7%) and urgency (11.0%) comparing to other two courses (Table 1).

The frequency of high level of dental fear (DFS≥37) changed significantly among the three undergraduate courses. The psychology students showed a higher percentage of high dental fear (52%), followed by mathematics (36.6%) and dental (17.6%) ($p<0.001$). After the partition with Bonferroni correction, there was a strong statistically significant difference between undergraduates with low level of dental fear and high level of dental fear in three undergraduate courses ($p<0.001$) (Table 2).

Tables 3, 4 and 5 show the bivariate analysis of dental fear between the three groups of the three undergraduate courses and the independent variables such as gender, negative dental experience in childhood, age at the first visit and reason for the first dental visit. There was no statistically significant difference between gender and the three groups of dental fear of the three undergraduate courses. There was a

statistically significant association between the three groups of dental fear of the three courses and negative dental experience in childhood ($p<0.05$). After the partition with Bonferroni correction, this statistical significance difference was confirmed between low fear and high fear group comparing the dentistry, psychology and mathematics undergraduates ($p<0.017$) (Tables 3, 4 and 5). The moderate fear group and high fear group showed statistically significant differences among themselves for the psychology and mathematics undergraduates ($p<0.017$) (Tables 4 and 5). Regarding the reason for the first dental visit, it was observed a significant association between the three groups of dental fear only in the mathematics course ($p=0.004$). After Bonferroni correction, the mathematics undergraduates who went to the dentist, for urgency reasons, had a statistically significant higher prevalence of dental fear compared to low dental fear from those who visited the dentist for routine examination ($p<0.001$); similar result was found among those who went to the dentist because of tooth decay compared to those by urgency ($p=0.005$) (Table 5).

The results from Poisson regression are in table 6. Only the variables with $p<0.20$ were included in the model. Therefore, the gender variable was included in the first model, but was removed from the final model because it was not statistically significant. The final model showed the prevalence rates between the independent variables and high dental fear group, stratified by the undergraduates courses. A statistically significant association of high dental fear in adults with negative dental experience in childhood was confirmed, in dentistry, psychology and mathematics courses: PR=1.34 (95% CI: 1.07-1.69), PR=1.35 (95% CI: 1:21-1:50), PR=1.40 (95% CI: 1.12-1.74), respectively. As for the reason for the first dental visit, the final model showed that dentistry and psychology undergraduates that had been to the dentist for the first time due to caries were 1.38 (95% CI: 1.08-1.78) and 1.14 (95% CI: 1.00 -

1.30) times more likely to have high dental fear in adulthood than those who had visited for routine examination, respectively. Mathematics undergraduates who had been to the dentist for the first time due to urgency had 1.68 (95% CI: 1.36-2.07) times higher prevalence of high dental fear in adulthood than those who had visited for routine.

Discussion

This cross-sectional study showed that the prevalence of dental fear changed significantly among dentistry, psychology and mathematics undergraduates, and that dental students had lower scores of high dental fear measured by DFS comparing to psychology and mathematics undergraduates. The mathematics and psychology undergraduates showed a higher prevalence of high dental fear, probably because of the lack of knowledge towards the dental treatment they were subjected to (7, 29). The average age of students in three undergraduate courses was 22.3 (SD=5.1) and 35.4% of them were classified as high dental fear group, although they probably had access to a more technologically advanced dentistry and more conservative.

Although these findings showed that high dental fear was less prevalent among dentistry undergraduates, it was observed that the prevalence of high dental fear among them was still high (17.6%). Facing this result, we must reflect on the future role of dental professionals, who are often afraid of the procedures they perform in their patients, although they had received adequate oral health education as part of their curricula (29). The child's age at first visit to the dentist was one of the variables studied. The vast majority of undergraduates did not remember the age of their first consultation (76.5%). Despite its importance, the participants were faced

with memory bias (30). Although questionnaires are the main instruments for collecting data in surveys (31), the recall method based on data collected through questionnaires retrospective self-reports may influence the respondents and bias can occur when interpreting the results (30, 32). This result could be considered with caution, since the memory method was used to investigate the dental experience in childhood. Therefore, questionnaires regarding past events, such as recall episodes of the childhood, may cause information bias and compromise the scientific results (32). However, many respondents remembered the reason for this first visit. The routine exam was the most frequent reason the first visit to the dentist reported by students from three undergraduate courses (76.5%), while a lower proportion (23.5%) reported that the first dental experience was due to operative treatments (caries and urgency), which showed a more preventive behavior of the parents / guardians of these individuals when they were children. This result indicates a paradigm shift of health promotion, compared to the time of validation of the DFS in Brazil, conducted with undergraduates in the early 90's (20), in which most students reported having been to the dentist the first time for operative treatment (51.6%) and a minority for routine examinations (23.0%).

The results of this study were in agreement with previous studies that reported that undergraduates from three university majors who had a negative dental experience in childhood, had significantly higher prevalence of high dental fear than those who reported no such experience (3, 8-10). Mathematics undergraduates, who were treated in childhood as urgency, had significantly higher prevalence of high dental fear than those who were for routine examination or treatment of caries. It should be noted that most mathematics undergraduates (54.2%) reported that their first time in dentist was after seven-years-old.

The operative dental treatment in childhood (urgency and dental caries) probably explains the high occurrence of dental fear among undergraduates. Among dental students who went to the dentist for routine examination, the percentage of low dental fear group was almost three times greater than in the high dental fear group. Among psychology undergraduates, those who went to the dentist for emergency or dental caries treatment the percentages of high dental fear group were seven and four times higher compared to the low dental fear group, respectively. These results could explain the higher prevalence of high dental fear among psychology undergraduates, who had a higher frequency of negative dental experience. However, fear is a complex emotion (2, 15) and DFS scores does not always reflect all of its subjective understanding (2), and should be evaluated taking under consideration the psychological profile of individuals who chose each profession. In this study it was not measured personality traits of the participants.

