



Original article

Knowledge of the population about the orofacial harmonization procedures

Conhecimento da população sobre os procedimentos de harmonização orofacial

Renata Souza Leite Vieira¹ , Giovana Rodrigues Machado¹ , Wlisses Gabriel Santos Lopes¹  e Flávia Durães Oliveira¹ .

¹FUNORTE University Center, Montes Claros-MG, Brazil.

Abstract

Objective: to verify the knowledge of the population of a city in the north of Minas Gerais state about orofacial harmonization. **Materials and Methods:** this is a descriptive, quantitative and cross-sectional study. The population consisted of residents of the city of Montes Claros (MG). The sample was composed of 193 people aged between 18 and 65 years. For data collection, a form created in Google Forms was used, distributed by the snowball technique. **Result:** it was found that the majority of the population knows about orofacial harmonization procedures and that they are performed by dentistry surgeons. Women aged 18 to 35 years old are predominant in the search for these procedures. Among them, the most known are the hyaluronic acid filling, bichectomy and lip filling. **Conclusion:** the population knows the orofacial harmonization procedures and considers dentists capable of performing them.

Keywords: Dentistry. Rejuvenation. Hyaluronic acid. Botulinum toxin.

Resumo

Objetivo: verificar o conhecimento da população de um município norte mineiro sobre harmonização orofacial. **Materiais e Métodos:** trata-se de um estudo de caráter descritivo, quantitativo e transversal. A população foi constituída por moradores da cidade de Montes Claros (MG). A amostra foi composta por 193 pessoas com idade entre 18 e 65 anos. Para a coleta de dados, foi utilizado um formulário criado no *Google* Formulários, distribuído pela técnica de *snowball*. **Resultados:** constatou-se que a maioria da população conhece os procedimentos de harmonização orofacial e que são realizados por cirurgiões-dentistas. As mulheres na faixa etária de 18 a 35 anos são predominantes na busca por esses procedimentos. Entre eles, os mais conhecidos são preenchimento com ácido hialurônico, bichectomia e preenchimento labial. **Conclusão:** a população conhece os procedimentos de harmonização orofacial e considera os cirurgiões-dentistas aptos a realizá-los.

Palavras-chave: Odontologia. Rejuvenescimento. Ácido hialurônico. Toxina botulínica.

Corresponding Author: Renata Souza Leite Vieira | renata.leite@funorte.edu.br

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Introduction

For a long time, non-surgical aesthetic procedures, which are those offered by Orofacial Harmonization (HOF), were under the exclusive competence of medical specialties. In 2011, the Federal Council of Dentistry (CFO) began to lay the groundwork for making Orofacial Harmonization a practice regulated by dentists, and clarified that the procedures performed were only those involving the oral cavity, muscles, and tissues of the face¹. This confirms that dentistry professionals have in-depth knowledge in facial anatomy and dentistry and facial measurements, which are essential for aesthetic and functional balance².

The latest normative act, the first article of Resolution 198, dated January 29, 2019³, recognizes HOF as a dentistry specialty. Thus, such specialty provided by the resolution, is defined as the competence of dentistry surgeons. As of June 23, 2022, the CFO (Federal Council of Dentistry) registered 1,216 dentistry surgeons in the council, of which 880 were women and 333 men⁴⁻⁶.

Since the recognition by the council, the search and the offer for training in the area by professionals have increased significantly and, consequently, reflected in the number of complications and failures⁷. The mastery of techniques, as well as knowledge about indications and contraindications of materials and products used in the treatments, is essential, and is present in the Dentistry Code of Ethics, to maintain the care for the dignity and health of patients⁸.

The knowledge of the anatomy applied to the head and neck, with the mastery of the fundamentals of facial analysis and the Brazilian biotype can diagnose an aesthetic disharmony of skeletal origin, dentistry or anatomical changes that can be fundamental to the diagnosis and treatment with the non-invasive aesthetic therapies of the HOF⁹.

Among all procedures approved by the HOF, the most widespread are those involving the use of hyaluronic acid (HA) and botulinum toxin. This is justified by the fact that HA is a natural polymer already found in the extracellular matrix of some human tissues, such as synovial fluid, cartilage, connective tissues, dermis, and brain, which makes it a biocompatible material, reducing allergic and inflammatory reactions¹⁰. And botulinum toxin, which is a neurotoxin produced by *Clostridium botulinum* bacteria, commonly found in plants and extracted from the soil, water, and the intestinal tracts of animals. This bacterium synthesizes eight exotoxins, namely A, B, C1, C2, D, E, F, and G, and all serotypes block the release of acetylcholine by acting on the peripheral nervous system¹¹.

The HOF is a dentistry specialty that has been rising in recent years, due to the great demand of patients who want a facial aesthetic enhancement without having to resort to plastic surgery of greater complexity. Given the above, the increased demand for the procedures of HOF associated with the lack of knowledge to which it is intended, makes it relevant to conduct this study.

The objective was to verify the knowledge of the population of a city in the north of Minas Gerais state about orofacial harmonization.

Materials and Methods

This is a quantitative, cross-sectional, descriptive study.

The study was performed in the city of Montes Claros (MG), in the period from August 18 to October 1, 2021. The population consisted of men and women over 18 years old, residents in Montes Claros. A total of 206 people were invited to participate in the study.

The variables evaluated were age, gender, knowledge about HOF (orofacial harmonization) performed by dentistry surgeons, procedures performed or desired, impacts of HOF on patients lives, and factors preventing them from performing the procedures.

