



Endodontically treated dental elements: a retrospective comparative observational cohort study

Christiane Michele Dias¹, Giovana Rodrigues¹, Victória Carolina Pavane Rodrigues¹, Ana Paula Bernardes da Rosa^{1,2*}

¹ UNORTE - University Center of Northern São Paulo, Dentistry department, São José do Rio Preto, São Paulo, Brazil.

² UNIPOS - Postgraduate and continuing education, Dentistry department, São José do Rio Preto, São Paulo, Brazil.

*Corresponding author: Profa. Me. Ana Paula Bernardes da Rosa.

Unorte/Unipos – Graduate and Postgraduate education, Dentistry department, São José do Rio Preto, São Paulo, Brazil.

Email: implantesecia@terra.com.br

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Abstract

Generation X is a generation of great intensity, with great social and financial anxiety in pursuit of self-improvement. Millennials are lazier and narcissistic, but more confident. This study aimed to search the database of the UNORTE – Universidade do Norte de São Paulo dentistry clinic for endodontically treated elements and draw a comparison between generations X and Y. 150 medical records that fit within the parameters were selected. It was concluded that Generation X has approximately 70% more endodontically treated elements than Generation Y.

Keywords: Endodontic treatment. Dental elements. Dental care. Lifestyle. Socioeconomic life.

Introduction

Generation X refers to those born between 1965 and 1981, responsible for a period of evident changes, as they rebelled against what was established at the time [1]. This generation was driven to develop skills that would improve employability, as there was no longer any confidence in functional stability [2].

In this sense, generation X is made up of autonomous people who care about making a difference, as long as they are doing what they love. In addition, due to technological development, they are not patient with activities that demand time [3]. Their life wasn't easy at all, as finding a job, after a turbulent period, was a big challenge. Working and producing was his philosophy of life, leaving aside idealism. Individualism, ambition, and dependence on work, or workaholic, are the values with which those born in this generation grew up [3-6].

Generation Y comprises those born between the years 1982 and 2000, also recognized as the Millennial generation. In Brazil, at the time when Generation Y began to develop, the country was experiencing substantial economic instability, followed by the process of democratic transition, with the publication of the current federal constitution of 1988. On the world stage, the culture of impermanence prevailed, and the scarcity of guarantees, with volatile markets [2,3,6-10].

Also, generation Y is considered open to exposing their expectations. People expect immediate professional advancement and have the habit of changing companies frequently when they are not subjected to challenges and do not have the opportunity for professional growth in their current occupation [4,8-11].

Also known as digital natives, technology is part of their daily lives: all their activities go through a screen. On and off are fully integrated into millennials' lives. However, they were not born in the technological age. They lived in the analog age and migrated to the digital world. Unlike previous generations, the world, due to the economic crisis, required them to be more prepared to get a job, as competition grew [4,10,11].

Because of this, the objective of this study was to search the database of the Teaching Institution UNORTE - University of North of São Paulo, the endodontically treated dental elements, and draw a comparison between the X and Y generations.

Methods

Study Design

The rules for a prospective observational cohort study were followed (The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)

Statement: guidelines for reporting observational studies). Available in: <https://www.equator-network.org/reporting-guidelines/strobe/>. Accessed at 2023/03/07.

Ethical Approval

This study followed the ethics committee's compliance and preserved the patient's anonymity, as well as preserving the rights and care of the patient and their information as recommended by the Declaration of Helsinki of 1964.

Participants and Data

When determining the fulfillment of the research, the age group was determining factor, (people of Generation X comprise people born between the years 1965 to 1981 corresponding to ages 41 to 57 years old, and Generation Y comprise people born between the years 1982 to 2000 corresponding to ages ranging from 22 to 40 years), gender, dental elements and coverage area (jaw or mandible, left or right side), considering quantitative approaches.

The endodontically treated teeth of 150 male and female patients from generations X and Y were surveyed, evaluating 75 patients from each generation, regardless of gender.

Settings

UNORTE Dental Database – University of Northern São Paulo, São José do Rio Preto, Brazil.