Although the origins for fear towards dental treatment are many and complex (2, 3, 12, 18), this study is consistent with the literature finding that negative dental experience in childhood could significantly contribute to the persistence of high dental fear in adults (1, 10, 11, 13, 14). The fear of pain, acquired by traumatic experiences during childhood, could persist and reflect negatively on the adult behavior (14, 15). The fear of being exposed to painful and unpleasant experiences could lead to postponement or cancellation of dental visits, increasing the complexity of treatments, creating more dental fear, thereby interfering with health promotion (13-15).

Most of the previous studies reported that the female gender had a higher prevalence of high dental fear than male (7, 10, 13-15, 22, 24, 29). However, in this study there was no statistically significant difference in the three groups of dental fear

of the three undergraduate courses. This result was similar to the DFS validation study in Brazil (20).

Fear recognition in adults by using questionnaires in the first dental visit may facilitate a more appropriate approach of the patient (11, 17, 24). DFS is a fast and self-administered questionnaire for the office waiting room and is appropriate to assess the fear of specific items from dental treatment, which could facilitate the identification of the stimuli that causes fear for the patient (25). The better informed dentist could establish a relationship of trust with the patient, which favors the dental care (11, 14). One should take into account the information bias in studies using self-assessment questionnaires, because the patient might feel embarrassed to share his fear with the dentist (14) or bias may arise in the design of their questions (31). However, DFS has clinical applicability in predicting the behavior for the use of sedation in patients with high dental fear and in the study of specific phobic reactions related to dental treatment (13, 26).

Since dental fear is a constant in dental treatment it is important for dental schools to encourage the development of behavioral sciences, with emphasis on training human resources with a focus on patient-provider relationship, allowing an appropriate approach to the children's fears or minimizing the consequences of negative dental experience in childhood (11, 14, 15, 17,18, 22).

In conclusion, the results showed that the prevalence of dental fear was significantly different in three undergraduate courses. There was a higher prevalence of high dental fear among psychology undergraduates, followed by mathematics and dentistry. Additionally, the undergraduates who had a negative dental experience during childhood and had been to the dentist for the first time for operative treatment had significantly higher prevalence of high dental fear than those with good dental

experience in childhood. Therefore, the proper conduct of the pediatric dentists is extremely important during children's treatment in situations that could lead to fear, with cognitive and behavioral strategies that allow a more humane and proper management of children and that could prevent dental fear in adulthood, thereby contributing to health promotion.

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Table 1: Frequency distribution of undergraduate students (n=1,256) according to gender, age, Dental Fear Survey (DFS) and dental experience in childhood; Belo Horizonte, Brazil, 2010.

Variables	*Undergraduate students n(%)**			
	Dentistry	*Psychology*	*Mathematics*	*Total*
Gender				
Male	156(30.9)	113(25.6)	197(63.8)	466(37.1)
Female	349(69.1)	329(74.4)	112(36.2)	790(62.9)
Total	505(100)	442(100)	309(100)	1256(100)
Age (years)*	21.2(3.7)	22.3(5.2)	23.2(6.5)	22.3(5.1)
High DFS*	89(17.6)	230(52.0)	113(36.6)	432(35.4)
Remember age at first dental visit **				
No	408(80.8)	340(76.9)	213(68.9)	961(76.5)
Yes	97(19.2)	102(23.1)	96(31.1)	295(23.5)
Total	504(100)	441(100)	309(100)	1254(100)
Age at first dental visit **				
≤ 6 years	77(80.2)	71(70.3)	44(45.8)	192(65.5)
> 6 years	19(19.8)	30(29.7)	52(54.2)	101(34.5)
Total	96(100)	101(100)	96(100)	293(100)
Negative dental experience in childhood **				
No	411(81.4)	307(69.6)	243(78.6)	961(76.6)
Yes	94(18.6)	134(30.4)	66(21.4)	294(23.4)
Total	505(100)	441(100)	309(100)	1255(100)
Reason for first dental visit **				
Routine examination	310(81.4)	256(76.2)	149(68.3)	715(76.5)
Urgency	25(6.6)	24(7.1)	24(11.0)	73(7.8)
Dental caries	46(12.0)	56(16.7)	45(20.7)	147(15.7)
Total	381(100)	336(100)	218(100)	935(100)

* The variables “age” and “DFS” were presented with mean and standard deviation (in parentheses) values.

**Not all students answered all questions.

Table 2: Association between Dental Fear Survey (DFS) scores and undergraduate courses (n=1,256); Belo Horizonte, Brazil, 2010.

Variable	***DFS***			**P-value***	**Partition with Bonferroni correction (P-value)* †**
	Low fear n(%)	Moderate fear n(%)	High fear n(%)		
Undergraduate Course					**Low fear *versus* Moderate fear**
					Dentistry *vs* Psychology – **p<0.001**
					Dentistry *vs* Mathematics – p=0.091
Dentistry	232(45.9)	184(36.4)	89(17.6)		Psychology *vs* Mathematics – **p=0.002**
					Low fear *versus* High fear
					Dentistry *vs* Psychology – **p<0.001**
Psychology	72(16.3)	140(31.7)	230(52.0)	**<0.001**	Dentistry *vs* Mathematics – **p<0.001**
					Psychology *vs* Mathematics – **p<0.001**
					Moderate fear *versus* High fear
Mathematics	95(30.7)	101(32.7)	113(36.6)		Dentistry *vs* Psychology – **p<0.001**
					Dentistry *vs* Mathematics – **p<0.001**
					Psychology *vs* Mathematics – p=0.026

***** Chi-square test.

† Bonferroni correction (p<0.006); Result in bold type significant at p<0.006

Values in parentheses refer to the percentages between rows.

Table 3: Association between Dental Fear Survey (DFS) scores from dental students (n=505) and independent variables; Belo Horizonte, Brazil, 2010.

