







Activities of members of the Brazilian Society of Stomatology and Oral Pathology in the Covid-19

Alison José Martelli^{1*} , Paulo Rogério Ferreti Bonan² , Daniella Reis Barbosa Martelli³ , Jannefer Leite de Oliveira³ , Danyel Elias da Cruz Perez^{1,4} , Hercílio Martelli Júnior^{3,5} 

¹ Department of Oral Diagnosis, Faculdade de Odontologia de Piracicaba (FOP), Universidade Estadual de Campinas (UNICAMP), Piracicaba, São Paulo, Brazil.

² Department of Clinical and Social Dentistry, Federal University of Paraíba, João Pessoa, Brazil.

³ School of Dentistry, State University of Montes Claros, Montes Claros, Brazil.

⁴ Department of Clinical and Preventive Dentistry, School of Dentistry, Federal University of Pernambuco (UFPE), Recife, PE, Brazil.

⁵ Center for Rehabilitation of Craniofacial Anomalies, Dental School, University of José Rosário Vellano, Alfenas, Minas Gerais, Brazil.

Corresponding author:

Alison José Martelli
Department of Oral Diagnosis,
University of Campinas (FOP/UNICAMP)
901 Limeira Avenue, Piracicaba,
São Paulo, 13414-018, Brazil.
Phone +55 35991910838
E-mail: alison.martelli@gmail.com

Editor: Dr. Altair A. Del Bel Cury

Received: November 11, 2023

Accepted: October 17, 2024

The COVID-19 pandemic quickly spread throughout many countries, affecting the functioning of various important services, including services in dentistry, and led to profound changes. **Aim:** This study aims to highlight the problems faced by members of the Brazilian Society of Stomatology and Oral Pathology (SOBEP), during the period of COVID-19 pandemic.

Methods: This was a cross-sectional study. Three hundred and eighteen members of the SOBEP received, by e-mail, an online structured questionnaire, on the Google Forms platform (Google®), with questions related to the clinical and research activities developed during the COVID-19 pandemic.

Results: Of the 318 members of the SOBEP, 139 (43.7%) answered the questionnaire. Of the 139 associates, 88 were females (63.3%), distributed in five Brazilian Regions, and twenty states, and Federal District. Thirty-three (23.7%) associates work in two areas, stomatology and oral pathology, being the workplace throughout the area of operation public higher education institutions. Importantly, 112 (80.6%) members reported that they are developing their activities with restriction, and 95 (68.3%) members reported changes in their workplace to meet the new biosafety standards. Ninety-one (65.5%) reported having noticed changes in their mental health.

Conclusion: The pandemic has caused numerous changes in the clinical activities of dentistry, and due to the risk of infection, several procedures within stomatology and oral pathology have been postponed. Thus, further studies are required in order to show the real impact of the pandemic in this area.

Keywords: COVID-19. Oral medicine. Pathology, oral. Surveys and questionnaires.



Introduction

In Latin America, Brazil was the first country to confirm a case of COVID-19 on February 26, 2020^{1,2}. More than a year after the first confirmed case (May 24, 2021), the country has become the epicenter of the pandemic in the world (<https://coronavirus.jhu.edu/map.html>). The production of aerosols during oral procedures demonstrated an additional risk to dentists³. These professionals had their operation restricted, as well as in dental schools⁴. In Brazil, during the pandemic, the number of consultations in oral medicine (OM) and oral biopsies dropped 65.5% and 68.8%, respectively, thereby resulting in a delay in the diagnosis of oral lesions^{5,6}.

With a population of approximately 213 million people (<https://www.ibge.gov.br/>) (accessed in May 2021), and an extensive territory, Brazil has 336,254 dentists (<http://cfo.org.br/website/estatisticas/quantidade-geral-de-entidades-e-profissionais-ativos/>). In Brazil, the Federal Council of Dentistry recognized OM (or Stomatology) as a specialty in 1992 and Oral Pathology (OP) in 1971⁷. In 1974, the Brazilian Society of Stomatology (SOBE) was founded, and, in 2007, it was renamed the Brazilian Society of Stomatology and Oral and Maxillofacial Pathology (SOBEP) (www.estomatologia.com.br). Owing to the restrictions, specialists in OM and OP had their services affected. Thus, this study aimed to evaluate the main challenges faced by SOBEP members during the pandemic.

Indeed, due to the pandemic, several measures were imposed to reduce contamination, leading to restrictions even in dental services, consequently affecting the services of specialists in oral medicine and oral pathology. In this context, our study aims to assess the main problems faced by SOBEP members during this pandemic period.

Material and Method

This is a cross-sectional questionnaire, using the Google Forms Platform (Google®) tool (<https://docs.google.com/forms/>), distributed electronically to SOBEP members, through institutional e-mail, by the entity itself (<http://www.estomatologia.com.br/>), totaling 318 forms sent.

