

## Dentistry: A Crisis Aggravated by the Covid-19 Pandemic \*

Odontología: una crisis agravada por la pandemia del Covid-19

Odontologia: uma crise agravada pela pandemia de Covid-19

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### ABSTRACT

**Background:** The Covid-19 pandemic involved the establishment of health emergency measures, among others, the suspension and subsequent progressive reopening of dental care. **Purpose:** To understand how health measures due to Covid-19 affected owners of dental offices and clinics in Bogotá, Colombia, and whether they aggravated the crisis of the profession. **Methods:** a qualitative study was conducted by interviewing seven dentists who owned dental clinics or offices. The interviews inquired about working conditions, economic changes, hiring conditions, and the participation of professional organizations in the pandemic. **Results:** Dentistry was facing a crisis that was exacerbated by health measures in the face of the Covid-19 pandemic. Those interviewed did not perceive a timely leadership response from government entities to establish care protocols. Administrative management is different according to the capabilities of dental clinics compared to private offices. Finally, the pandemic and mobility restrictions made it possible to establish improvements in time shared with the family; however, this affected the office owners' income, leading them to seek other forms of income. **Conclusions:** Dentistry has been in crisis for many years, which was more evident with the confinement measures implemented to control the Covid-19 pandemic. There are differences in management with dental clinics being ahead of private offices. They were essential during the pandemic.

**Keywords:** Coronavirus infections; dental personnel; dentistry; health care management; health personnel; health services research; pandemics; public health

### RESUMEN

**Antecedentes:** La pandemia por Covid-19 implicó el establecimiento de medidas de emergencia sanitaria, entre otras, la suspensión y la posterior reapertura progresiva de la atención odontológica. **Objetivo:** Comprender la forma en que las medidas sanitarias por Covid-19 afectaron a propietarios de consultorios y clínicas odontológicas de Bogotá, Colombia, y si estas agravaron la crisis de la profesión. **Métodos:** Se realizó un estudio cualitativo mediante entrevistas a siete odontólogos propietarios de clínicas o consultorios odontológicos. Se indagó por las condiciones laborales, cambios económicos,

condiciones de contratación y la participación de organizaciones profesionales en la pandemia. **Resultados:** La odontología ya venía experimentando una crisis que se exacerbó a partir de las medidas sanitarias ante la pandemia por Covid-19. Los entrevistados no percibieron una rápida voz de liderazgo de las entidades gubernamentales para establecer protocolos de atención. La gestión administrativa es diferente de acuerdo con las capacidades de las clínicas odontológicas en comparación con los consultorios privados. Finalmente, la pandemia y las restricciones en la movilidad permitieron establecer mejoras en el tiempo compartido con la familia; no obstante, esto afectó los ingresos de los propietarios que los llevó a buscar otras formas de ingreso. **Conclusiones:** La odontología enfrenta desde hace muchos años una crisis que fue más evidente con las medidas de confinamiento implementadas para controlar la pandemia de Covid-19. Se identificaron diferencias en la gestión administrativa en favor de las clínicas odontológicas que fueron fundamentales en el marco de la pandemia.

**Palabras clave:** administración en salud; infecciones por coronavirus; investigación sobre servicios de salud; odontología; pandemias; personal de salud; personal de odontología; salud pública

## RESUMO

**Antecedentes:** A pandemia de Covid-19 implicou o estabelecimento de medidas de emergência sanitária, entre outras, a suspensão e posterior reabertura progressiva dos cuidados dentários. **Objetivo:** Compreender como as medidas sanitárias devido à Covid-19 afetaram os proprietários de consultórios particulares e clínicas odontológicas em Bogotá, Colômbia, e se estas agravaram a crise da profissão. **Métodos:** Foi realizado um estudo qualitativo a través de entrevistas com sete dentistas proprietários de clínicas ou consultórios odontológicos particulares. Investigaram as condições de trabalho, as mudanças econômicas, as condições de contratação e a participação das organizações profissionais na pandemia. **Resultados:** A Odontologia já se encontrava em uma crise que foi agravada pelas medidas sanitárias diante da pandemia da Covid-19. Os entrevistados não perceberam uma rápida voz de liderança das entidades governamentais para estabelecer protocolos de cuidado. A gestão administrativa é diferente de acordo com as capacidades das clínicas odontológicas em comparação aos consultórios particulares. Por fim, a pandemia e as restrições de mobilidade permitiram estabelecer melhorias no tempo partilhado com a família, mas isso afetou a renda dos proprietários, levando-os a buscar outras formas de renda. **Conclusões:** A medicina dentária está em crise há muitos anos, o que ficou mais evidente com as medidas de confinamento implementadas para controlar a pandemia de Covid-19. Existem diferenças na gestão em favor das clínicas odontológicas que foram essenciais no contexto da pandemia.