	Dentistry				
	DFS				**Partition with Bonferroni correction**
Variables	Low fear n(%)	Moderate fear n(%)	High fear n(%)	**P-value**	**(P-value)* †**
Gender					
Male	78(50.0)	53(34.0)	25(16.0)	0.470	
Female	154(44.1)	131(37.5)	64(18.3)		
Negative dental experience during childhood					Low fear *versus* Moderate fear – **p=0.011**
No	202(49.1)	143(34.8)	66(16.1)	**0.008**	Low fear *versus* High fear – **p=0.005**
Yes	30(31.9)	41(43.6)	23(24.5)		Moderate fear *versus* High fear – p=0.515
Age at first dental visit					
≤ 6 years	36(46.8)	30(39.0)	11(14.3)	0.339	
> 6 years	6(31.6)	8(42.1)	5(26.3)		
Reason for first dental visit					
Routine examination	150(48.4)	107(34.5)	53(17.1)		
Urgency	13(28.3)	22(47.8)	11(23.9)	0.143	
Dental caries	10(40.0)	10(40.0)	5(20.0)		

* Chi-square test.

† Bonferroni correction (0.017); Result in bold type significant at p<0.017

Values in parentheses refer to the percentages between rows.

Note: Not all students answered all questions.

Table 4: Association between Dental Fear Survey (DFS) scores from psychology students (n=442) and independent variables; Belo Horizonte, Brazil, 2010.

	Psychology				
	DFS				**Partition with Bonferroni correction**
Variables	Low fear n(%)	Moderate fear n(%)	High fear n(%)	**P-value**	**(P-value)* †**
Gender					
Male	23(20.4)	40(35.4)	50(44.2)	0.137	
Female	49(14.9)	100(30.4)	180(54.7)		
Negative dental experience during childhood					Low fear *versus* Moderate fear – p=0.154
No	64(20.8)	113(36.8)	130(42.3)	**<0.001**	Low fear *versus* High fear – **p<0.001**
Yes	8(6.0)	26(19.4)	100(74.6)		Moderate fear *versus* High fear – **p<0.001**
Age at first dental visit					
≤ 6 years	12(16.9)	21(29.6)	38(53.5)	0.758	
> 6 years	4(13.3)	11(36.7)	15(50.0)		
Reason for first dental visit					
Routine examination	45(17.6)	91(35.5)	120(46.9)		
Urgency	5(8.9)	14(25.0)	37(66.1)	0.101	
Dental caries	3(12.5)	10(41.7)	168(50.0)		

* Chi-square test.

† Bonferroni correction (0.017); Result in bold type significant at p<0.017

Values in parentheses refer to the percentages between rows.

Note: Not all students answered all questions.

Table 5: Association between Dental Fear Survey (DFS) scores from mathematics students (n=309) and independent variables; Belo Horizonte, Brazil, 2010.

Variables	***Mathematics*** ***DFS*** Low fear n(%)	Moderate fear n(%)	High fear n(%)	P-value	Partition with Bonferroni correction (P-value)* †
Gender					
Male	62(31.5)	71(36.0)	64(32.5)	0.109	
Female	33(29.5)	30(26.8)	49(43.8)		
Negative dental experience during childhood					Low fear *versus* Moderate fear – p=0.059
No	83(34.2)	88(36.2)	72(29.6)	**<0.001**	Low fear *versus* High fear – **p<0.001**
Yes	12(18.2)	13(19.7)	41(62.1)		Moderate fear *versus* High fear – **p<0.001**
Age at first dental visit					
≤ 6 years	15(34.1)	8(18.2)	21(47.7)	0.270	
> 6 years	15(28.8)	17(32.7)	20(38.5)		
Reason for first dental visit					**Low fear *versus* Moderate fear** ‡ Routine examination *vs* Urgency– p=0.018 Routine examination *vs* Dental caries – p=0.586 Dental caries *vs* Urgency – p=0.057
					Low fear *versus* High fear ‡
Routine examination	58(38.9)	46(30.9)	45(30.2)		Routine examination *vs* Urgency– **p<0.001** Routine examination *vs* Dental caries – p=0.275
Urgency	14(31.1)	14(31.1)	17(37.8)	**0.004**	Dental caries *vs* Urgency – **p=0.005**
					Moderate fear *versus* High fear ‡
Dental caries	1(4.2)	7(29.2)	16(66.7)		Routine examination *vs* Urgency– p=0.083 Routine examination *vs* Dental caries – p=0.604 Dental caries *vs* Urgency – p=0.272

*Chi-square test.

† Bonferroni correction (0.017); ‡ Bonferroni correction (0.006);

Result in bold type significant at p<0.017 or p<0.006

Values in parentheses refer to the percentages between rows.

Note: Not all students answered all questions.

Table 6: Poisson regression models explaining the independent variables from students with High fear, stratified by undergraduate course (n=1,256); Belo Horizonte, Brazil, 2010.

Variables	*Dentistry*		*Psychology*		*Mathematics*	
	Adjusted PR (95% CI)	**P value**	**Adjusted PR (95% CI)**	**P value**	**Adjusted PR (95% CI)**	**P value**
Negative dental experience in childhood						
No	1		1		1	
Yes	1.34(1.07-1.69)	**0.013**	1.35(1.21-1.50)	**<0.001**	1.40(1.12-1.74)	**0.003**
Reason for first dental visit						
Routine examination	1		1		1	
Urgency	1.07(0.73-1.58)	0.720	0.99(0.80-1.22)	0.913	1.68(1.36-2.07)	**<0.001**
Dental caries	1.38(1.08-1.78)	**0.011**	1.14(1.00-1.30)	**0.053**	1.10(0.84-1.44)	0.509

PR: Prevalence Ratio; 95% CI: Confidence Interval

Result in bold type significant at 5% level

CONSIDERAÇÕES FINAIS

3 CONSIDERAÇÕES FINAIS

Apesar do conhecimento científico e do avanço dos procedimentos técnicos, o medo do tratamento odontológico ainda é uma realidade (Armfield *et al*., 2007; Al-Omari e Al-Omiri, 2009; Milgrom *et al*., 2010). Universitários com média de idade 22,3 anos (SD=5,1), como constatado neste estudo, obtiveram escores significativos de alto medo odontológico, embora provavelmente tenham vivenciado uma odontologia mais preventiva e conservadora quando crianças.

