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USO DE SERVIÇO ODONTOLÓGICO NA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL DE CRIANÇAS: UM ESTUDO DE COORTE

Santa Maria, RS
2018

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Dissertação apresentada ao Curso de Mestrado do Programa de Pós-Graduação em Ciências Odontológicas, Área de Concentração em Odontologia, ênfase em Odontopediatria, da Universidade Federal de Santa Maria (UFSM, RS), como requisito para a obtenção do título **Mestre em Ciências Odontológicas**.

Orientador: Prof. Dr. Thiago Machado Ardenghi

Santa Maria, RS
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A tarefa não é tanto ver aquilo que ninguém viu, mas pensar o que ninguém ainda pensou sobre aquilo que todo mundo vê.

(Arthur Schopenhauer)

RESUMO

USO DE SERVIÇO ODONTOLÓGICO NA QUALIDADE DE VIDA RELACIONADA À SAÚDE BUCAL DE CRIANÇAS: UM ESTUDO DE COORTE

AUTOR: Gabriele Rissotto Menegazzo
ORIENTADOR: Thiago Machado Ardenghi

A atenção e organização dos serviços odontológicos às necessidades da população auxiliam na redução das iniquidades. Estudos anteriores demonstram uma associação entre a assistência odontológica e a qualidade de vida relacionada à saúde bucal. Entretanto, a maioria desses estudos tem delineamento transversal, o que limita relação de causa-efeito. Considerando que mudanças na infância refletem ao longo da vida adulta, o objetivo deste estudo foi avaliar o efeito da utilização de serviço odontológico por rotina na qualidade de vida relacionada à saúde bucal de crianças em uma cidade do sul do Brasil. Este estudo é um estudo de coorte com 7 anos de acompanhamento. Um levantamento epidemiológico foi realizado em Santa Maria, Brasil, durante o Dia Nacional da Vacinação Infantil, no ano de 2010. Um total de 639 pré-escolares foi examinado neste levantamento. A segunda etapa deste estudo ocorreu em 2017, quando 449 crianças de 7 a 13 anos foram reexaminadas (taxa de retenção na coorte de 70,3%). As variáveis sexo, educação materna, renda familiar e aglomeração familiar foram coletadas em 2010 através de um questionário semi estruturado respondido pelos responsáveis das crianças. O uso de serviços odontológicos por rotina ao longo da coorte foi avaliado por duas perguntas coletadas tanto em 2010 quanto em 2017. Variáveis clínicas, como a ocorrência de cárie não tratada e sobremordida maxilar, também foram coletadas em 2010 por examinadores calibrados. Para a obtenção da qualidade de vida relacionada à saúde bucal de crianças, desfecho deste estudo, as crianças responderam a versão brasileira do *Child Perception Questionnaire* (CPQ8-10) em 2017. O modelo de regressão de Poisson multinível foi utilizado para descrever a influência das variáveis comportamentais de uso de serviço odontológico nos escores do CPQ8-10 geral e por domínio específico. Os resultados demonstraram que a proporção de participantes que reportaram piores escores de CPQ é maior entre aqueles que, em algum estágio de sua vida, experimentaram uma assistência odontológica curativa. As análises ajustadas demonstraram que as médias de CPQ8-10 foram duas vezes maiores para assistência odontológica não preventiva quando comparadas com crianças que eram atendidas rotineiramente (IRR: 2.05;95% IC 1.59-2.66). Associações análogas foram descritas para a análise de domínios específicos do CPQ8-10. Estes achados sugerem que existe um impacto da assistência odontológica preventiva na qualidade de vida relacionada à saúde bucal de crianças e justificariam iniciativas políticas que destacam a importância do atendimento odontológico de rotina.

Palavras-chave: Assistência odontológica. Criança. Estudo longitudinal. Fator de risco. Qualidade de vida.

ABSTRACT

USE OF DENTAL SERVICE IN CHILDREN'S ORAL HEALTH-RELATED QUALITY OF LIFE: A COHORT STUDY

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The attention and organization of dental services to the needs of the population helps reduce the inequities. Previous studies have demonstrated that there is an association between dental attendance and oral health-related quality of life. However, the most of these studies have a cross-sectional design, which limits cause-effect relationship. Considering that, changes in childhood reflect throughout adult life, the aim of this study was evaluate the effect of the use of routine dental care on children's oral health-related quality of life in a south city of Brazil. This is a cohort study that has a 7-year follow-up. An epidemiological survey was performed in Santa Maria, Brazil, during the National Children's Vaccination Day, in the years 2010. A total of 639 preschool children were examined. The second stage of this study took place in 2017, when 449 children 7-13 years-old were re-examined (cohort retention rate of 70.3%). The variables sex, maternal education, household income and household crowding were assessed in 2010 throughout a semi-structured questionnaire answered by children's caregivers. The routine dental attendance throughout the cohort were based on two questions assessed in 2010 and in 2017. Clinical variables, like occurrence of untreated caries and maxillary overjet, were assessed in 2010 by calibrated examiners. For the assessment of the child oral health-related quality of life (COHRQoL), outcome of this study, children answered the Brazilian version of the Child Perception Questionnaire (CPQ8-10) in 2017. A multilevel Poisson regression models were used to describe the influence of the behavioral variables of use of the dental services on overall and domain specific CPQ8-10 scores. The results showed that the proportions of participants who reported worst CPQ scores were higher among those who, at some point in their life, experienced a curative dental attendance. Adjusted analysis demonstrated that the mean CPQ8-10 was two times higher for non-routine dental attendance when compared to children who were routine dental attenders (IRR: 2.05;95% CI 1.59-2.66). Analogous associations were described for the CPQ8-10 domains-specific analysis. The findings suggested that there is an impact of long-term routine attendance on COHRQoL and would warrant policy initiatives that highlight the importance of routine dental attendance.

Keywords: Child. Dental care. Longitudinal study. Quality of life. Risk factor.

SUMÁRIO

1 INTRODUÇÃO

Problemas de saúde pública associados às doenças bucais são altamente prevalentes e atingem cerca de quatro bilhões de indivíduos em todo mundo, além de trazerem consequências negativas para qualidade de vida e gerarem graves impactos econômicos devido a seus tratamentos (WHO, 2013; MARCENES et al., 2013). No Brasil, o último levantamento epidemiológico de âmbito nacional, o Saúde Bucal Brasil 2010 (SBBrasil 2010), mostrou que existem iniquidades caracterizadas pela prevalência destas doenças; grupos populacionais mais pobres com elevadas cargas de doença cárie, por exemplo, refletem marcantes desigualdades sociais do país (FREIRE et al., 2013). Visto que a redução das barreiras de utilização dos serviços odontológicos pode contribuir para a melhoria do estado de saúde bucal da população, a atenção e organização dos serviços odontológicos às necessidades da população seriam estratégias profícuas para redução das iniquidades sociais (PUCCA et al., 2015; HERKRATH; VETTORE; WERNECK, 2018).

A avaliação do uso de serviços em saúde, especialmente serviços odontológicos, fornece dados sobre as características do serviço e comportamento de saúde da população, logo, o uso regular de serviços em saúde é tido como um hábito comportamental de saúde bucal (DAVOGLIO et al., 2009). Entretanto, o uso de serviços de saúde é um comportamento complexo, determinado por uma grande variedade de fatores, podendo ser resultado da interação do comportamento do indivíduo, que procura pelos cuidados, e do profissional, que o conduz dentro do sistema de saúde (TRAVASSOS; MARTINS, 2004).

A relação entre uso dos serviços e seus determinantes, pode ser melhor compreendida por meio de modelos teóricos explicativos. O primeiro modelo comportamental para uso de serviços foi proposto por Andersen, no ano de 1968, para avaliar e compreender o comportamento do uso de serviços de saúde dos indivíduos; definir e medir o acesso aos serviços e auxiliar na implementação de políticas que promovam a equidade no acesso (ANDERSEN, 1995). Após alguns anos, em 1973, Andersen e Newman propuseram um novo modelo explicativo para uso de serviços, levando em consideração as dimensões de políticas em saúde, recursos financeiros e aspectos organizacionais, tornando assim o uso de serviços de saúde um desfecho intermediário para o desfecho final da satisfação do consumidor (ANDERSEN; NEWMAN, 1973).