**Palavras-chave:** gestão de saúde; infecções por coronavírus; pesquisas em serviços de saúde; odontologia; pandemias; pessoal de saúde; pessoal odontológico; saúde pública

## INTRODUCTION

The effects of the Covid-19 pandemic on the health of populations have been widely described (1, 2), as well as its consequences on other sectors of society (3). In particular, pandemics have represented challenges for States with regard to health care, prevention, mitigation, and overcoming their effects. Likewise, they have led to changes in the economic, political, and social systems derived from the exposure of their weaknesses (4).

The economies of Latin America and the Caribbean have been affected by the pandemic, among other reasons, by the reduction of international trade, the fall in prices of primary products, the intensification of risk aversion, and the worsening of financial conditions worldwide (5). As a result, approximately 2.7 million businesses in the region closed, 44 million people lost their jobs, and poverty increased from 30.3 % to 33.7 %. Under this context, the region was faced with a crisis that, for instance, meant the largest economic contraction in the developing world expressed in a reduction in GDP of 7.7 % (6).

Since March 2020, the Colombian government implemented different health measures to confront the pandemic such as decreeing the suspension of commercial and drinking establishments and the mandatory confinement of the population (7). The latter was widely debated in different sectors due to its likely effects on the national economy, a discussion that led to the postulation of a possible dilemma between economy versus health (8-11).

The health sector was particularly affected by the pandemic, not only the professionals and services linked to Covid-19 care due to overcrowding (12-14), but also those outpatient services that had to

suspend patient care (15). This has economically affected professionals who practice in private offices and clinics, with dentists being one of the most affected groups of professionals (16-19).

Among the consequences of the pandemic on dental students and professionals, the impact on mental health (20), well-being (21,22), and financial situation (20,23) have been documented. In terms of job prospects, professionals considered reducing work hours or retiring early (24), moving to a non-clinical but related jobs, or switching professions (25). Finally, the pandemic has been a scenario for reflection around dental training, pointing out the necessary development of the profession by strengthening unions and improving working conditions (26).

In 1993, Colombia underwent a transformation of its health care system through Law 100 (27). The new structure for the provision of health services in the country involved moving from a supply-side subsidy model to a demand-side subsidy model. In addition, it involved the participation of the private sector in both the insurance and provision of health services. In addition, a health benefits plan was established containing a series of health procedures and technologies that the population could access, including a series of dental procedures (i.e., oral hygiene, dental surgery, endodontics, and oral surgery). The latter have been expanded to include other dental treatments throughout the 30 years of existence of the system. The restructuring of the Colombian health care system was typical among those undertaken by other countries in the region in the 1990s (28).

Since Law 100 of 1993, dental practice has faced different transformations, such as shifting from a liberal independent profession to becoming an employable job that is performed under waged employment relationships with significant levels of unemployment and precariousness (29,30). Issues of the transformation are aggravated because 69.9% of professionals are concentrated in 7 of the 32 departments (territory divisions) of the country (31). On the other side, it has been estimated that unemployment is around 30 % (32), and monthly income is on average USD\$1,300 nationally (31). All these challenges take place in a context in which multiple private dental clinics were created (33), the dental practice was assimilated into a services market, and the signing of service contracts that do not guarantee dignified working conditions (34,35). These circumstances impact the quality of life of dental health professionals (36) and have been described as some of the causes for the crisis of dental profession in the Colombia (29,37-39).