Este estudo demonstrou que a experiência odontológica negativa na infância foi associada significativamente com o alto medo na idade adulta. Tal fato pode ser decorrente de uma vivência de situação estressante ou traumática envolvendo estímulos específicos do tratamento odontológico na infância (Berggren e Meynert, 1984; Scott *et al*.,1984; Domoto *et al.,*1988; Milgrom *et al*., 1988; 1995; Singh *et al*., 2000).

Os universitários que recordaram de experiências negativas durante o primeiro atendimento odontológico na infância relataram ter alto medo frente ao tratamento na idade adulta. A instrumentação utilizada pelo cirurgião-dentista e a relação paciente-dentista parecem estar intimamente relacionadas com a sua imagem, o que infere uma associação negativa com o dentista. O fórceps, o motor, a seringa de anestesia são exemplos dos instrumentais mais comumente associados ao medo do tratamento odontológico. Apesar da evolução da odontologia nas últimas décadas, o cirurgião-dentista ainda hoje é estigmatizado pela mídia (Cruz *et al*., 1997). Ainda é possível assistir a filmes e televisão onde cenas exibem o dentista como “torturador”, até mesmo em desenhos animados infantis. Isso se repete na música e em outros meios de comunicação.

O odontopediatra tem a oportunidade de evitar experiências negativas durante o atendimento odontológico, contribuindo para a prevenção do medo diante do tratamento odontológico na idade adulta e para a promoção da saúde. O indivíduo medroso tende a adiar visitas ao dentista, mesmo diante de situações de desconforto e dor. Assim, forma-se um ciclo vicioso do medo que pode levar à progressão de problemas bucais simples para quadros mais graves (Armfield *et al.,* 2007).

A interação entre paciente e dentista é fundamental para a prevenção do medo odontológico. O dentista deve inteirar-se do comportamento adverso e perceber as reações fisiológicas do medo durante o tratamento odontológico, para abordar estrategicamente o indivíduo no intuito de diminuir o medo e evitar a dor, tendo em vista que cada indivíduo tem uma resposta particular aos estímulos do tratamento odontológico (Locker D., 2003; Tunc *et al.*, 2005; Jaakkola *et al.,* 2009).

As medidas de medo frente ao tratamento odontológico podem guiar o dentista na conduta mais adequada de abordagem do paciente que tem medo (Coolidge *et al*., 2008; Jaakkola *et al*., 2009). O DFS é um instrumento válido para pesquisas epidemiológicas (Cesar *et al.*, 1993) e como medida preditiva de indicação para tratamento odontológico sob sedação (Milgrom *et al.,* 2010), mas ainda não tem um ponto de corte bem definido. Muitos estudos tem usado a mediana como ponto de corte, o que determina que 50% da população tem baixo medo e 50% tem alto medo frente ao tratamento odontológico. Neste estudo, os tercis foram usados para classificar e caracterizar melhor as associações do medo com outras variáveis importantes entre universitários. Porém, é importante ressaltar que este estudo transversal foi de conveniência e que a proporção de indivíduos com alto nível de medo poderia ser diferente de uma pesquisa da população geral.

O presente estudo abre uma perspectiva para a aplicação clínica deste instrumento em sala de espera de consultórios odontológicos em indivíduos que não visitam o dentista há um ou mais anos. Dessa forma, seria possível a comparação do medo do indivíduo, obtido pelos escores do DFS, com o medo autorrelatado ou avaliado pelo profissional durante o atendimento, o que poderá auxiliar na abordagem mais adequada do paciente que sente medo.

Os achados descritos neste trabalho também levam à reflexão de que os projetos pedagógicos dos cursos de odontologia devem estimular a abordagem da temática da relação profissional/paciente com foco na imagem positiva do cirurgião-dentista, estendendo esse trabalho à comunidade em geral.

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APÊNDICES

APÊNDICE A

Carta de Apresentação ao Diretor(a) da Escola de Matemática

Prezado Diretor(a),

Meu nome é Maurício Antônio de Oliveira, sou aluno do curso de mestrado da Faculdade de Odontologia da UFMG.

Venho por meio desta apresentar minha pesquisa sobre o medo frente ao tratamento odontológico, seus objetivos e solicitar a sua autorização.

Os objetivos da pesquisa são avaliar a prevalência do medo frente ao tratamento odontológico em universitários e a possibilidade da presença do medo frente ao tratamento odontológico na escolha da profissão.

Para realização da pesquisa serão aplicados questionários em sala de aula teórica.

Os resultados da pesquisa serão divulgados em revistas científicas sem revelar a identidade de nenhum participante. Os dados serão manipulados apenas pela equipe de pesquisadores.

Será garantido o direito de participação ou não e da possibilidade de desistência de participação em qualquer momento da pesquisa.

A pesquisa será aprovada pelo Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais.

Então solicito sua autorização para a pesquisa e enfatizo o papel importante que estará exercendo na contribuição do desenvolvimento desta pesquisa já que os resultados podem trazer dados que valorizem a promoção da saúde bucal com foco na relação profissional/paciente.

Atenciosamente,

Maurício Antônio de Oliveira

Aluno: Maurício Antônio de Oliveira - (31) 8893-2569

Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra – (31) 3409-2496

Co-Orientadora: Profa. Dra. Miriam Pimenta Parreira do Vale

Autorizado.

Prof. Remy de Paiva Sanchis
Coordenador do Colegiado do Curso de Graduação em Matemática/ICEx-UFMG

Belo Horizonte, 22 de abril de 2010

APÊNDICE B

Carta de Apresentação ao Diretor(a) da Escola de Psicologia

Prezado Diretor(a),

Meu nome é Maurício Antônio de Oliveira, sou aluno do curso de mestrado da Faculdade de Odontologia da UFMG.

Venho por meio desta apresentar minha pesquisa sobre o medo frente ao tratamento odontológico, seus objetivos e solicitar a sua autorização.

Os objetivos da pesquisa são avaliar a prevalência do medo frente ao tratamento odontológico em universitários e a possibilidade da presença do medo frente ao tratamento odontológico na escolha da profissão.