No ano de 1986, Kiyat expandiu e adaptou o modelo conceitual de uso de serviços de saúde, então preconizado para uso em serviços odontológicos, incluindo variáveis predisponentes, e tendo como prioridade a saúde bucal em comparação a outras necessidades

(KIYAT, 1986). Entretanto, em 1995, o próprio Andersen reavaliou seu modelo inicial e retratou as múltiplas influências sobre o uso dos serviços de saúde e, posteriormente, sobre o estado de saúde (ANDERSEN, 1995). Sendo assim, a abordagem do uso de serviços como um constructo multidimensional vem sendo reafirmada, salientando a importância da inclusão de características contextuais no modelo teórico explicativo (ANDERSEN, 2008; BAKER, 2009). Fatores individuais predisponentes, como renda e nível educacional, fatores contextuais, como suporte social, e fatores relativos à qualidade do cuidado influenciam então o uso e a efetividade do cuidado (TRAVASSOS; MARTINS, 2004).

Visto que as desigualdades socioeconômicas na visita odontológica precoce emergem de várias etapas do processo de procura de cuidados, Harris, Pennington e Whitehead (2016) identificaram que as intervenções que tornam o cuidado uma experiência positiva para pacientes com baixo nível socioeconômico, podem ser particularmente benéficas na redução de desigualdades. Sendo assim, os autores sustentaram um modelo onde os vários componentes psicológicos são influenciados por fatores mais amplos de nível social e de políticas econômicas, concluindo que o comportamento de visita odontológica deve ser visto não apenas como um evento único, mas estendendo-se ao longo do tempo e do espaço social (HARRIS; PENNINGTON; WHITEHEAD, 2016).

Um aspecto importante destacado pelos modelos analisados é a distinção entre os modelos explicativos de saúde e do uso de serviços de saúde. A saúde é entendida como um fenômeno bem mais amplo que a doença e não se explica unicamente pelo uso de serviços de saúde (TRAVASSOS; MARTINS, 2004). Desta forma, a saúde da população não resulta unicamente da ação dos sistemas de saúde. Entretanto, a porcentagem de indivíduos que nunca tiveram uma consulta odontológica é muito prevalente. Segundo a Pesquisa Nacional de Saúde (PNS) do ano de 2013, divulgada pelo Instituto Brasileiro de Geografia e Estatística (IBGE), 55,6% dos brasileiros não utilizaram o serviço odontológico no ano antecedente (IBGE, 2013). Além disso, de acordo com estudo realizado em uma cidade do sul do Brasil, essa condição para a faixa etária de pré-escolares é mais alarmante, pois apenas um total de 23,7% da amostra que já havia visitado um dentista (MARCHY et al., 2013).

Um estudo realizado na Austrália no ano de 2018, por Amarasena e colaboradores, com uma amostra de adultos, demonstrou que aqueles com maior conhecimento odontológico tiveram taxas mais elevadas de procura de serviços odontológicos e mais baixas de tratamento invasivo ao longo de 2 anos. Essas descobertas justificam iniciativas políticas que destacam a importância do conhecimento dentário na melhoria da saúde bucal e na procura dos serviços odontológicos (AMARASENA et al., 2018). Apesar da prevalência de dados demonstrando

que uma alta taxa da população não procura atendimento odontológico, as atitudes sociais mais amplas em relação às desigualdades e até mesmo os incentivos e os arranjos de governança no próprio sistema de saúde, tornam mais atraentes a prática de serviços em áreas mais favorecidas, pois a cultura está orientada para uma perspectiva individual e não coletiva, e portanto, torna possível que dentistas escolham trabalhar preferencialmente em áreas onde os indivíduos possuam maior poder aquisitivo e, consequentemente, conhecimento. Esta prática é conhecida como mercantilização dos cuidados de saúde, e é uma expressão desses valores culturais além de um mecanismo pelo qual a Lei de Cuidado Inverso é reforçada, descrevendo que: tanto a quantidade de cuidados disponíveis, quanto a qualidade dos cuidados prestados é inversamente relacionado com a necessidade (HARRIS, 2016).

Quanto aos componentes psicológicos relacionados à procura do serviço odontológico, a qualidade de vida tem se demonstrado um parâmetro válido na avaliação do paciente em todas as áreas do cuidado (SISHO & BRODER, 2011). Piores condições socioeconômicas, podem levar a condições bucais precárias, produzindo sintomas que causam efeitos físicos, sociais e psicológicos, principalmente em crianças, influenciando sua qualidade de vida (MCGRATH et al., 2004). Dessa forma, a relação de saúde e qualidade de vida tem sido amplamente explorada, mostrando que indivíduos em piores condições de saúde e em desvantagem socioeconômica reportam um maior impacto na sua qualidade de vida (BURKERT et al., 2012; DE PAULA et al., 2013; LIU et al., 2013; TOMAZONI et al., 2014; ORTIZ et al., 2014).

A saúde bucal é um componente fundamental da saúde e do bem-estar físico e mental. Ela reflete os atributos fisiológicos, sociais e psicológicos essenciais à qualidade de vida, e é influenciada pela mudança de experiências, percepções, expectativas e capacidade de adaptação às circunstâncias (GLICK et al., 2016). A qualidade de vida relacionada à saúde bucal (QVRSB) é, por sua vez, um desfecho multidimensional que se refere ao impacto negativo que as enfermidades bucais geram nas atividades físicas e sociais rotineiras e na auto percepção do estado de saúde dos indivíduos (LOCKER & ALLEN, 2007). Ela é mensurada através de questionários autoaplicáveis denominados indicadores sócio-dentários ou sócio-odontológicos (SLADE, 1998). Diversos instrumentos têm sido desenvolvidos para realizar essa mensuração, dentre eles, o CPQ8-10 (*Child Perceptions Questionnaire*), demonstrou ser um instrumento válido para a população de escolares de 8 a 10 anos (JOKOVIC et al., 2004) e também para uma população mais nova, com idades entre 5 a 8 anos (FOSTER PAGE; BOYD; THOMSON, 2013), sendo, também, um instrumento validado para a população brasileira (BARBOSA; TURELI; GAVIÃO, 2009).

Estudos recentes têm identificado uma forte relação entre o uso de serviços odontológicos e a qualidade de vida relacionada à saúde bucal, demonstrando que, além da procura do cuidado, o tipo de serviço procurado, seja ele preventivo ou não, influencia em um relato de melhora ou piora da QVRSB ao longo dos anos (FISHER; GILBERT; SHELTON, 2004; ÅSTRØM et al., 2014; ÅSTRØM et al., 2018). Um estudo de Fisher, Gilbert e Shelton (2004) demonstrou que os serviços odontológicos específicos, como tratamento corretivo, coroas e extrações, são diferencialmente efetivos entre pessoas de grupos raciais distintos. Os resultados puderam mostrar que houve diferenças significativas na prestação e na efetividade dos serviços odontológicos, para melhoria da qualidade de vida relacionada à saúde bucal nos diferentes grupos (FISHER; GILBERT; SHELTON, 2004).

Os achados do estudo de Fisher, Gilbert e Shelton corroboram com os achados dos estudos de Åstrøm e colaboradores nos anos de 2014 e 2018 realizados na Suécia. O primeiro atestou que a participação do atendimento de rotina a longo prazo teve impacto positivo na QVRSB, apoiando o princípio de incentivar a assistência odontológica anual para exames preventivos entre pessoas idosas (ÅSTRØM et al., 2014). O posterior, por sua vez, teve por objetivo avaliar se a utilização a longo prazo de atendimento odontológico e tratamento com obturações e coroas estão associados com mudanças na QVRSB após 15 anos de acompanhamento. Seus resultados demonstram que o atendimento odontológico de rotina a longo prazo ocorre como preditor para uma melhora ou piora da QVRSB (ÅSTRØM et al., 2018). Sendo assim, o acúmulo de vantagens e desvantagens ao longo da vida aumenta e diminui a probabilidade de melhora e piora da qualidade de vida relacionada à saúde bucal de pessoas adultas e este fato ainda não foi relatado na literatura durante o período da infância.