The forms were composed of two parts: the first, containing sociodemographic variables, such as gender, origin, federative unit, area of activity, among others, and the second part, with questions related to the clinical and research activities developed. Participation in the questionnaire was voluntary and spontaneous and all responses were anonymous.

Data were collected and stored in a database and processed using the statistical program SPSS® version 24.0 (Statistical Package for Social Sciences for Windows, Inc., Chicago, IL, USA). The Research Ethics Committee (#4.091.568) approved the study.

Result

Of the 318 SOBEP members, 139 (43.7%) answered the questionnaire. There was a predominance of females (88; 63.3%). The participants were distributed in all the 5 Brazilian macro-regions, in 21 states and the Federal District (Table 1). Most of them (66; 47.5%) reported working exclusively in public services, 51 (36.7%) in public dental schools and 15 (12.3%) in health care services. The majority of participants (112; 80.6%) reported that their clinical activities continued during the pandemic, but with restrictions; 95 (68.3%) confirmed adjustments in their workplace to meet the new biosafety standards. There was no lack of personal protective equipment (PPE) for 64 (46.1%) SOBEP members. However, 104 (74.8%) requested funding for PPE. Monthly income had a significant reduction for 54 (38.8%) participants and 91 (65.5%) reported mental health disorders.

Table 1. Oral Medicine and Oral Pathology according to the Brazilian Regions and States.

Regions of Brazil	State	Number of SOBEP members (n) (%)
Southeast	São Paulo	30 (21.6)
	Rio de Janeiro	17 (12.2)
	Minas Gerais	16 (11.5)
	Espírito Santo	1 (0.7)
South	Paraná	12 (8.6)
	Rio Grande do Sul	12 (8.6)
	Santa Catarina	11 (7.9)
Northeast	Pernambuco	8 (5.8)
	Bahia	7 (5.0)
	Paraíba	6 (4.3)
	Ceará	4 (2.9)
	Sergipe	3 (2.2)
	Alagoas	3 (2.2)
	Rio Grande do Norte	2 (1.4)
	Piauí	1 (9.7)
	Maranhão	1 (9.7)
	Midwest	Goiás
Federal District*		1 (9.7)
North	Amapá	1 (9.7)
	Amazônia	1 (9.7)
	Pará	1 (9.7)
	Total	139 (100)

*The Federal District encompasses the capital of Brazil, Brasília.

When asked about problems faced in clinical activities, most members (56; 40.2%) had restrictions on opening the workplace. Face-to-face activities were completely suspended for 48 (34.5%) members, and 38 (27.3%) reported lack or incomplete adaptations to the biosafety protocols. Additionally, 18 (12.9%) mentioned lack of reagents and consumables, and 8 (5.8%) pointed out difficulties in getting to the workplace (Table 2).

Table 2. Limitation of the activities of members of the Brazilian Society of Stomatology and Oral Pathology during the COVID-19 pandemic.

	n (%)
Carried out your professional activities	
Yes, with restrictions	112 (80.6)
Yes	16 (11.5)
No	11 (7.9)
Changes in the workplace to achieve new biosecurity standards	
Yes	95 (68.3)
No, but adjustments are in progress	30 (21.6)
No	14 (10.1)
Lack of Personal Protective Equipment	
No	64 (46.1)
Yes	28 (27.3)
My face-to-face activities are suspended	37 (26.6)
Increase in financial values for the acquisition of Personal Protective Equipment	
Yes	104 (74.8)
I'm not following, my activities are suspended	27 (19.4)
No	8 (5.8)
Worsening in mental health	
Yes	91 (65.5)
No	48 (34.5)
Reduction of your monthly income	
Yes, slight reduction	54 (38.8)
No	53 (38.2)
Yes, significant	32 (23)
Problem(s) related to your professional activity during	
Restrictions on the opening of the workplace	56 (40.2)
My face-to-face activities are completely suspended	48 (34.5)
Lack or incomplete adaptations of biosafety protocols	38 (27.3)
Lack of consumables	18 (12.9)
Difficulties in moving to the workplace	8 (5.8)

Most members (116; 83.5%) reported developing research activities, with 100 (86.2%) of them declaring ongoing research, and 83 (71.6%) reported developing research on COVID-19. Nevertheless, 89 (79.3%) stated difficulties with the progress of the research. The major problems encountered for research development were closure of workplaces, including laboratories, school-clinics (69; 59.5%), difficulties in moving due to restrictions (36; 31%), communication with other team members (24; 20.7%), lack of research material (12; 10.3%), and insufficient funding (12; 10.3%). Moreover, 114 (98.2%) reported participating in remote teaching activities (Table 3).