Para realização da pesquisa serão aplicados questionários em sala de aula teórica.

Os resultados da pesquisa serão divulgados em revistas científicas sem revelar a identidade de nenhum participante. Os dados serão manipulados apenas pela equipe de pesquisadores.

Será garantido o direito de participação ou não e da possibilidade de desistência de participação em qualquer momento da pesquisa.

A pesquisa será aprovada pelo Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais.

Então solicito sua autorização para a pesquisa e enfatizo o papel importante que estará exercendo na contribuição do desenvolvimento desta pesquisa já que os resultados podem trazer dados que valorizem a promoção da saúde bucal com foco na relação profissional/paciente.

Atenciosamente,

Maurício Antônio de Oliveira

Aluno: Maurício Antônio de Oliveira - (31) 8893-2569

Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra – (31) 3409-2496

Co-Orientadora: Profa. Dra. Miriam Pimenta Parreira do Vale

De acordo

Prof.ª Del[illegible]es Barros
Coordenadora do Colegiado do Curso
de Graduação em Psicologia
FAFICH/UFMG

04/05/2010

APÊNDICE C

Carta de Apresentação ao Diretor(a) da Escola de Odontologia

Prezado Diretor(a),

Meu nome é Maurício Antônio de Oliveira, sou aluno do curso de mestrado da Faculdade de Odontologia da UFMG.

Venho por meio desta apresentar minha pesquisa sobre o medo frente ao tratamento odontológico, seus objetivos e solicitar a sua autorização.

Os objetivos da pesquisa são avaliar a prevalência do medo frente ao tratamento odontológico em universitários e a possibilidade da presença do medo frente ao tratamento odontológico na escolha da profissão.

Para realização da pesquisa serão aplicados questionários em sala de aula teórica.

Os resultados da pesquisa serão divulgados em revistas científicas sem revelar a identidade de nenhum participante. Os dados serão manipulados apenas pela equipe de pesquisadores.

Será garantido o direito de participação ou não e da possibilidade de desistência de participação em qualquer momento da pesquisa.

A pesquisa será aprovada pelo Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais.

Então solicito sua autorização para a pesquisa e enfatizo o papel importante que estará exercendo na contribuição do desenvolvimento desta pesquisa já que os resultados podem trazer dados que valorizem a promoção da saúde bucal com foco na relação profissional/paciente.

Atenciosamente,

Maurício Antônio de Oliveira

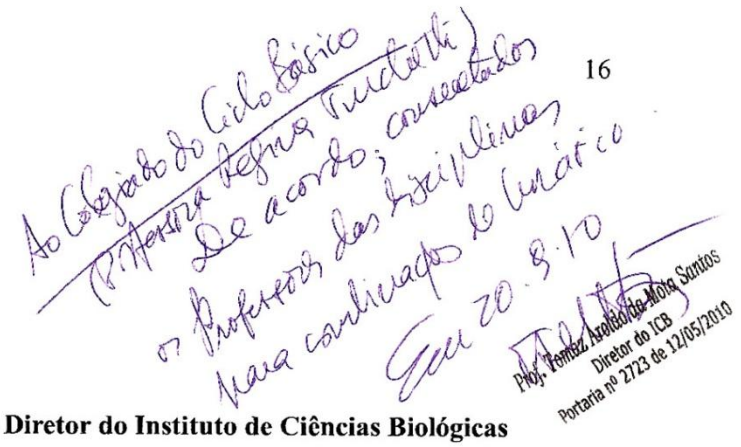
Aluno: Maurício Antônio de Oliveira - (31) 8893-2569

Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra – (31) 3409-2496

Co-Orientadora: Profa. Dra. Miriam Pimenta Parreira do Vale

Professor Evandro Neves Abdo
Matrícula - UFMG 10961-6
Diretor da Faculdade de
Odontologia / UFMG

APÊNDICE D



16

Carta de Apresentação ao Diretor do Instituto de Ciências Biológicas

Prezado Diretor Sr. Tomaz Aroldo da Mota Santos

Meu nome é Maurício Antônio de Oliveira, sou aluno do curso de mestrado da Faculdade de Odontologia da UFMG.

Venho por meio desta apresentar minha pesquisa sobre o medo frente ao tratamento odontológico, seus objetivos e solicitar a sua autorização.

Os objetivos da pesquisa são avaliar a prevalência do medo frente ao tratamento odontológico em universitários e a possibilidade da presença do medo frente ao tratamento odontológico na escolha da profissão.

Para realização da pesquisa serão aplicados questionários em sala de aula teórica.

Os resultados da pesquisa serão divulgados em revistas científicas sem revelar a identidade de nenhum participante. Os dados serão manipulados apenas pela equipe de pesquisadores.

Será garantido o direito de participação ou não e da possibilidade de desistência de participação em qualquer momento da pesquisa.

A pesquisa foi aprovada pelo Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais, parecer n. ETIC 0201.0.203.000-10.

Então solicito sua autorização para a pesquisa e enfatizo o papel importante que estará exercendo na contribuição do desenvolvimento desta pesquisa já que os resultados podem trazer dados que valorizem a promoção da saúde bucal com foco na relação profissional/paciente.

Atenciosamente,

Maurício Antônio de Oliveira

Aluno: Maurício Antônio de Oliveira - (31) 8893-2569

Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra - (31) 3409.2496

Co-Orientadora: Profa. Dra. Miriam Pimenta Parreira do Vale

APÊNDICE E1

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO

PARA RESPONDENTES ACIMA DE 18 ANOS

Eu_____
declaro que fui devidamente informado e esclarecido dos objetivos da pesquisa e concordo em participar respondendo as perguntas que forem feitas. Autorizo também que os dados obtidos através dos questionários sejam apresentados e publicados em eventos e artigos científicos.