O conhecimento das mudanças estabelecidas no estágio de transição da primeira infância é importante para implementação de abordagens preventivas, visto que esses problemas e as suas consequências não se refletem apenas na infância, mas podem persistir ao longo da vida, assim como o estabelecimento de um hábito de saúde (HOLST; SCHULLER, 2012). Sendo assim, é de notória importância entender o efeito da utilização do serviço odontológico a longo prazo e como fator de risco, influenciando a qualidade de vida das crianças. Portanto, o objetivo deste estudo foi avaliar o efeito da utilização de serviço odontológico de rotina na qualidade de vida relacionada à saúde bucal de crianças em uma cidade do sul do Brasil. A nossa hipótese é que crianças que, ao longo do tempo, utilizaram os serviços odontológicos de forma preventiva, apresentam uma melhor qualidade de vida relacionada à saúde bucal comparadas àquelas que em algum momento utilizaram o serviço não preventivamente ou nunca procuraram o serviço odontológico.

2 ARTIGO - EFFECT OF ROUTINE DENTAL ATTENDANCE ON CHILD ORAL HEALTH-RELATED QUALITY OF LIFE: A COHORT STUDY

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Title:

Effect of routine dental attendance on child oral health-related quality of life: a cohort study

Short Title: Dental attendance and quality of life

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ABSTRACT

Background: There are low studies that assess the influence of use of dental service on oral health-related quality of life. This cohort study assessed the effect of routine dental attendance on child oral health-related quality of life (COHRQoL) among a population-based sample of Brazilian preschoolers.

Methods: Baseline data from 639 children (12–59 months old) who had been orally examined during a survey in 2010 were used. After 7 years, 449 children were re-examined (follow-up rate of 70.3%). Mothers of the children completed a questionnaire collecting data on socioeconomic status and the pattern of use of dental service. Children were classified as long-term routine dental attendance according to their pattern of use of dental service (routine vs curative) in the baseline and in the follow-up. The COHRQoL was assessed through the Brazilian version of the Child Perception Questionnaire (CPQ8-10). The association between routine dental attendance and COHRQoL was assessed using Multilevel Poisson regression models (Incidence Rate Ratio: IRR;95%CI).

Results: The proportion of participants who reported worst CPQ scores were higher among those who, at some point in their life, experienced a curative dental attendance. Adjusted analysis demonstrated that the mean CPQ8-10 was two times higher for non-routine dental attendance when compared to children who were routine dental attenders (IRR: 2.05;95% CI 1.59-2.66). Analogous associations were described for the CPQ8-10 domains-specific analysis.

Conclusion: The findings suggested that there is an impact of long-term routine attendance on COHRQoL and would warrant policy initiatives that highlight the importance of routine dental attendance.

Introduction

Public health problems associated with oral diseases are highly prevalent and reach about four billion individuals around the world; in addition, they bring negative consequences to the child's quality of life and serious economic impacts due to their treatments. [1,2] In Brazil, a high level of socioeconomic inequalities on the prevalence and severity of oral disease have been reported (SBBrasil 2010); such inequalities has been related to individual and contextual factors, including the use of dental service. [3,4] There is evidence suggesting an improvement on oral health status among people who receive a preventive dental care during their lifetime, highlighting the possible effect of dental services in resolving oral health problems and/or oral health-related quality of life (OHRQoL). [5-7] Thus, International guidelines recommend that infants have an initial oral health evaluation in the first year of life. [8]

The percentage of individuals who have never had a dental visit is still prevalent and it is associated with the individual socioeconomic status. [9,10] Therefore, Harris, Pennington and Whitehead (2016) supported a service use model in which socioeconomic inequalities in early dental visiting emerge from several stages in the care-seeking process and the psychological components that lead individuals to demand for care are influenced by broader social-level factors and economic policies. [11]

As for the psychological components related to demand for care, quality of life has proven to be a valid parameter in the evaluation of the patient in all areas of care. [12] The oral health related quality of life is a multidimensional outcome that refers to the negative impact that oral diseases generate in routine physical and social activities and self-perception of individuals' health status. [13]

Recent studies have identified a relationship between the use of dental services and oral health-related quality of life whereas the cumulative use of dental service for routine resulted in better OHRQoL over the years. [7,14,15] Therefore, the disadvantages accumulation throughout life increase the probability of aggravate of OHRQoL among adults, and this fact is not reported yet in the literature for childhood period.

The knowledge about the changes established in the transition stage from early childhood is important for the implementation of preventive approaches, whereas these problems and their consequences are not only reflected in childhood, but also may persist throughout life, as well as the establishment of a health habit. [16] Therefore, it is important to understand the effect of the pattern of long-term utilization of dental care on the children's quality of life. This cohort study assessed the effect of the use of routine dental care on children OHRQoL. Our hypothesis is that children who have been routine dental attender over

the time present a better oral health-related quality of life compared to those who at one time used the service non-preventively or never had a dental visit.

Methods

Ethical issues and Study design

This is a cohort study that has a 7-year follow-up. It was approved by the Committee for Ethics in Research from Federal University of Santa Maria. The participants' parents or guardians signed an informed consent form and the participants signed an agreement consent. The guideline 'Strengthening the Reporting of Observational studies in Epidemiology (STROBE)' was followed to write the manuscript.

A cross-sectional survey was performed to assess the dental caries status of preschool children (aged 12–59 months) in the city of Santa Maria, located in the south of Brazil during the National Children's Vaccination Day, in 2010 (baseline). The city has 263,403 inhabitants with 27,520 children under 6 years old and according to the Ministry of Health, the vaccination program has had a consistent uptake rate of greater than 97%. At this study, 639 children were examined on 15 health centers by 15 calibrated examiners. The health centers were randomly selected by a multistage sampling considered all health centers with a dental office. The sample was inversely weighted by the sampling fraction at each center and every fifth child in the queue for vaccination was invited to participate, making this a representative sample of the city. More details about the epidemiological survey conducted were published elsewhere. [17]

The second stage of this study took place between January 2017 and March 2018, totaling an average of 7 years of follow-up. During this period, all the children evaluated in 2010 (n = 639) were considered eligible and were sought to participate in the reassessment; they were re-examined by three calibrated examiners who were unaware of the previously collected data. Children were accessed through three strategies: telephone calls inviting them to come to university clinics; the acquisition of student listings enrolled in the city's public schools and later visiting the schools; and through home visits. The sample size calculation take into account the following parameters of the follow-up: an alpha error probability of 0.05; mean of CPQ of the exposed group who have non-routine dental attendance or no dental attendance of 10.9 (with standard deviation of 10.7); and mean of CPQ of the unexposed group who have routine dental attendance of 8.7 (with standard deviation of 8.4). This calculation demonstrates that the sample power of this study was approximately 99%.

Independent variables

Data on socioeconomic status, use of dental service and oral health behavior were collected through a longitudinal questionnaire answered by the parents at the baseline and at the follow-up. The questionnaire include questions about sex, maternal education, household income and household crowding. Maternal education was collected in years of formal education and categorized as having completed elementary school (≥ 8 years) and those with less than 8 years of formal education. The household income was collected in terms of Brazilian Reais and then categorized into approximate quartiles: Q1 (Lowest): < R$500,00, Q2: R$500,00 to < R$900,00, Q3: R$900,00 to < R$1,500.00; and Q4 (Highest): R$1,500+; household crowding was assessed as the ratio of number of people by the number of rooms in the house (except bathroom); the categories were based on the quartiles of sample distributed.

Clinical variables were assessed in baseline by calibrated examiners and International criteria standardized by the World Health Organization for oral health surveys were used for all dental examinations. [18] Children were examined with artificial light using periodontal CPI probe (“ball point”), dental mirrors and wet gauze pads in a dental chair. The prevalence of untreated caries was recorded as a non-zero D/d component in the decayed, missed or filled teeth index - DMFT/dmft index. The maxillary overjet was measured in millimeters and posteriorly dichotomized in ≤3mm or >3mm.