Results

In Generation X, 280 elements were treated, 106 in the upper posterior region, 87 in the upper anterior region, 09 in the lower anterior region and 78 in the lower posterior region. In Generation Y, 165 elements were treated, 83 in the upper posterior region, 30 in the upper anterior region, 02 in the lower anterior region, and 50 in the lower posterior region. Both generations totaled 445 elements that have endodontic treatment.

VARIABLES	GENERATION X	GENERATION Y
• Female (F)	56 (F)	35 (F)
• Male (M)	19 (M)	40 (M)
• Predominant elements	Upper hindquarters	Upper hindquarters
• Predominant arcade	Jaw	Jaw
• Treated elements	280	165
• Upper interiors	87	30
• Upper hindquarters	106	83
• Lower forelegs	9	2
• Lower hindquarters	78	50

Discussion

According to the objective of this study, which analyzed the database of the Dental Education Institution of UNORTE, in Generation X, 280 elements were treated, 106 in the upper posterior region, 87 in the upper anterior region, 09 in the lower anterior region and 78 in the anterior lower region. lower back region. In Generation Y, 165 elements were treated, 83 in the upper posterior region, 30 in the upper anterior region, 02 in the lower anterior region, and 50 in the lower posterior region. Both generations totaled 445 elements that have endodontic treatment.

Based on these findings and as literary support, a study indicated a relationship between tooth loss and conservative endodontic therapy, resulting in choices. However, the socioeconomic level has an inverse relationship with tooth loss and conservative endodontic therapy, but a direct relationship with the worsening of the periodontal condition. This study highlighted the need for the public health administration to adopt a socioeconomic assessment not only based on family income but also to improve its therapeutic course [12].

In this scenario, periodontal diseases and dental caries are the most common human diseases and the main cause of tooth loss. Both diseases can lead to nutritional impairment and negative impacts on self-esteem and quality of life. As complex chronic diseases, they share common risk factors, such as the need for a pathogenic plaque biofilm, but exhibit distinct pathophysiology. Multiple exposures contribute to its causal pathways, and susceptibility involves risk factors that are inherited and those that are acquired such as socioeconomic factors, biofilm load or composition, smoking, and carbohydrate intake. Identifying these factors is crucial in the prevention of both diseases, as well as in their management. There is moderately strong evidence for a genetic contribution to periodontal disease and caries susceptibility, with an estimated attributable risk of up to 50%. In caries, the fermentation process leads to the production of acid and the generation of biofilm components such as glucans. In periodontitis, glycemia leads to oxidative stress and the end products of advanced glycation can also trigger a hyperinflammatory state. Deficiencies of micronutrients such as vitamin C, vitamin D or vitamin B12 may be related to the onset and progression of both diseases. Furthermore, hyposalivation, rheumatoid arthritis, smoking/tobacco use, undiagnosed or poorly controlled diabetes, and obesity are common acquired risk factors for caries and periodontal disease [13].

Therefore, the literature confirms these findings concerning endodontically treated dental elements based on population clinical data. In this sense, it fits

into this scope that the loss of the dental coronal portion after carious lesions or fractures leads to endodontic treatment with subsequent restoration to ensure correct anatomy and function. Partial adhesive restorations have been widely proposed to increase the survival rate of endodontically treated teeth. Indirect partial restorations in endodontically treated teeth showed acceptable overall results in terms of success 2 to 4 years after placement with only 4.32% failure. Failures increase after 7 years up to 12-30 years with failure rates of approximately 10.65% and 20.94%. The analysis of the articles included reporting the causes of failures in restorations showed that 15.51% of the cases were related to the loss of the tooth [14].

Conclusion

This research concluded that Generation X has approximately 70% more endodontically treated elements when compared to Generation Y. The life of Generation Y was difficult with the lack of jobs facing a great challenge. They had no idealism, but a realistic life of hard work and production. Therefore, it was a generation that did not have time and did not prioritize oral health.

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Ethics approval

This study followed the ethics committee's compliance and preserved the patient's anonymity, as well as preserving the rights and care of the patient and their information as recommended by the Declaration of Helsinki of 1964.

Informed consent

Not applicable.

Data sharing statement

No additional data are available.

Conflict of interest

The authors declare no conflict of interest.

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