Belo Horizonte, _____ de _____ de _____

_____
Assinatura do participante

TERMO DE ESCLARECIMENTO

O Programa de Pós-Graduação da FOUFMG te convida a participar da pesquisa "Avaliação do medo frente ao tratamento odontológico entre universitários das áreas de Odontologia, Psicologia e Matemática" desenvolvido pelo mestrando Maurício Antônio de Oliveira sob a orientação da Profa. Júnia Maria Cheib Serra-Negra que tem o objetivo de avaliar vários aspectos que podem interferir na saúde bucal das pessoas devido ao medo de dentista. Este é um estudo epidemiológico cujos dados serão coletados em sala de aula. Você responderá a dois questionários simples que não possuem respostas certas ou erradas. O que importa para nós é a sua história de vida.

É garantido o direito de confidencialidade (garantia de sigilo), liberdade de participação e de se retirar da pesquisa a qualquer momento, caso queira. Não existe nenhum ônus para participar e não haverá nenhum problema para você caso queira desistir ou não participar.

Se tiver dúvidas, pode entrar em contato comigo através dos telefones: (31) 3284-2569 / 8893-2569 ou entrar em contato com o Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais (UFMG) pelo telefone: (31) 3409-4592.

_____
Nome do pesquisador: Maurício Antônio de Oliveira - (31) 8893-2569

_____
Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra

_____
Co-Orientadora: Profa. Dra Miriam Pimenta Parreira do Vale

Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais (COEP): (31) 3409-4592

APÊNDICE E2

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO
PARA PAIS OU RESPONSÁVEIS DOS RESPONDENTES MENORES DE 18 ANOS

Eu_____

pais/responsáveis por _____declaro que fui devidamente informado e esclarecido dos objetivos da pesquisa e concordo em autorizar a participação do mesmo respondendo as perguntas que forem feitas. Autorizo também que os dados obtidos através dos questionários sejam apresentados e publicados em eventos e artigos científicos.

Belo Horizonte, _____ de _____ de _____

_____

Assinatura do responsável

TERMO DE ESCLARECIMENTO

O Programa de Pós-Graduação da FOUFMG te convida a participar da pesquisa "Avaliação do medo frente ao tratamento odontológico entre universitários das áreas de Odontologia, Psicologia e Matemática" desenvolvido pelo mestrando Maurício Antônio de Oliveira sob a orientação da Profa. Júnia Maria Serra-Negra que tem o objetivo de avaliar vários aspectos que podem interferir na saúde bucal das pessoas devido ao medo de dentista. Este é um estudo epidemiológico cujos dados serão coletados em sala de aula. Você responderá a dois questionários simples que não possuem respostas certas ou erradas. O que importa para nós é a sua história de vida.

É garantido o direito de confidencialidade (garantia de sigilo), liberdade de participação e de se retirar da pesquisa a qualquer momento, caso queira. Não existe nenhum ônus para participar e não haverá nenhum problema para você caso queira desistir ou não participar.

Se tiver duvidas, pode entrar em contato comigo através dos telefones: (31) 3284-2569 / 8893-2569 ou entrar em contato com o Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais (UFMG) pelo telefone: (31) 3409-4592.

_____

Nome do pesquisador: Maurício Antônio de Oliveira - (31) 8893-2569

_____

Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra

_____

Co-Orientadora: Profa. Dra. Miriam Pimenta Parreira do Vale

Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais (COEP): (31) 3409-4592

APÊNDICE E3

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO
PARA RESPONDENTES MENORES DE 18 ANOS

Eu_____
declaro que fui devidamente informado e esclarecido dos objetivos da pesquisa e concordo em participar respondendo as perguntas que forem feitas. Autorizo também que os dados obtidos através dos questionários sejam apresentados e publicados em eventos e artigos científicos.

Belo Horizonte, _____ de _____ de _____

_____
Assinatura do responsável

TERMO DE ESCLARECIMENTO

O Programa de Pós-Graduação da FOUFMG te convida a participar da pesquisa "Avaliação do medo frente ao tratamento odontológico entre universitários das áreas de Odontologia, Psicologia e Matemática" desenvolvido pelo mestrando Maurício Antônio de Oliveira sob a orientação da Profa. Júnia Maria Serra-Negra que tem o objetivo de avaliar vários aspectos que podem interferir na saúde bucal das pessoas devido ao medo de dentista. Este é um estudo epidemiológico cujos dados serão coletados em sala de aula. Você responderá a dois questionários simples que não possuem respostas certas ou erradas. O que importa para nós é a sua história de vida.

É garantido o direito de confidencialidade (garantia de sigilo), liberdade de participação e de se retirar da pesquisa a qualquer momento, caso queira. Não existe nenhum ônus para participar e não haverá nenhum problema para você caso queira desistir ou não participar.

Se tiver duvidas, pode entrar em contato comigo através dos telefones: (31) 3284-2569 / 8893-2569 ou entrar em contato com o Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais (UFMG) pelo telefone: (31) 3409-4592.

_____
Nome do pesquisador: Maurício Antônio de Oliveira - (31) 8893-2569

_____
Orientadora: Profa. Dra. Júnia Maria Cheib Serra-Negra

_____
Co-Orientadora: Profa. Dra Miriam Pimenta Parreira do Vale

Comitê de Ética em Pesquisa da Universidade Federal de Minas Gerais (COEP): (31) 3409-4592