Children were classified as long-term routine dental attendance based on two questions assessed in 2010 and 2017. "Has your child visited a dentist in the last six months? Yes or No?" and "What was the reason for this consultation? Routine/preventive or treatment/non-routine?" At each time point, routine dental attendance were coded (1) for those who did not visit a dentist or have attended the dentist for non-preventive reason and (0) for those who attended the service for routine. Long-term routine dental attendance combined the categories of routine dental attendance in baseline and follow-up into (3) non-routine attendance in baseline and follow-up, (2) routine dental attendance in baseline and non-routine dental attendance in follow-up, (1) non-routine dental attendance in baseline and routine dental attendance in follow-up, (0) routine dental attendance in baseline and follow-up.

Dependent variable

The Brazilian version of the Child Perception Questionnaire (CPQ8-10) was used to assess the children OHRQoL - the outcome of this study. Children answered the questionnaire

in the follow-up through a face-to-face interview conducted by previously trained interviewers. The CPQ 8-10 questionnaire is translated and validated for Brazilian children [19-21] and comprises 25 items distributed among four domains: oral symptoms, functional limitations, emotional well-being, and social well-being. Each question of this questionnaire has five possible answers on a likert scale from 0 to 4, and higher values corresponded to a poorer OHRQoL. The CPQ8-10 scores were computed by summing up all scores for each domain, and the overall scores ranged from 0 to 100.

Analysis

Data were analyzed using the statistical software STATA 14.0 (Stata Corporation, College Station, TX, USA). Descriptive analysis described demographic, clinical, and socioeconomic characteristics of the sample. The association between routine dental attendance and children OHRQoL was assessed using Multilevel Poisson regression models.

In our dataset, children (first-level unit) were nested in the 15 health centers (second-level unit). The model estimates the incidence rate ratio (95 percent confidence interval) as a measure of association; it correspond to the ratio of the arithmetic mean of CPQ scores between categories of exposed and the unexposed group.

Results

From 639 children examined at baseline, a total of 449 were reassessed (cohort retention rate of 70.3%). The follow-up losses occurred due to change of address and telephone (n=181) or for refusal of the parents/guardians (n=9). The mean age of children was 2.8 years (SD: 1.4) at the baseline and 10.0 years (SD: 1.4) at the follow-up. Table 1 is comparing the participants with the non-participants (chi-square test), there were no statistical differences for sex (p=0.28), maternal education (p=0.35), household crowding (p=0.16), dental attendance (p=0.47), caries experience (p=0.51) and maxillary overjet (p=0.25). However, re-examined children had lower income than the nonparticipants ($p < 0.05$).

Demographic, socioeconomic characteristics and oral health status of the sample in baseline (T1) and follow-up (T2) are present in Table 2. Most of the children were non-routine dental attendance in the baseline and in the follow-up; their mothers had predominantly more than 8 years of formal education. Approximately 28% of the children had dental caries in 2010, decreasing to 14% in 2017. Around 17% of the sample had a household income of over R$ 1,500 in 2010, decreasing to 13% in the second assessment.

The Table 3 presents the unadjusted association between the pattern of dental attendance and overall and domain-specific CPQ8-10 scores. Higher means of CPQ8-10 were observed for those who were non-routine dental attendance (non-routine in 2010 and in 2017) compared to those who were always routine dental attendance. Analogous association is described for the domain specific analysis, excepted for the oral symptoms domains. Non-routine dental attendance in the baseline also associated with lower children OHRQoL after 7 years of follow-up. This pattern was also observed for the functional limitation, emotional and social well-being domains.

The association of overall and domain-specific CPQ8-10 scores at 7-year follow-up (T2) by the pattern of dental attendance and the dental attendance at baseline and follow-up were adjusted for sex, maternal education, household income, household crowding, dental caries and maxillary overjet at baseline in three different models (Table 4). The proportions of participants who reported worst overall CPQ8-10 scores were higher among those who, at some point in their life, experienced a curative dental attendance or who did not visited the dentists compared with those who were long-term routine dental attenders, regardless of the final value of the other variables. Adjusted analysis demonstrated that the mean CPQ8-10 was two times higher for non-routine dental attendance when compared to children who were routine dental attenders (IRR: 2.05;95% CI 1.59-2.66). Analogous associations were described for the CPQ8-10 domains-specific analysis. Notwithstanding, the negative effect of non-routine dental attendance in the baseline on OHRQoL after 7 years remains significant even after the adjustment for possible covariates.

Discussion

This study considered the children's development of dental attendance from children and the impact of long-term routine attendance throughout this period on oral health-related quality of life. The present results support the hypothesis that the non-routine dental attendance is a risk factor to poor child OHRQoL over time. Our findings corroborate with previous studies that have found that the accumulation of lifetime disadvantages decreases the probability of improving the OHRQoL in adults and old-aged people. [7,14,15] Irregular dental visits have been reported to be associated with more untreated dental caries and poor OHRQoL in children, but the accumulation of care had not been reported yet for this age group. [4,9,22,23]

The significant effect of this study might be attributed to the particular types of treatment provided during dental visiting. Brennan et al. (2012) reported that worsening in

self-reported oral health was less prevalent for those who received cleaning services during dental visiting but more prevalent among those who received extraction. [24] Furthermore, Amarasena et al. (2018) reported that dental knowledge and routine dental visiting behavior are complementing each other with one emphasizing the importance of other. [25] Therefore, people with less dental knowledge had higher rates of invasive treatments, that is, encouraging routine attendance will conduct patients to have more knowledge and consequently better oral health and OHRQoL.

In Sweden, with a cohort of older people from age 65 to 70 years, Åstrøm et al. (2018) demonstrated that long-term routine dental attenders had an improvement on their OHRQoL along the lifetime. [7] This is in agreement with our results, that showed that children who, over time, use dental services in a preventive way, present a better oral health-related quality of life compared to those who at one time used the service non-preventively.

The routine dental attenders at the baseline, in turn, was significantly associated with better child OHRQoL after 7 years and this effect was more significant when still associated with the follow-up. This fact confirms the importance of the association between the age of the first dental visit and self-perception of health. Previous studies have demonstrated that children who were less likely to receive early dental care were more likely to have poor oral health than their counterparts. [26,27] However, no study have reported the effect of early dental care on child OHRQoL. It has been recommended, by the American Academy of Pediatric Dentistry, that children should see a dentist as early as 6 months of age and no later than 6 months after the first tooth erupts. This dental visit would be a strategy to establish primary prevention as well as an early intervention for harmful effects of dental disease. [8]

Notwithstanding, our results have suggested that a preventive dental attendance can influence physical and mental health behaviors, with a positive child effect, which probably will result in an adult population with healthy habits. It also should be taken into account that treatment procedures are more complex and expensive compared with long-term routine attendance. Mermad and El-Housseiny (2017) observed significant associations between dental fear, pain as the reason for the most recent dental visit and poor OHRQoL. [28] According to these findings, children's caregivers should be guided to treat early their children to avoid deterioration of their OHRQoL.

The difference on OHRQoL across the groups of patern of dental attendance remained significant for social and emocional well-being domains. However, differences in OHRQoL between the groups were more significant for they who was routine dental attenders at the baseline on oral symptons and functional limitation domains. This may be due to the

influence of clinical conditions in these domains, because this items refer to limitations on performing normal functions, such as chewing difficulty and it is known that dental conditions affect the OHRQoL of children [29], resulting in disturbance of daily performance, that the earlier, more harmful. However, routine dental attendance contributes significantly to the psychologic and social aspects of life.

Our findings should be interpreted with caution, because they have some limitations and strengths. A limitation of this study is the possibility of inaccuracy in the exposure measurement, with 7-year survey intervals. It is possible that some participants changed their attendance patterns from routine to non-routine or vice versa between the survey years and we collected only two points of time. This study also was based entirely on self-reported data and a possible recall bias may arouse. However, this is not expected to be significant since self-reported dental attendance has been found to be a valid measure of dental care use. [30] This study is a long-term cohort study with a large cohort retention rate of 70.3% after 7 years, indicating the extern validity of our findings. We also have a representative sample of the city and we take into account the contextual level variability to adjust the association between use of dental services and OHRQoL.