Table 3. Limitation on research activities by members of the Brazilian Society of Stomatology and Oral Pathology.

	n (%)
Developing any research activities	
Yes	116 (83.5)
No	23 (16.5)
Having any research in progress	
Yes	100 (86.2)
No	16 (13.8)
Difficulties in conducting the research	
Yes	92 (79.3)
No	24 (20.7)
Conducting any studies involving Covid-19	
Yes	83 (71.6)
No	33 (28.4)
Participating in remote updating or training activities, such as lives, forums, lectures, among others	
Yes	114 (98.2)
No	2 (1.7)
Frequency of online activities per week:	
2 times a week	32 (28.0)
1 time a week	33 (29)
5 times or more per week	19 (16.6)
3 times a week	17 (15)
4 times a week	13 (11.4)
Difficulty in research development during this period	
Closing of the place where the research is applied or carried out	69 (59.5%)
Difficulty in displacement due to restrictions	36 (31%)
Communication with other team members	24 (20.7%)
Does not apply	22 (19%)
Research material	12 (10.3%)
Budget cut	12 (10.3%)

Discussion

In Brazil, public health is a guarantee for all inhabitants, as demonstrated in this study by a large number of exclusive health workers. Members of SOBEP reported continuing their activities even with restrictions, using tools such as telemedicine and remote classes while maintaining their activities^{8,9}. The majority of SOBEP members revealed adjustments in their workplace to meet the new biosafety standards, including social distance, the use of PPE, and environmental cleanliness, among other things¹⁰⁻¹².

The transmission of COVID-19 occurs primarily by air, making the use of PPE essential¹². Although the majority of SOBEP members were affected by an increase in the price of this equipment, justified by a higher demand, the members were not harmed by a lack of PPE¹³. Professionals reported a modest reduction in income, whereas radiography clinics revealed a significant decrease¹⁴. According to the conclusions of previous investigations, treatment of patients during the pandemic caused considerable emotional distress¹⁴⁻¹⁶. The main problems faced by clinical activities were restrictions on opening the workplace, face-to-face activities completely suspended and lack or incomplete adaptations of biosafety protocols that may result in diagnostic delays for oral disorders^{17,18}.

Most members reported developing research activities and difficulties with their progress, thus resulting in losses in research¹⁹. These factors have led to impacts in various fields of OM and OP, due to the numerous problems faced^{3,5,20}.

In conclusion, the pandemic has brought profound changes to our societies and, among them, dental care in the area of oral medicine and pathology can be highlighted. Several measures have been taken in order to reduce the risk of contaminations and infections. In dentistry, the risk of infection is very high, due to the handling of areas potentially contaminated by COVID-19. Restrictive measures had a considerable impact on the activities developed by the members of Brazilian Society of Stomatology and Oral Pathology, reflecting the great number of problems identified in this study. Certainly, this will cause many long-term consequences, due to the importance of oral medicine and pathology in the diagnosis and treatments of oral diseases.

Acknowledgment

The Minas Gerais State Research Foundation-FAPEMIG, Minas Gerais, Brazil, and the National Council for Scientific and Technological Development - CNPq, Brazil.

Conflict of Interest

The authors declare no conflict of interest.

Data Availability

Datasets related to this article will be available upon request to the corresponding author.

Authors Contribution

Alison José Martelli: conceptualization and writing of the manuscript. **Paulo Rogério Ferreti Bonan:** validation and interpretation of data. **Daniella Reis Barbosa Martelli:** analysis and interpretation of data. **Jannefer Leite de Oliveira:** investigation and writing of the manuscript. **Danyel Elias da Cruz Perez:** methodology and data collection. **Hercílio Martelli Júnior:** supervision and critical review of written work.