APÊNDICE F
QUESTIONÁRIO

Preencher nas células sombreadas

Nome:						Data de nascimento:	
Endereço:						Idade:	
1 - Qual (is) motivo (s) o levou (aram) a escolher esta profissão que está cursando?							
2 - Você se lembra da idade de sua primeira visita ao dentista?							
	Sim				Não		
3 - Com que idade foi a sua primeira visita ao dentista?							
4 - Qual o motivo de sua primeira visita ao dentista?			Exame de rotina		Dor		
			Fratura de dente		Cárie		
			Outro				
5 - Você teve alguma experiência odontológica ruim na infância?							
	Sim		Não				
Qual?							
6 - Você tem medo de ir ao dentista?							
	Nenhum medo		Um pouco				
	Bastante medo		Muito medo				
7 - Existe (m) algum (ns) fator (es) que o incomoda (m) durante o tratamento odontológico?							
	Sim		Não				
Qual?							
8 - Há quanto tempo você não visita o dentista?							
9 - Quantas vezes por ano você procura cuidados de um dentista?							
10 - Você se acha com necessidade de fazer algum tratamento dentário?							
	Sim		Não				
Qual? Marque as opções abaixo.							
	Rotina (*check up*)		Limpeza		Tratamento de gengiva		
	Restauração		Tratamento canal		Outro		
	Tratamento estético		Extração				
	Cirurgia		Clareamento				
11 – Você sentiu dor de dente nos últimos 12 meses?							
	Sim		Não				
12 - Você se sente desconfortável com a aparência de seus dentes, boca?							
	Sim		Não				
Por quê?							
13 - Você evita comer alguns alimentos devido a problemas dentários?							
	Sim		Não				
14 - Você acha que a sua vida foi menos satisfatória devido a problemas dentários?							
	Sim		Não				
Por quê?							
15 - Você teve/tem dificuldade para dormir por causa de problemas dentários?							
	Sim		Não				
Qual?							
16 - Como você classificaria a sua própria saúde bucal?							
	Ruim		Regular				
	Boa		Ótima				
17 – Quando você vai escolher um dentista você prefere homem ou mulher?							
	Homem		Mulher				
Por quê?							

ANEXOS

ANEXO A
APROVAÇÃO DO COMITÊ DE ÉTICA EM PESQUISA DA UFMG

UNIVERSIDADE FEDERAL DE MINAS GERAIS
COMITÊ DE ÉTICA EM PESQUISA - COEP

Parecer nº. ETIC 0201.0.203.000-10

Interessado(a): Profa. Junia Maria Cheib Serra-Negra
Departamento de Odontopediatria e Ortodontia
Faculdade de Odontologia - UFMG

DECISÃO

O Comitê de Ética em Pesquisa da UFMG – COEP aprovou, no dia 23 de julho de 2010, após atendidas as solicitações de diligência, o projeto de pesquisa intitulado **"Avaliação do medo frente ao tratamento odontológico entre universitários das áreas de Odontologia, Psicologia e Matemática"** bem como o Termo de Consentimento Livre e Esclarecido.

O relatório final ou parcial deverá ser encaminhado ao COEP um ano após o início do projeto.

Profa. Maria Teresa Marques Amaral
Coordenadora do COEP-UFMG

ANEXO B

DENTAL FEAR SURVEY (DFS)

Os itens neste questionário se referem a várias situações, sentimentos e reações relacionadas com o tratamento dentário. Por favor, avalie seu sentimento ou reação com relação a estes itens fazendo um círculo ao redor do número (1, 2, 3, 4 ou 5) da categoria que melhor corresponde a sua reação.

Nome: _____ Data: ____/____/____

Sexo: Feminino ( ) Masculino ( ) Idade: _____

Profissão do Pai: _____ Profissão da Mãe: _____

Que escola cursou anteriormente? ( ) Particular ( ) Pública

Quando foi sua última visita ao dentista? ( ) 6 meses ( ) 1 ano ( ) 2 anos ( ) 3 anos ( ) outros

Qual o tipo de tratamento realizado na última visita?

( ) Exame clínico ( ) Restauração ( ) Profilaxia ( ) Extração

( ) Tratamento de canal ( ) Alívio de dor ( ) Outros

1. O medo do tratamento dentário já levou você a demorar a (adiar) marcar consulta?

1	2	3	4	5
Nunca	Uma ou duas vezes	Algumas vezes	Frequen-temente	Quase sempre

2. O medo do tratamento dentário já levou você a cancelar uma consulta ou simplesmente não comparecer?

1	2	3	4	5
Nunca	Uma ou duas vezes	Algumas vezes	Frequen-temente	Quase sempre

3. Quando me submeto ao tratamento dentário: meus músculos ficam tensos

1	2	3	4	5
Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo

4. O ritmo da minha respiração aumenta

1	2	3	4	5
Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo

5. Eu transpiro

1	2	3	4	5
Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo

6. Sinto náuseas e enjôo de estômago

1	2	3	4	5
Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo

7. Meu coração bate mais depressa

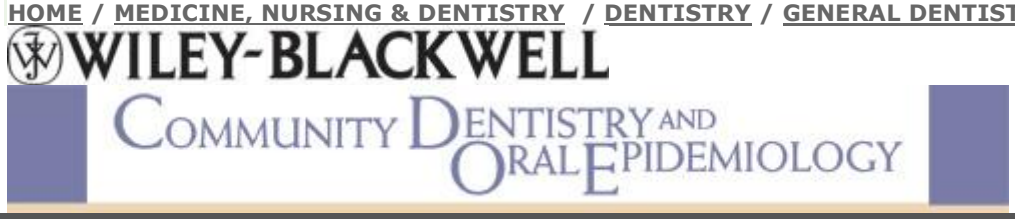
1	2	3	4	5
Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo

A seguir há uma lista de coisas e situações que muitas pessoas mencionam como sendo algo como ansiedade ou medo. Por favor, avalie quanto medo, ansiedade ou desprazer cada uma delas causa em você. Use os números de 1 a 5 da escala a seguir. Faça uma marca no espaço apropriado (se ajudar, tente imaginar você mesmo em cada uma destas situações e descreva qual é a sua reação habitual).

1	2	3	4	5
Nem um pouco	Um pouco	Mais ou menos	Muito	Muitíssimo

	1	2	3	4	5
8. Marcando consulta para ir ao dentista					
9. Aproximando-se do consultório do dentista					
10. Aguardando na sala de espera					
11. Estar sentado na cadeira do dentista					
12. Sentindo o cheiro do consultório					
13. Vendo o dentista entrar					
14. Vendo a agulha da seringa					
15. Sentindo a agulha penetrar					
16. Vendo a broca do motor					
17. Ouvindo o motor					
18. Sentindo as vibrações do motor no dente					
19. Submetendo-se à limpeza dos dentes					
20. Considerando todas as situações, quanto medo você sente em relação ao tratamento dentário?					