The present study confirmed the influence of behavioral habits on OHRQoL in a transition stage in children's life course. This is important for tackling oral health promotion strategies aimed at improving OHRQoL, helping in the development of guidelines for an evidence-based practice and redirecting resources allocated to public health giving priority to dental access for routine visits.

Conclusion

The findings showed that there is an impact of long-term routine attendance throughout 7 years on children’s oral health-related quality of life. They could warrant policy initiatives that highlight the importance of dental attendance in improving health on children.

What is already known on this subject

Knowledge exist on how the dental attendance trajectory influences the adult’s quality of life. However, there is limited insight of this association in childhood, age of habit establishment.

What this study adds

This study provides new information from a public health perspective and for the scientific community. It considered the development of dental attendance from children and the impact of long-term routine attendance throughout this period on oral health-related quality of life with a longitudinal assessment.

Ethics approval

This study was approved by the Research Ethics Committee of the Federal University of Santa Maria (CAAE 54257216.1.0000.5346).

Informed consent

Informed consent was obtained from all individual participants included in the study.

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Conflicts of interest

The authors declare that they have no conflict of interest.

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Tables

Table 1 Comparison of baseline characteristics between the group of children who were followed up and the group that did not receive follow-up.

Variables	Followed up children	Non-participants children at T2[a]	p*
	n (%)	n (%)	
Sex			0.28
Boys	220 (68.3)	102 (31.7)	
Girls	229 (72.2)	88 (27.8)	
Maternal education			0.35
≥ 8 years of formal education	246 (68.9)	111 (31.1)	
< 8 years of formal education	199 (72.4)	76 (27.6)	
Household income in R$[b]			0.03
Lowest (1st quartile)	94 (68.6)	43 (31.4)	
Medium lowest (2nd quartile)	129 (75.0)	43 (25.0)	
Medium highest (3rd quartile)	128 (75.3)	42 (24.7)	
Highest (4th quartile)	75 (61.0)	48 (39.0)	
Household crowding in people/room			0.16
Lowest (1st quartile)	147 (66.5)	74 (33.5)	
Medium lowest (2nd quartile)	158 (73.8)	56 (26.2)	
Medium highest (3rd quartile)	34 (64.2)	19 (35.8)	
Highest (4th quartile)	107 (74.8)	36 (25.2)	
Dental attendance			0.47
Routine	63 (67.0)	31 (33.0)	
Non-routine or no dental attendance	379 (70.7)	157 (29.3)	
Dental caries (dmft)			0.51
Without (dmft=0)	283 (69.4)	125 (30.6)	
With (dmft>0)	166 (71.9)	65 (28.1)	
Maxillary overjet			0.25
≤ 3mm	292 (72.1)	113 (27.9)	
> 3mm	41 (65.1)	22 (34.9)	

*p-value of chi-square test.

[a]T2: 7-year follow-up.

[b]R$: Brazilian Reais (R$3.80 it was equivalent to US$1.00 approximately).

Table 2 Demographic, socioeconomic characteristics and oral health status of the sample.

Variables	Baseline (T1)[a] (n= 449)	Follow-up (T2)[b] (n= 449)
	n (%)	n (%)
Sex		
Boys	220 (49.0)	220 (49.0)
Girls	229 (51.0)	229 (51.0)
Maternal education		
≥ 8 years of formal education	246 (55.3)	322 (72.9)
< 8 years of formal education	199 (44.7)	120 (27.1)
Household income in R$[c]		
Lowest (1st quartile)	94 (22.1)	14 (3.1)
Medium lowest (2nd quartile)	129 (30.3)	205 (45.7)
Medium highest (3rd quartile)	128 (30.1)	171 (38.1)
Highest (4th quartile)	75 (17.6)	59 (13.1)
Household crowding in people/room		
Lowest (1st quartile)	147 (33.0)	246 (56.6)
Medium lowest (2nd quartile)	158 (35.4)	152 (34.9)
Medium highest (3rd quartile)	34 (7.6)	19 (4.4)
Highest (4th quartile)	107 (24.0)	18 (4.1)
Dental attendance		
Routine	63 (14.2)	54 (12.0)
Non-routine or no dental attendance	379 (85.8)	395 (88.0)
Dental caries (dmft)		
Without (dmft=0)	283 (71.2)	383 (85.5)
With (dmft>0)	166 (28.8)	65 (14.5)
Maxillary overjet		
≤ 3mm	292 (87.7)	260 (59.0)
> 3mm	41 (12.3)	181 (41.0)

Taking into account the sampling weight. Values lower than 449 due to missing data.
[a]T1: baseline.
[b]T2: 7-year follow-up.
[c]R$: Brazilian Reais (R$3.33 it was equivalent to US$1.00 approximately).

Table 3 Unadjusted association of Overall and Domain-Specific CPQ8-10 Scores at 7-year follow-up (T2) by the pattern of dental Attendance. Multilevel Poisson Regression.

	n (%)**	Oral symptoms IRR[a] (95% CI)[b]	Functional limitation IRR[a] (95% CI)[b]	Emotional well-being IRR[a] (95% CI)[b]	Social well-being IRR[a] (95% CI)[b]	Overall CPQ8-10 IRR[a] (95% CI)[b]
Pattern of Dental attendance						
Routine T1 & T2	17 (3.8)	1	1	1	1	1
Non-routine or no dental attendance T1/Routine T2	37 (8.3)	1.24 (0.92-1.68)	1.63 (0.94-2.84)	2.51 (1.44-4.37)*	7.33 (2.96-18.14)*	1.82 (1.45-2.28)*
Routine T1/Non-routine or no dental attendance T2	48 (10.8)	1.16 (0.86-1.55)	1.58 (0.92-2.71)	2.09 (1.21-3.61)*	5.32 (2.15-13.18)*	1.58 (1.27-1.98)*
Non-routine or no dental attendance T1 & T2	342 (77.1)	1.22 (0.94-1.59)	1.94 (1.18-3.21)*	2.47 (1.48-4.14)*	6.41 (2.65-15.50)*	1.80 (1.46-2.21)*
Dental attendance at T1						
Routine	94 (14.9)	1	1	1	1	1
Non-routine or no dental attendance	536 (85.1)	1.07 (0.94-1.22)	1.29 (1.04-1.60)*	1.32 (1.08-1.62)*	1.49 (1.18-1.88)*	1.22 (1.11-1.33)*
Dental attendance at T2						
Routine	54 (12.0)	1	1	1	1	1
Non-routine or no dental attendance	395 (88.0)	1.03 (0.90-1.19)	1.31 (1.03-1.65)*	1.18 (0.95-1.46)	1.15 (0.92-1.45)	1.12 (1.02-1.23)*

*P<0.05

** Taking into account the sampling weight.

[a]IRR, incidence rate ratio.

[b]CI, confidence interval.

Table 4 Adjusted association of Overall and Domain-Specific CPQ8-10 Scores at 7-year follow-up (T2) by the pattern of dental Attendance. Multilevel Poisson Regression.

