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ORIGINAL ARTICLE

Need for orthodontic treatment among Brazilian adolescents: evaluation based on public health

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KEYWORDS

Oral health;
Malocclusion;
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Abstract

Objective: To identify the prevalence and the severity of malocclusions and to analyze factors associated with the need for orthodontic treatment of Brazilian adolescents.

Methods: This exploratory, cross-sectional study was carried out based on secondary data from the national epidemiological survey on oral health in Brazil (2002-2003). Socio-demographic conditions, self-perception, and the existence and degree of malocclusion, using the Dental Aesthetic Index, were evaluated in 16,833 adolescent Brazilians selected by probabilistic sample by conglomerates. The dependent variable - need orthodontic treatment - was estimated from the severity of malocclusion. The magnitude and direction of the association in bivariate and multivariate analyzes from a Robust Poisson regression was estimated.

Results: The majority of the adolescents needed orthodontic treatment (53.2%). In the multivariate analysis, the prevalence of the need for orthodontic treatment was larger among females, non-whites, those that perceived a need for treatment, and those that perceived their appearance as normal, bad, or very bad. The need for orthodontic treatment was smaller among those that lived in the Northeast and Central West macro-regions compared to those living in Southeast Brazil and it was also smaller among those that perceived their chewing to be normal or their oral health to be bad or very bad.

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PALAVRAS-CHAVE

Saúde bucal;
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Adolescente;
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Conclusions: There was a high prevalence of orthodontic treatment need among adolescents in Brazil and this need was associated with demographic and subjective issues. The high prevalence of orthodontic needs in adolescents is a challenge to the goals of Brazil's universal public health system.

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Necessidade de tratamento ortodôntico em adolescentes brasileiros: avaliação com base na saúde pública

Resumo

Objetivo: Identificar a prevalência e a gravidade das más oclusões e fatores associados com a necessidade de tratamento ortodôntico dos adolescentes brasileiros.

Métodos: Estudo transversal realizado com base nos dados da pesquisa epidemiológica nacional em saúde bucal no Brasil (2002-2003). Condições sociodemográficas, autopercepção, existência e nível de gravidade da má oclusão, usando o Índice de Estética Dentária, foram avaliados em 16.833 adolescentes brasileiros selecionados por amostra probabilística por conglomerados. A variável dependente - necessidade de tratamento ortodôntico - foi estimada a partir da gravidade da má oclusão. A magnitude e a direção das associações na análise bivariada e multivariada foram estimadas pela regressão de Poisson.

Resultados: A maioria dos adolescentes apresentou necessidade de tratamento ortodôntico (53,2%). Na análise multivariada, a prevalência da necessidade de tratamento ortodôntico foi maior entre as mulheres, os não brancos, entre aqueles que autopercebem a necessidade de tratamento e aqueles que autoperceberam sua aparência como normal, ruim ou muito ruim. A necessidade de tratamento ortodôntico foi menor entre aqueles que viviam nas macrorregiões Nordeste e Centro-Oeste em comparação com aqueles da macrorregião Sudeste e também menor entre aqueles que auto-perceberam sua mastigação como normal e sua saúde bucal como ruim ou muito ruim.

Conclusões: O estudo identificou uma prevalência elevada da necessidade de tratamento ortodôntico em adolescentes no Brasil, sendo associada com questões demográficas e subjetivas de saúde bucal. A alta prevalência de necessidades ortodônticas entre adolescentes é um desafio para o sistema público de saúde brasileiro (SUS).

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Introduction

Brazil has great regional and social inequalities. To address such disparities, the New Constitution of Brazil (1988) recognized health as a right of each citizen and the responsibility of the government, and established the ideological basis for the creation of Brazil's universal public health care system, the Unified System of Health (SUS). This has increased access to healthcare for a great part of the Brazilian population.¹ At Brazil's 11th National Health Conference in 2000, the principles of comprehensive care, humanization and equity were restated as goals for the consolidation of SUS. Additionally, the need to strengthen collective actions regarding public health services and to assure governmental compliance with its responsibility to provide universal, comprehensive, and equitable health care to all Brazilians was stressed.¹⁻³

Previous studies have evaluated oral health status, indicating the need for implementation of health public policies for improvement of these conditions and universality of health, considering socioeconomic characteristics.⁴⁻⁶ Malocclusion, the third most prevalent oral pathology has

been considered a priority in global public health and has many adverse consequences, such as psychosocial maladjustment, periodontal disease and unfavorable mastication.⁷

Malocclusions are not classified as diseases and are difficult to define, unlike other issues of oral health,⁸ highlighting the importance of a clear definition, as well as an improvement in diagnostic criteria for obtaining epidemiological data regarding these issues in order to facilitate the planning of public health prevention and care.⁹ Therefore, there was a need to develop an epidemiological instrument to identify and classify malocclusions and recognize the dental and aesthetic need for orthodontic treatment of a given population to compare such needs among populations or longitudinally. In response to this need, Jenny & Cons developed the Dental Aesthetic Index (DAI) in 1986.¹⁰ It quantifies aesthetic factors and clinical presentations, using both subjective and objective measures to produce a single numerical value that reflects all aspects of malocclusion.⁷ The DAI is composed of ten variables and results in a numerical value that classifies the individual on a scale of 13 to 80, which can be categorized into cutoff points.¹⁰ DAI

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