ANEXO C



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Top

Content of Author Guidelines: 1. General, 2. Ethical Guidelines, 3. Submission of Manuscripts, 4. Manuscript Format and Structure, 5. After Acceptance

Relevant Documents: Copyright Transfer Agreement , Colour Work Agreement Form

Useful Websites: Submission Site, Articles published in *Community Dentistry and Oral Epidemiology*, Author Services, Wiley-Blackwell's Ethical Guidelines, Guidelines for Figures

1. GENERAL

The aim of *Community Dentistry and Oral Epidemiology* is to serve as a forum for scientifically based information in community dentistry, with the intention of continually expanding the knowledge base in the field. The scope is therefore broad, ranging from original studies in epidemiology, behavioral sciences related to dentistry, and health services research through to methodological reports in program planning, implementation and evaluation. Reports dealing with people of all age groups are welcome.

The journal encourages manuscripts which present methodologically detailed scientific research findings from original data collection or analysis of existing databases. Preference is given to new findings. Confirmation of previous findings can be of value, but the journal seeks to avoid needless repetition. It also encourages thoughtful, provocative commentaries on subjects ranging from research methods to public policies. Purely descriptive reports are not encouraged, nor are behavioral science reports with only marginal application to dentistry.

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Authorship: Authors submitting a manuscript do so on the understanding that the manuscript have been read and approved by all authors and that all authors agree to the submission of the manuscript to the Journal.

Community Dentistry and Oral Epidemiology adheres to the definition of authorship set up by The International Committee of Medical Journal Editors (ICMJE). According to the ICMJE criteria, authorship should be based on 1) substantial contributions to conception and design of, or acquisition of data or analysis and interpretation of data, 2) drafting the article or revising it critically for important intellectual content and 3) final approval of the version to be published. Authors should meet conditions 1, 2 and 3.

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2.2. Ethical Approvals

In all reports of original studies with humans, authors should specifically state the nature of the ethical review and clearance of the study protocol. Informed consent must be obtained from human subjects participating in research studies. Some reports, such as those dealing with institutionalized children or mentally retarded persons, may need additional details of ethical clearance.

Experimental Subjects: experimentation involving human subjects will only be published if such research has been conducted in full accordance with ethical principles, including the World Medical Association Declaration of Helsinki (version 2008) and the additional requirements, if any, of the country where the research has been carried out.

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Language: All submissions must be in English; both British and American spelling conventions are acceptable. Authors for whom English is a second language must have their manuscript professionally edited by an English speaking person before submission to make sure the English is of high quality. It is preferred that manuscript is professionally edited. A list of independent suppliers of editing services can be found athttp://authorservices.wiley.com/bauthor/english_language.asp. All services are paid for and arranged by the author, and use of one of these services does not guarantee acceptance or preference for publication.

Font: All submissions must be double spaced using standard 12 point font size.

Abbreviations, Symbols and Nomenclature: Authors can consult the following source: CBE Style Manual Committee. Scientific style and format: the CBE manual for authors, editors, and publishers. 6th ed. Cambridge: Cambridge University Press, 1994

4.3. Structure
All manuscripts submitted to *Community Dentistry and Oral Epidemiology* should follow the guidelines regarding structure as below.

Title Page: should include a title of no more than 50 words, a running head of no more than 50 characters and the names and institutional affiliations of all authors of the manuscript should be included.

Abstract: All manuscripts submitted to *Community Dentistry and Oral Epidemiology* should use a structured abstract under the headings: Objectives - Methods - Results - Conclusions.

Main Text of Original Articles should include Introduction, Materials and Methods and Discussion.

Introduction: should be focused, outlining the historical or logical origins of the study and not summarize the results; exhaustive literature reviews are not appropriate. It should close with the explicit statement of the specific aims of the investigation.

Materials and Methods must contain sufficient detail such that, in combination with the references cited, all studies reported can be fully reproduced. As a condition of publication, authors are required to make materials and methods used freely available to academic researchers for their own use.

Discussion: may usually start with a brief summary of the major findings, but repetition of parts of the abstract or of the results sections should be avoided. The section should end with a brief conclusion and a comment on the potential clinical program or policy relevance of the findings. Statements and interpretation of the data should be appropriately supported by original references.

4.4. References
The list of references begins on a fresh page in the manuscript, using the Vancouver format. References should be numbered consecutively in the order in which they are first mentioned in the text. Identified references in the text should be sequentially numbered by Arabic numerals in parentheses, e.g., (1,3,9). Superscript in-text references are not acceptable in CDOE. For correct style, authors are referred to: International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals: writing and editing for biomedical publication. http://www.icmje.org October 2004. For abbreviations of journal names, consult http://www.lib.umich.edu/dentlib/resources/serialsabbr.html

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Examples of the Vancouver reference style are given below:

Journals
Standard journal article
(List all authors when six or fewer. When seven or more, list first six and add et al.)

Widström E, Linna M, Niskanen T. Productive efficiency and its determinants in the Finnish Public Dental Service. Community Dent Oral Epidemiol 2004;32:31-40.

Corporate author
WHO Collaborating Centre for Oral Precancerous Lesions. Definition of leukoplakia and related lesions: an aid to studies on oral precancer. Oral Surg Oral Med Oral Pathol 1978;46:518-39.

Books and other monographs
Personal author(s)
Fejerskov O, Baelum V, Manji F, Møller IJ. Dental fluorosis; a handbook for health workers. Copenhagen: Munksgaard, 1988:41-3.

Chapter in a book
Fomon SJ, Ekstrand J. Fluoride intake. In: Fejerskov O, Ekstrand J, Burt BA, editors: Fluoride in dentistry, 2nd edition. Copenhagen: Munksgaard, 1996; 40-52.

4.5. Tables, Figures and Figure Legends
Tables are part of the text and should be included, one per page, after the References. All graphs, drawings, and photographs are considered figures and should be sequentially numbered with Arabic numerals. Each figure must be on a separate page and each must have a caption. All captions, with necessary references, should be typed together on a separate page and numbered clearly (Fig.1, Fig. 2, etc.).

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