	Oral symptoms IRR[a] (95% CI)[b]	Functional limitation IRR[a] (95% CI)[b]	Emotional well-being IRR[a] (95% CI)[b]	Social well-being IRR[a] (95% CI)[b]	Overall CPQ8-10 IRR[a] (95% CI)[b]
Pattern of Dental attendance					
Routine T1 & T2	1	1	1	1	1
Non-routine or no dental attendance T1/Routine T2	1.58 (1.09-2.28)*	1.80 (0.95-3.41)	2.54 (1.29-4.99)*	15.09 (3.68-61.87)*	2.20 (1.67-2.91)*
Routine T1/Non-routine or no dental attendance T2	1.18 (0.81-1.71)	1.39 (0.72-2.67)	2.59 (1.31-5.09)*	9.86 (2.38-40.80)*	1.70 (1.28-2.25)*
Non-routine or no dental attendance T1 & T2	1.42 (1.02-1.98)*	2.16 (1.21-3.88)*	2.44 (1.29-4.59)*	11.90 (2.95-47.93)*	2.05 (1.59-2.66)*
Dental attendance at T1					
Routine	1	1	1	1	1
Non-routine or no dental attendance	1.22 (1.02-1.46)*	1.58 (1.18-2.12)*	1.06 (0.82-1.38)	1.60 (1.18-2.17)*	1.31 (1.16-1.49)*
Dental attendance at T2					
Routine	1	1	1	1	1
Non-routine or no dental attendance	0.98 (0.84-1.14)	1.31 (1.00-1.71)*	1.17 (0.91-1.50)	1.07 (0.82-1.38)	1.08 (0.97-1.20)

*P<0.05

[a]IRR, incidence rate ratio.

[b]CI, confidence interval.

Multilevel models adjusted for sex, maternal education, household income, household crowding, dental caries and maxillary overjet at baseline.

3 CONSIDERAÇÕES FINAIS

Este estudo avaliou o efeito do uso de atendimento odontológico de rotina na qualidade de vida relacionada à saúde bucal de crianças. Para isso, foi realizado um estudo de acompanhamento de crianças de 1 a 5 anos de idade durante um período médio de 7 anos. Visto que a acumulação de desvantagens ao longo da vida aumenta a probabilidade de agravamento de problemas psicológicos (HOLST; SCHULLER, 2012), é importante entender o efeito do padrão de utilização dos cuidados odontológicos a longo prazo sobre a QVRSB de crianças.

O presente estudo confirmou a influência dos hábitos comportamentais na QVRSB em um estágio de transição na vida das crianças. As avaliações da qualidade de vida oferecem uma medida que pode auxiliar no desenvolvimento de diretrizes para uma prática odontológica baseada em evidências e que apoiem o redirecionamento de recursos alocados para a saúde pública, dando prioridade ao acesso odontológico para visitas de rotina. Também é importante ressaltar que este é o primeiro estudo de caráter longitudinal que faz essa avaliação da primeira infância, fase fundamental para a formação de hábitos de saúde.

Nosso estudo possui algumas limitações. São elas: a possibilidade de imprecisão na mensuração da exposição, devido ao intervalo de 7 anos de acompanhamento, onde os padrões de atendimento odontológico dos participantes podem ter mudado entre os anos da pesquisa e coletamos apenas dois pontos no tempo, e por ter sido baseado inteiramente em dados auto relatados, despertando um possível viés de memória dos participantes. Porém, não se espera que o efeito disto seja significativo na corroboração dos dados deste estudo, uma vez que a assistência odontológica auto relatada já foi considerada uma medida válida de uso de tratamento odontológico (GILBERT; ROSE; SHELTON, 2002).

O atendimento odontológico não rotineiro ao longo do acompanhamento foi um fator de risco para uma pior qualidade de vida relacionada à saúde bucal de crianças após os 7 anos, demonstrando assim a importância do cuidado preventivo desde a primeira infância proporcionando uma melhor saúde para os futuros adolescentes e adultos. Estes achados vão de acordo com nossa hipótese de que crianças que, ao longo do tempo, utilizaram os serviços odontológicos de forma preventiva, apresentam uma melhor qualidade de vida relacionada à saúde bucal comparadas àquelas que em algum momento utilizaram o serviço não preventivamente ou nunca procuraram o serviço odontológico, justificando assim iniciativas políticas que destacam a importância do atendimento odontológico para melhorar a saúde da população.

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ANEXO A – CARTA DE APROVAÇÃO DO COMITÊ DE ÉTICA EM PESQUISA NO ANO DE 2010

MINISTÉRIO DA SAÚDE
Conselho Nacional de Saúde
Comissão Nacional de Ética em Pesquisa
(CONEP)

UNIVERSIDADE FEDERAL DE SANTA MARIA
Pró-Reitoria de Pós-Graduação e Pesquisa
Comitê de Ética em Pesquisa - CEP- UFSM
REGISTRO CONEP: 243

CARTA DE APROVAÇÃO

O Comitê de Ética em Pesquisa – UFSM, reconhecido pela Comissão Nacional de Ética em Pesquisa – (CONEP/MS) analisou o protocolo de pesquisa:

Título: Associação da presença e atividade de lesões de cárie em dentes decíduos comindicadores de risco biológicos e socioeconômicos

Número do processo: 23081.015459/2009-91
CAAE (Certificado de Apresentação para Apreciação Ética): 0270.0.243.000-09
Pesquisador Responsável: Thiago Machado Arderghi

Este projeto foi APROVADO em seus aspectos éticos e metodológicos de acordo com as Diretrizes estabelecidas na Resolução 196/96 e complementares do Conselho Nacional de Saúde. Toda e qualquer alteração do Projeto, assim como os eventos adversos graves, deverão ser comunicados imediatamente a este Comitê. O pesquisador deve apresentar ao CEP:

Janeiro/ 2011 - **Relatório final**

Os membros do CEP-UFSM não participaram do processo de avaliação dos projetos onde constam como pesquisadores.

DATA DA REUNIÃO DE APROVAÇÃO: 15/12/2009

Santa Maria, 29 de Dezembro de 2009.

Elisete Medianeira Tomazetti
Coordenadora do Comitê de Ética em Pesquisa-UFSM
Registro CONEP N. 243.

ANEXO B – CARTA DE APROVAÇÃO DO COMITÊ DE ÉTICA EM PESQUISA NO ANO DE 2017

UNIVERSIDADE FEDERAL DE SANTA MARIA/ PRÓ-REITORIA DE PÓS-GRADUAÇÃO E

PARECER CONSUBSTANCIADO DO CEP

DADOS DO PROJETO DE PESQUISA

Título da Pesquisa: AVALIAÇÃO DO RISCO DE DESENVOLVIMENTO DE LESÕES DE CÁRIE, FATORES RELACIONADOS E ALTERAÇÕES NO IMPACTO NA QUALIDADE DE VIDA DE CRIANÇAS.

Pesquisador: Thiago Machado Ardenghi

Área Temática:

Versão: 2

CAAE: 54257216.1.0000.5346

Instituição Proponente: Departamento de Estomatologia

Patrocinador Principal: Financiamento Próprio

DADOS DO PARECER

Número do Parecer: 1.525.380

Apresentação do Projeto:

Corresponde a um projeto de doutorado vinculado ao Programa de Pos-Graduacao em Ciencias Odontologicas e esta assim apresentado: "Condições bucais adversas permanecem sendo um problema altamente prevalente e atingem cerca de quatro bilhões de indivíduos no mundo todo. A cárie dentária é considerada a doença crônica mais comum na infância, com prevalência variando de 60% a 90% na população infantil mundial durante a primeira década de vida. A literatura tem demonstrado as consequências que a cárie pode trazer para os indivíduos tanto na fase inicial da vida, quanto ao longo do tempo, trazendo implicações também para a vida adulta. Estudos de associação, como o caso dos transversais, são de extrema importância para o conhecimento de fatores de risco para a cárie, no entanto, tais estudos não são capazes de relevar relações causais entre diferentes exposições e o desfecho em questão. Para um melhor entendimento a respeito de causalidade, fazem-se necessários estudos longitudinais que avaliem as complexas relações entre os diferentes fatores ou indicadores associados a doença. O objetivo desse estudo longitudinal será avaliar o caminho pelo qual os fatores demográficos, socioeconômicos, psicossociais e comportamentais influenciam na ocorrência de lesões de cárie em primeiros molares permanentes em crianças. Esse estudo será realizado em Santa Maria, RS, Brasil e trata-se da terceira avaliação de uma coorte de crianças, que neste momento terão entre 7 e 11 anos de idade. Será realizada

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uma nova avaliação de saúde bucal através de exames clínicos e questionários. O International Caries Detection Assessment System (ICDAS) será usado para avaliar a presença de cárie em Primeiros Molares. Dados a respeito de condições demográficas como sexo e cor da pele, socioeconômicas como renda familiar e escolaridade dos pais, psicossociais e comportamentais relacionadas ao uso de serviços e hábitos de higiene serão coletados através de um questionário semiestruturado. A qualidade de vida relacionada a saúde bucal será avaliada através do Child Perception Questionnaire (CPQ) na sua versão brasileira para crianças de 8-10 anos (CPQ 8-10). Os dados serão analisados utilizando o programa STATA 12. Será utilizada a análise por Modelos de Equações Estruturais (MEE) a qual permite que o modelo hipotético possa ser testado estatisticamente. A magnitude e a significância das relações entre as variáveis entre si e com o desfecho serão avaliadas através de um coeficiente de regressão () e valores de p que, quando 0,05 serão considerados estatisticamente significantes."