Bogotá, the capital of Colombia, is a city with approximately eight million inhabitants. According to the Ministry of Health, a third of the people unaffected by Covid-19 nationwide were residents of the city. The country's capital brings together a significant number of dental professionals who represent approximately 17.61 dentists per 10,000 inhabitants (31). The closure of dental offices, in compliance with the health emergency measures due to the pandemic, became a scenario that could aggravate the ongoing problems of the profession and compromises the future of dental professional practice (29,40). Some studies have been conducted to recognize the effects of the pandemic on dental students and professionals, both internationally, in the region, and nationwide (20-25). However, to our knowledge, no studies using a comprehensive approach to report the consequences of the Covid-19 pandemic on dentists who own dental particular offices and clinics have been conducted in Colombia. Based on the research problem stated above, this study inquired how the health measures adopted by the government in the face of the Covid-19 pandemic affected the owners of private dental offices and clinics in Bogotá and if they are perceived to aggravate the ongoing crisis of the dental profession.

## **MATERIALS AND METHODS**

This study is part of an interinstitutional project titled, “Impact on owners of dental offices and clinics in Bogotá from the implementation of health emergency measures within the framework of the Covid-19 pandemic,” conducted in collaboration in 2020 between the Jorge Tadeo Lozano University of Bogotá

and the CES University of Medellín. Ethics committees in both institutions approved the project, Minutes No. 6-2020 (Jorge Jadeo Lozano University) and minutes No. 152 of 2020 (CES University).

This was a qualitative study whose purpose was to understand the way in which the health measures adopted by the government during the Covid-19 pandemic affected the owners of dental offices and clinics in Bogotá. In addition, the study aimed to explore whether they aggravated the ongoing crisis of the dental profession in Colombia. The participants were dental professionals who owned dental clinics or offices. A homogeneous sampling was conducted (41) and the participants were contacted through the Facebook© page *Acción Odontológica* (Table 1).

TABLE 1  
Characteristics of Participants

Professional Training	Type of Ownership	Years of dental practice
General dentist	Dental office owner	24
General dentist, studies in health administration	Dental office owner	27
General dentist, specialization in orthodontics, master's in biological anthropology, and doctorate in biomechanics	Franchise dental clinic partner	19
General dentist, specialization in periodontics	Dental office owner	28
General dentist	Dental clinic owner	7
General dentist, specialization in endodontics	Dental clinic partner	20
General dentist, specialization in orthodontics	Dental office owner	13

Source: the authors.

Semi-structured interviews were conducted based on a guide that investigated working conditions, economic changes, hiring and social security conditions, and involvement in professional organizations during the contingency. The interviews took place through the Skype© platform between August and November 2020 and were recorded and later transcribed for qualitative analysis. The interviewees authorized the use of content from the interviews for research purposes through a signed informed consent. The final number of people interviewed was the result of saturation of the analysis categories.

The interview was designed by the members of the research team and consisted of a series of questions based on *a priori* categories of analysis: working conditions, economic changes, hiring conditions, and involvement in professional organizations during the pandemic. The recorded interviews were transcribed through the Word® Office processor.

The interpretation of the findings was performed through a coding process that took place in three phases: First, open coding, through the detection of content related to the established categories that was obtained from the interview transcripts; second, axial coding, by grouping the findings by category according to the associations between properties and dimensions that resulted in emerging *a posteriori* categories; third, selective coding, when the findings were organized to explain the phenomenon and respond the research question (42). From the open coding, 147 codes were established. From the axial coding, relationships between said codes were made, renaming some and adding others. 19 codes were grouped. During the selective coding, the findings were integrated and interpreted to generate a narrative that was organized based on three definitive categories, which were used in a logical and coherent way to be presented in the section of research findings.

# RESULTS

## Dentistry in Crisis

The implementation of strict confinement measures decreed by the national government as a response to the Covid-19 health emergency highlighted the structural problems that had been affecting the dental profession. Among others, we found unfair competition, pressures derived from considering dentistry as a business rather than as a right or public service, and poor remuneration of professionals.

Recently, the dental practice has suffered from a growing commodification. As a result, dental clinics and other private practices in which mechanisms of advertising and financing of treatments are integrated have emerged. That trend has resulted, within the framework of market conditions and free competition, in low prices of treatments, affecting private offices that must affect their profits to be more attractive to patients.