We used a structured questionnaire prepared by the authors themselves through Google Forms, containing 15 questions, 12 closed and 3 open. The questionnaire was first sent to two specific WhatsApp groups. The participants could share the survey with their other groups and contacts. This characterizes the snowball technique, providing a wider reach of respondents when an exact sample number is not available. During the data collection period, the researchers shared the form on the social networks Facebook and Instagram twice a week for a month and a half, from August to October 2021, with the intention of reaching different participants.

Descriptive analysis was performed using Microsoft Excel® software.

Ethical care

The research followed all ethical precepts determined by resolution 466/12 and was approved by the Research Ethics Committee with opinion: 4.907.676.

Results

A total of 206 answers were obtained through the questionnaire sent to the participants; however, 13 presented incomplete answers. Thus, 193 people participated in the study.

The predominant age range among the group was 18 to 35 years (68.4%; n=133), with the majority of participants being women (78.2%; n=151). A large proportion of people have some knowledge about HOF (92.7%, n=179), with 89% (n=172) knowing that HOF procedures could be performed by dentistry surgeons and 82.4% (n=159) considering them able and skilled to resolve any interferences related to these procedures (Table 1).

Table 1 - Knowledge of the population about orofacial harmonization performed by dentistry professionals. Montes Claros (MG), Brazil, 2021. (n=193).

Variables	Yes		No	
	n	%	n	%
Already heard about harmonization	179	92.7	14	7.3
Were aware that orofacial harmonization procedures can be performed by dentistry surgeons	172	89.1	21	10.9
Had the knowledge that the dentistry surgeon is a professional authorized and trained to solve any interference related to the procedures	159	82.4	34	17.6

Most participants declared they knew all the procedures related to HOF, with a predominance of lip fillers (92.2%, n=161), botulinum toxin (90.7%, n=175) and hyaluronic acid fillers (83.4%, n=161). Only 1% (n=2) said they did not know about the procedures. In contrast, 87.6% (n=169) informed that, despite knowing about them, they had never performed HOF procedures.

Among the procedures mentioned, 36.8% (n=71) would like to undergo hyaluronic acid filling, 46.1% (n=89) botulinum toxin treatment, 32.1% (n=62) jowl liposuction, and 20.7% (n=40) of the respondents would not undergo any HOF procedure (Table 2).

Table 2 - Known, performed and desired procedures by the investigated population. Montes Claros (MG), Brazil, 2021. (n=193).

Procedures	Known procedures		Performed procedures		Desired Procedures	
	n	%	n	%	n	%
Hyaluronic acid filler	161	83.4	8	4.1	71	36.8
Bichectomy	161	83.4	1	0.5	27	14
Lip	178	92.2	5	2.6	48	24.9
Botulinum toxin (BOTOX)	175	90.7	17	8.8	89	46.01
Rhinomodeling	130	67.4	1	0.5	38	19.7
Liposuction of jowls	158	81.9	2	1	62	32.1
Support wires (PDO)	120	62.2	0	0	38	19.7
Collagen biostimulation	92	47	0	0	57	29.5
None	92	1	196	87.6	40	20.7

It was observed that 55.4% of participants (n=107) responded that they would seek a dentistry surgeon to perform any procedure of HOF for aesthetic dissatisfaction, 34.7% (n=67) for factors related to age and 24.9% (n=48) would perform if a professional indicated the treatment. Among the participants, 86% (n=166) stated that offering HOF would positively impact their lives.

The factors that would prevent participants from performing any HOF procedure were: procedure values (62.2%, n=120), insecurity (30.6%, n=59), lack of knowledge of procedures (13.5%, n=26), no reason (15.5%, n=30), and other (10.4%, n=20).

Discussion

According to the findings in this research, it could be observed that the population has knowledge about HOF, and 18 to 25 year olds were the most interested. This may be due to the fact that this age group has more access to the internet and ease of handling. The study on the role of Instagram social network in patient decision making in undergoing HOF had a prevalence of 49.2% of participants aged 19 to 25 years, a group that had constant access to digital content, which influenced the decisions of these participants¹².

The procedures pioneered in HOF and most chosen are hyaluronic acid and botulinum toxin. In a systematic review on the efficacy and safety of different HA fillers used to increase overall lip fullness, short, medium and long-term satisfaction rates were found to be over 70%¹³.

In a recent study conducted online in 35 countries, the authors investigated the existence of a universal standard of lip size or ratio between lower and upper lips in women and found that the moderate lip ratio was considered the most pleasing by the female public¹⁴, which justifies procedures for lip fillers.

The majority level, that is, the time of action is restricted to 12 months of the procedure. It is justified that this variation in results is due to the choice of products used, the place, the amount, and the depth of application. This is because the smaller the quantity of products required and the depth of application, the shorter the durability of the innervation¹⁵.

The clinical examination of the dentistry surgeon should observe factors that lead to facial harmony and integrate face, smile, lips and facial bone measurements, differentiating it from other professionals who work in HOF¹⁶. Thus, it is confirmed in this research, in which most participants affirmed positively, that the dentistry surgeon is a professional able to perform the procedures of HOF.

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However, the study is limited by the fact that there are no previous studies that evaluated the performance of HOF procedures by the population of Montes Claros (MG), which restricts confirmation that there was an increase or decrease in the procedures cited in the study.

Conclusion

The procedures most known by the population investigated are HA fillers, bichectomy, lip fillers, and botulinum toxin procedures. The participants are aware that dentistry surgeons are able to perform HOF procedures and treat possible interurrences. They also stated that raising self-esteem and improving appearance would be the main points for performing procedures of HOF.

Authors contributions

All authors have approved the final version of the manuscript and declare themselves responsible for all aspects of the work, including ensuring its accuracy and completeness.

Conflict of interest

The authors declare that there are no conflicts of interest.

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