Projeto apresenta ornamento e cronograma adequados e compatíveis.

Objetivo da Pesquisa:

Objetivo geral: avaliar o caminho pelo qual os fatores demográficos, socioeconômicos, psicossociais e comportamentais, ao nível do indivíduo e do contexto, influenciam na ocorrência de lesões de cárie em primeiros molares permanentes em crianças.

Objetivos específicos:

- Avaliar, por meio de exames clínicos, a ocorrência de lesões de cárie em Primeiros Molares Permanentes.
- Avaliar se existe associação entre fatores demográficos, como idade, sexo e raça, e a incidência de lesões.
- Avaliar se fatores socioeconômicos, individuais e contextuais, estão associados a ocorrência de lesões de cárie nos primeiros molares permanentes.
- Verificar se há associação entre fatores psicossociais, como auto percepção de saúde bucal e qualidade de vida relacionada a saúde bucal, e a ocorrência de lesões em molares permanentes.
- Avaliar se os fatores comportamentais, como hábito de higiene e uso de serviços exercem influencia sobre a incidência de lesões de cárie em dentes permanentes.
- Avaliar se as alterações nas condições de saúde bucal relacionadas a cárie dentária se refletem no impacto sobre a qualidade de vida e persistem ao longo do tempo.

Avaliação dos Riscos e Benefícios:

Riscos sao assim descritos: "Como esta pesquisa se trata apenas de uma entrevista e um exame bucal, os riscos previstos são mínimos, a criança poderá ficar cansado(a) ao fazer o exame e os pais/responsáveis poderão ficar constrangidos em responder alguma pergunta. Caso isto ocorra, as perguntas poderão não ser respondidas, o exame poderá ser cancelado e/ou os pais/responsáveis ou a criança poderão se recusar a participar da pesquisa a qualquer momento sem que haja qualquer problema."

Beneficios: "Os participantes não receberão benefícios diretos com a pesquisa, entretanto, como benefício indireto, caso a criança precise de algum tratamento odontológico, será encaminhado para atendimento na Clínica de Odontopediatria da UFSM e, ainda, os participantes contribuirão para melhor entendimento científico a respeito do tema pesquisado. Os individuos não receberão qualquer remuneração financeira por essa participação."

Considerando os objetivos da pesquisa e os procedimentos realizados, riscos e beneficios estao descritos de maneira adequada.

Comentários e Considerações sobre a Pesquisa:

O projeto esta bem escrito e apresentado. Possui tema relevante pois procura entender os determinantes e fatores de risco para o desenvolvimento da doenca carie em criancas.

Considerações sobre os Termos de apresentação obrigatória:

Registro no GAP, Folha de Rosto, Termo de Confidencialidade e Autorizacao institucional estao apresentados de maneira adequada.

TCLE e termo de assentimento estão apresentados de maneira adequada.

Recomendações:

Veja no site do CEP - http://w3.ufsm.br/nucleodecomites/index.php/cep - na aba "orientações gerais", modelos e orientações para apresentação dos documentos. Acompanhe as orientações disponíveis, evite pendências e agilize a tramitação do seu projeto.

Conclusões ou Pendências e Lista de Inadequações:

O projeto não apresenta pendências e pode ser aprovado.

Considerações Finais a critério do CEP:

Este parecer foi elaborado baseado nos documentos abaixo relacionados:

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_675434.pdf	26/04/2016 10:45:52		Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	Termo_de_Assentimento.pdf	26/04/2016 10:44:33	Thiago Machado Ardenghi	Aceito
Outros	Registro_GAP.pdf	16/03/2016 11:29:31	Thiago Machado Ardenghi	Aceito
Outros	Termo_de_Confidencialidade.pdf	16/03/2016 11:17:30	Thiago Machado Ardenghi	Aceito
Declaração de Instituição e Infraestrutura	Declaracao_Instituicao.pdf	07/03/2016 16:22:03	Thiago Machado Ardenghi	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLE.pdf	07/03/2016 16:19:35	Thiago Machado Ardenghi	Aceito
Projeto Detalhado / Brochura Investigador	Projeto_doutorado.pdf	07/03/2016 16:18:31	Thiago Machado Ardenghi	Aceito
Folha de Rosto	folha_de_rosto.pdf	07/03/2016 16:16:00	Thiago Machado Ardenghi	Aceito

Situação do Parecer:

Aprovado

Necessita Apreciação da CONEP:

Não

SANTA MARIA, 02 de Maio de 2016

Assinado por:
CLAUDEMIR DE QUADROS
(Coordenador)

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ANEXO C – NORMAS PARA SUBMISSÃO NO PERIÓDICO *JOURNAL OF EPIDEMIOLOGY & COMMUNITY HEALTH*

Authors

Journal of Epidemiology and Community Health is published monthly and covers the field of epidemiology and community health relating to a total defined and numerically rated population. Papers are accepted on their scientific originality and general interest.

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- Submission guidelines

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Editorial
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Debate
Research agenda
Speakers' corner
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eLetter
Obituary
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Editorial

Editorials are usually commissioned, but we are happy to consider and peer review unsolicited editorials on any relevant topic.

Word count: up to 1200 words
Tables/Illustrations: 1
References: up to 12 references

Commentary

Critical analysis of an article published in the journal, always commissioned by the editors.Readers that wish to comment on a published article may do so via submission of a Letter to the Editor or an eLetter.

Word count: up to 800 words
References: up to 12 references

Research report

Manuscripts reporting results of original research should follow the IMRaD style (Introduction, Methods, Results and Discussion) and should have a structured abstract (Background, Methods, Results and Conclusion). All research on human subjects must have been approved by the appropriate ethics committee and must have conformed to the principles embodied in

the Declaration of Helsinki (see Ethics Approval for more guidelines). A statement to this effect must be included in the methods section of the paper.

Research Reports should include a box offering a thumbnail sketch of what is already known and what your paper adds to the literature, for readers who would like an overview without reading the whole paper. It should be as different as possible from the text in the Abstract, brief and schematic. The use of abbreviations should be avoided. It should include the following information:

What is already known on this subject?
In two or three sentences explain what the state of scientific knowledge was in this area before you did your study and why this study needed to be done. Be clear and specific.

What this study adds?
Give a simple answer to the question "What do we now know as a result of this study that we did not know before?". Be brief, succinct, specific, and accurate. You might use the last sentence to summarise any implications for practice, research, policy, or public health.

Word count: up to 3000 words
Abstract: maximum of 250 words (Background, Methods, Results and Conclusion)
Tables/Illustrations: up to 5
References: up to 40

Short report

Manuscripts reporting initial results of innovative research that deserve immediate dissemination before finalisation. The section must not be used to present a poorly elaborated research report. Short Reports should follow the IMRaD style (Introduction, Methods, Results and Discussion) and should have a structured abstract (Background, Methods, Results and Conclusion).

All research on human subjects must have been approved by the appropriate ethics committee and must have conformed to the principles embodied in the Declaration of Helsinki (see Ethics Approval for more guidelines). A statement to this effect must be included in the methods section of the paper.

Manuscripts should include a box offering a thumbnail sketch of what is already known and what your paper adds to the literature (see Research Reports).