... large clinics that work more by volume and whose prices are very low... then, if there is one of those clinics close to the office, then one also has to compete or give more or less a range of those costs, to have a point of competition with them... large clinics can handle a lot of advertising, propaganda, something that perhaps a small office does not handle in that way... (E6).

The issue mentioned above, along with signs of decline in the country's economic growth, in the period prior to the declaration of a pandemic, showed a reduction of 3.1 percentage points of GDP in the period of 2010-2017 and a slow recovery between 2017 and 2019 (41). This situation has negatively impacted the attention of people in the provision of dental services.

... the country's economy, which was affected a few years ago, had deteriorated, so that, well, the number of consultations or procedures had been decreasing, since the volume did change year after year (E6).

The same dynamics have consolidated a scenario of job insecurity for dental professionals. Such insecurity is evident in situations such as honoraria paid as a percentage of the price of the care provided in which practitioners contribute their instruments and supplies for the care of patients and managers are not responsible for payments to social security of independent workers. In this context, there are few options for the dental professional, which compromises their dignity.

In the case of dental clinics, given the relationship established to link a professional, there is greater control over the payment of social benefits, an issue that does not occur in private offices, where the relationship established is more informal ... to the doctor who works with me, I pay her by percentage and I pay her a basic [wage], because I have told her that, if we use that basic to make an affiliation directly to make her health payment, pension, which is the law, but, well, she has made her choice that no, that she wants her basic plus her percentage and that she is responsible for that part (E6).

... each professional is in charge of the equipment they want to modernize their consultation, very good technology photocuring lamps, very good technology endodontic equipment, rehabilitation equipment, nanotechnology handpieces, but well, that is for each professional, the clinic as such, let's say, handles the basic issue that is the unit and the sterilization center (E5).

Moreover, patients often make the decision to start dental treatment based on the price and not exactly the comprehensive care proposal that a dental professional will provide. This fact adds to the challenges and declaration of a health emergency due to Covid-19 and complicates the income reductions dentists face.

...with respect to our fees, well nothing, March we do not receive zero, we as owners nothing zero, eh April neither, until May, we receive a small part of back wages because, well, in fact eh since we opened the clinic the priority has always been paying rent, salaries, everything and from what we have left we are paying our arrears fees ... (E6).

On the other hand, dental professional associations are perceived by the interviewees as distant and incapable of becoming the voice of dentists in the face of the problems they experience on a daily basis.

... I have to say that I do not feel represented by those associations, the truth is that they make me sad, and I simply feel that they are entities that serve to raise money, period, they live off of that, to raise money, but there really is no return for the associates ... (E5).

Other opinions of the interviewees emphasize that this fragmentation should be eliminated through the consolidation of a single union that is responsible for championing the defense of dentists.

## **Managing Dental Services During the Pandemic**

The management of dental clinics is different from private offices. The former need to hire professional services in areas such as administration, finance, marketing, and accounting. This allows them to maintain strict control and make the investments they make more efficient, while foreseeing expenses and seeking savings. The owners of private offices must implement these tasks based on what they learned in the dental programs they attended (undergraduate curriculum, in this context). Thus, dental service administration has become rustic.

...I keep an accounting of the daily income, each procedure that is billed is entered, we keep an accounting notebook in which we manage, well, the laboratory discount, but I don't have anything like that planned, I don't manage it, as well as in such detail, let's say that if something on the unit is damaged, I don't have it so specific that I can... have money or capital saved for that... (E6)

The need for care expressed by some patients and the need to have income that would allow them to cover their expenses led some of those interviewed, a few months after the health emergency measures began, to resume dental care, even without having an authorization from the national or local governments. At that point, the guidelines for restarting patient care were not clear. To do this, dentists established strategies to contact patients to set times and days to provide care, which focused on dental emergency consultations.

When the biosafety protocols and standards for dental care were already established at the local and national level, it was necessary to make adjustments that involved making new investments. The latter complicated the panorama for the reactivation of regular dental practice.