References

1. Simões E Silva AC, Oliveira EA, Martelli H Jr. Coronavirus disease pandemic is a real challenge for Brazil. *Front Public Health*. 2020 Jun;8:268. doi: 10.3389/fpubh.2020.00268.
2. Alharbi A, Alharbi S, Alqaidi S. Guidelines for dental care provision during the COVID-19 pandemic. *Saudi Dent J*. 2020 May;32(4):181-6. doi: 10.1016/j.sdentj.2020.04.001.
3. Martelli AJ, Machado RA, Pereira WM, Silveira DMM, da Cruz Perez DE, Martelli Júnior H. Impact of the COVID-19 pandemic in the head and neck cancer treatment in the Brazil. *Oral Oncol*. 2021 May;116:105148. doi: 10.1016/j.oraloncology.2020.105148.
4. Martelli Júnior H, Machado RA, Bonan PRF, Perez DEDC, Pires FR, Alves FA. Brazilian oral medicine and oral pathology: we are here during the COVID-19 pandemic. *Oral Dis*. 2021 Apr;27(Suppl 3):757-9. doi: 10.1111/odi.13440. Epub 2020 Jun 18.
5. Marques NP, da Silveira DMML, Martelli PJL, Martelli DRB, de Lucena EHG, Martelli-Júnior H. Brazilian oral medicine and public health system: The enormous impact of the COVID-19 Era. *Oral Dis*. 2022 Apr;28(Suppl 1):1001-2. doi: 10.1111/odi.13677. Epub 2020 Nov 9.
6. Cunha AR, Antunes JLF, Martins MD, Petti S, Hugo FN. The impact of the COVID-19 pandemic on oral biopsies in the Brazilian National Health System. *Oral Dis*. 2022 Apr;28(Suppl 1):925-8. doi: 10.1111/odi.13620. Epub 2020 Sep 22.
7. Andrade RS, Martelli DRB, de Almeida OP, Lopes MA, Swerts MSO, Pires FR et al. Brazilian scientific production in oral medicine and oral pathology. *Oral Surg Oral Med Oral Pathol Oral Radiol*. 2018 Feb;125(2):179-81. doi: 10.1016/j.oooo.2017.08.009. Epub 2017 Aug 24.
8. Izzetti R, Nisi M, Gabriele M, Graziani F. COVID-19 transmission in dental practice: brief review of preventive measures in Italy. *J Dent Res*. 2020 Aug;99(9):1030-8. doi: 10.1177/0022034520920580.
9. Villa A, Sankar V, Shiboski C. Tele(oral)medicine: A new approach during the COVID-19 crisis. *Oral Dis*. 2021 Apr;27(Suppl 3):744-5. doi: 10.1111/odi.13364. Epub 2020 May 11.
10. Lippi G, Adeli K, Ferrari M, Horvath AR, Koch D, Sethi S et al. Biosafety measures for preventing infection from COVID-19 in clinical laboratories: IFCC taskforce recommendations. *Clin Chem Lab Med*. 2020 Jun;58(7):1053-62. doi: 10.1515/cclm-2020-0633.
11. Pambuccian SE. The COVID-19 pandemic: implications for the cytology laboratory. *J Am Soc Cytopathol*. 2020 May-Jun;9(3):202-11. doi: 10.1016/j.jasc.2020.03.001.
12. Cabrera-Tasayco FDP, Rivera-Carhuavilca JM, Atoche-Socola KJ, Peña-Soto C, Arriola-Guillén LE. Biosafety measures at the dental office after the appearance of COVID-19: a systematic review. *Disaster Med Public Health Prep*. 2021 Dec;15(6):e34-8. doi: 10.1017/dmp.2020.269. Epub 2020 Jul 27.
13. Meng L, Hua F, Bian Z. Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine. *J Dent Res*. 2020 May;99(5):481-7. doi: 10.1177/0022034520914246.

14. Sharpe RE Jr, Kuszyk BS, Mossa-Basha M; RSNA COVID-19 Task force members. special report of the RSNA COVID-19 task force: the short- and long-term financial impact of the COVID-19 pandemic on private radiology practices. *Radiology*. 2021 Jan;298(1):E11-8. doi: 10.1148/radiol.2020202517. Epub 2020 Jul 17.
15. Diez-Sampedro A, Gonzalez A, Delgado V, Flowers M, Maltseva T, Olenick M. COVID-19 and advanced practice registered nurses: frontline update. *J Nurse Pract*. 2020 Sep;16(8):551-5. doi: 10.1016/j.nurpra.2020.06.014.
16. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Netw Open*. 2020 Mar;3(3):e203976. doi: 10.1001/jamanetworkopen.2020.3976.
17. Pardo JC, Ramon D, Stefanelli-Silva G, Elegbede I, Lima LS, Principe SC. Advancing through the pandemic from the perspective of marine graduate researchers: challenges, solutions, and opportunities. *Front Mar Sci*. 2020;7:528. doi: doi.org/10.3389/fmars.2020.00528.
18. Abati S, Bramati C, Bondi S, Lissoni A, Trimarchi M. Oral cancer and precancer: a narrative review on the relevance of early diagnosis. *Int J Environ Res Public Health*. 2020 Dec;17(24):9160. doi: 10.3390/ijerph17249160.
19. Weiner DL, Balasubramaniam V, Shah SI, Javier JR; Pediatric Policy Council. COVID-19 impact on research, lessons learned from COVID-19 research, implications for pediatric research. *Pediatr Res*. 2020 Aug;88(2):148-50. doi: 10.1038/s41390-020-1006-3.
20. Spanemberg JC, Simões CC, Cardoso JA. The impacts of the COVID-19 pandemic on the teaching of dentistry in Brazil. *J Dent Educ*. 2020 Nov;84(11):1185-1187. doi: 10.1002/jdd.12364.