Word count: up to 1500 words
Structured Abstract: up to 200 words
Tables/Illustrations: up to 2
References: up to 20

Evidence-based public health policy and practice

The Editors believe that we should be publishing more work from the field and the front line. The laboratory for public health is to be found largely in the community itself. We need to learn the lessons from practitioners. The late Professor Geoffrey Rose spoke of the need for a clean mind and dirty hands. We want contributions from those with dirty hands, but they need to make sense to those with clean minds.

They should include a box offering a thumbnail sketch of what is already known and what your paper adds to the literature, for readers who would like an overview without reading the whole

paper. It should be as different as possible from the text in the Abstract, brief and schematic. The use of abbreviations should be avoided. It should include the following information:

What is already known on this subject?
In two or three sentences explain what the state of scientific knowledge was in this area before you did your study and why this study needed to be done. Be clear and specific

What this study adds?
Give a simple answer to the question "What do we now know as a result of this study that we did not know before?". Be brief, succinct, specific, and accurate. You might use the last sentence to summarise any implications for practice, research, policy, or public health.

Policy implications
Explain how your results could support the implementation of policies directed to solve the problem you are dealing with in your manuscript.

Word count: up to 3000 words
Abstract: up to 250 words (Background, Methods, Results and Conclusion)
Tables/Illustrations: 5
References: up to 40

Theory and methods

Manuscripts reporting novel methods or conceptual frameworks relevant to investigation of epidemiological or public health research problems. When possible they must follow the IMRaD style (Introduction, Methods, Results and Discussion). The abstract may be structured or unstructured according to the characteristics of the manuscript.

Submissions should aim to show clearly the messages from the methodological or theoretical issue under consideration. Manuscripts should include a box offering a thumbnail sketch of what is already known and what the manuscript adds to the literature (see Research Reports)

Word count: up to 3000 words
Abstract: up to 250 words
Tables/Illustrations: up to 5
References: up to 40

Essay

Manuscripts reporting analytic, interpretative or critical point of views and scientific arguments about a subject relevant for epidemiology or public health. Essays are commissioned by the editors. There is no fixed style, but submissions should aim to demonstrate clearly the messages from the issue under consideration. The abstract may be structured or unstructured according to the characteristics of the manuscript.

Word count: up to 3000 words
Abstract: up to 250 words
Tables/Illustrations: up to 5
References: up to 50

Review

Manuscripts reporting exhaustive, critical assessments of published literature on relevant epidemiological questions. Reviews should be prepared in strict compliance with MOOSE or PRISMA (formerly QUOROM) guidelines or with Cochrane's complementary guidelines for systematic reviews of health promotion and public health interventions. The journal encourages authors to use alternative databases covering scientific literature from low- and middle-income countries not indexed in the traditional international databases (ie, Medline, Web of Science). Manuscripts should include a box offering a thumbnail sketch of what is already known and what the manuscript adds to the literature (see Research Reports).

Word count: up to 3000 words
Structured abstract: maximum of 250 words
Tables/Illustrations: up to 5
References: up to 100

Glossary

Manuscripts containing definitions of relevant terms in a defined field of epidemiology or public health, mostly commissioned by the editors but we are happy to consider unsolicited editorials. Definitions should be as clear as possible and intelligible to non-specialist audiences. They should aim to cover the needs of such readers and contribute to the wider requirement for standardised concepts in our discipline. Longer glossaries may be considered but of a length publishable in a maximum of two parts.

For a full description of the aims and contents of the Glossaries in the journal, see: "A call for glossaries in public health" (J Epidemiol Community Health 2000;54:561).

Word count: up to 3000 words
Abstract: should not exceed 150 words
References: up to 50

Debate

A group of manuscripts aimed at stimulating new thoughts on theoretical, methodological and applied questions related to public health and epidemiology. These manuscripts could be about an Essay (or eventually other article type) or about a question posed by the Editors. While they are always commissioned, the editors welcome idea on topics for debate suggested by our readers and authors.

Word count: up to 1500 words
Abstract: up to 150 words
Tables/Illustrations: 1
References: up to 15

Research agenda

Manuscripts aimed at presenting useful background information on topical problems in public health and epidemiological research and providing readers with a summary of what it is necessary to know, a type of "objectives for future studies". Ideally, authors of the Research Agenda section

should present ideas and hypotheses that they are willing to share with others. Voluntary sharing of hypotheses and new research ideas in public health and epidemiology could stimulate creativity, innovation and useful research and also contribute to the shaping of the research agenda.

For more information on the aims and contents of the Research Agenda, see: "Sharing hypotheses and ideas in public health research: contributing to the research agenda" (J Epidemiol Community Health 2007;61:2-4).

Word count: up to 1500 words
Abstract: up to 150 words
Tables/Illustrations/Box: up to 2
References: up to 30

Speakers' corner

Speakers' Corner is an opportunity for readers to get things off their chests. We welcome provocative, outspoken and stimulating contributions – preferably rooted in reality. The idea is to have a more flexible place in which authors freely give their opinions on public health or epidemiological matters without the academic constrictions of other sections of the journal. For more information see "More opportunities for your opinions: The JECH speaker's corner" (J Epidemiol Community Health 2001;55:217).

Word count: up to 800 words
Tables/Illustrations: none
References: up to 10

Gallery

A section in which images (ie, photographs) will be more prominent than text, in contrast with the usual papers we publish. In doing this we want to use the advantages of images over words in triggering evocations and in reflecting on aspects of human health. The submission must include a title, the image and a text of no more than 200 words. Please note that we will require you to provide written consent from any person who appears in a photograph you submit.

For a full description of the aims and contents of the Gallery, see "The JECH Gallery: a call for public health photographs" (J Epidemiol Community Health 2000;54:801).

Word count: up to 200 words
Tables/Illustrations: 1

Letter to the Editor

Letters to the Editor are expected to include original data or substantiated comments or criticism arising from recent articles published in the journal.

Word count: up to 400 words
Tables/Illustrations: 1
References: up to 5

eLetter

Comments arising from recent articles published in the journal are welcome and should be submitted directly via the website (not throughout the normal online submission system used for all the other types of article). Authors should go to the Abstract or full text of the article in question. At the top right corner of each article is a "Contents box". Click on the "Submit a response" link. Some letters in response to an article may be published in the print version of the journal.

Word count: up to 400 words
Tables/Illustrations: 1
References: up to 5

Obituary

Obituaries are usually commissioned, but we are happy to consider and review unsolicited obituaries. We also welcome good quality photographs for this section.

Word count: up to 250 words
Tables/Illustrations: 1

Aphorism

Story-telling is one of the most powerful ways of communicating experience and motivating people to change practice. If you have an aphorism or a story which deserves wider broadcasting, the Editors would be delighted to receive it. Keep it short and pithy and try not to cover too many points at once.

Word count: up to 200 words
Tables/Illustrations: 1
References: up to 5

Supplements

The BMJ Publishing Group journals are willing to consider publishing supplements to regular issues. Supplement proposals may be made at the request of:

- The journal editor, an editorial board member or a learned society may wish to organise a meeting, sponsorship may be sought and the proceedings published as a supplement.
- The journal editor, editorial board member or learned society may wish to commission a supplement on a particular theme or topic. Again, sponsorship may be sought.
- The BMJPG itself may have proposals for supplements where sponsorship may be necessary.
- A sponsoring organisation, often a pharmaceutical company or a charitable foundation, that wishes to arrange a meeting, the proceedings of which will be published as a supplement.

In all cases, it is vital that the journal's integrity, independence and academic reputation is not compromised in any way.

For further information on criteria that must be fulfilled, download the supplements guidelines.

When contacting us regarding a potential supplement, please include as much of the information below as possible.

- Journal in which you would like the supplement published
- Title of supplement and/or meeting on which it is based
- Date of meeting on which it is based
- Proposed table of contents with provisional article titles and proposed authors
- An indication of whether authors have agreed to participate
- Sponsor information including any relevant deadlines
- An indication of the expected length of each paper Guest Editor proposals if appropriate

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- Latest content
- Current issue
- Archive
- Browse by topic
- Most read articles
- Responses

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- About
- Editorial board
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