... to begin with, the economic issue is what is going to hit us hard to be able to comply with all the requirements, that the isolation of the offices from floor to ceiling, that the distancing of patients in the waiting room, so we can no longer have so many chairs but now they are very few... the issue of ensuring that there is air flow in the offices... the issue of discharge rooms, the issue of floor-to-ceiling disinfection between patient and patient, leaving an hour or I don't know how long to follow the patient in the same office, the issue of the extra cost of everything that biosafety implies ... (E5).

It is important to mention that, at the time of the interviews, reactivation was slow, mainly due to the appearance of new peaks of Covid-19 contagion. However, during the pandemic and the period of reactivation of dental care services, there were new dynamics in clinical practice such as the possibility of charging again for treatment assessment.

... I didn't charge the evaluations, now it's time to charge the evaluations... I see it as positive [...] and, well, the other thing is that they are paying us for something that should always have been like that, the consultation should have had a cost, I don't know why we came to the free assessment ... (E6).

On the other hand, clinical work requires specialized equipment and supplies (e.g., gloves, masks, gowns, face shields, disinfectant liquids, and autoclaves) that are used during the lockdown and reactivation thereafter. This situation negatively affected the delivery of services due to the increase in the sales prices of said supplies, which at the end affected production costs of the services and sometimes cannot be compensated by the increase in care prices.

That situation affected the expectations of reactivation, which, at the time of the interviews and particularly in the case of particular practice owners, generated uncertainty about the future. This was due particularly to the unclear outcomes and behavior of the pandemic. It was impossible to know if there would be new mobility restrictions for citizens that would impact the dynamics of clinics.

... no matter how much they lift restrictions and surely many more people will be able to go out on the streets; however, we have planned to work with this Covid situation, until around March or April of next year [2021], it will surely be to be like this (E5).

On the other hand, the closure of clinics and particular offices during the pandemic meant pausing a series of in-progress dental treatments. The lack of continuity is perceived by the interviewees as potential risk that could worsen the oral health status of patients.

... I started to worry when I started to see that it was prolonging, when it wasn't anymore, well it wasn't 15 days anymore, it wasn't a month anymore, we've been there for two months, because you know that orthodontics are follow-up treatments. Yes, many times, if one does not attend to the patient in time there may be things that cannot be corrected, so I thought about my patients ... (E6).

The interviewees considered that once they were able to offered all the services, it would not be a priority for patients to resume dental treatments, since the people seeing a dentist before will have other issues that they will deem more important.

The confinement, initially total and then partial, generated an economic crisis in most sectors of the economy. Among the measures that the Colombian government took to mitigate the impact on the economy is Decree 639 of 2020 that created the formal Employment Support Program (PAEF). PAEF included a subsidy of 40 % of a minimum wage to workers who were dependent on companies who experienced a revenue reduction by at least 20% and explicitly requested the bailout.

Dental clinic owners were added to this program, who also resorted to other administrative measures, such as agreements with creditors and tenants intended to survive during the times of confinement.

... the first was payroll aid, which is where we requested precisely that payroll aid...; Regarding fixed expenses, we had to negotiate with the landlord of the premises and we also achieved a reduction for these months... and we resorted to tax refunds practically, that was what saved us (E3).

These conditions were not the same for the dental office owners interviewed who did not access government aid, as they did not meet the requirements established to receive the bailout or did not apply. This led to the fact that, in order to obtain some financial help to cover expenses during the pandemic, office owners resorted, without much success, to loan requests from banks, and availing themselves of facilities or extension of payments of personal debts (housing payment installments or banking products).

...my bank sent me information about assistance for being independent but only like advertising, when I entered the information it said no, I couldn't acquire that type of benefit either... (E6)

## **Wellbeing During the Pandemic**

The Covid-19 pandemic caused a series of changes in both the professional life and the family. Personal life of the owners of dental offices and clinics also generated more time with family members and sharing different aspects of life at home and in daily life. This happening was seen as positive, given that clinical practice leads, among other things, to having less time to share with other loved ones.

On a personal level, it was a break that my body needed, I had a wonderful time, I was happy, the rest of March, from March 20 to 31, I was happy, April I was happy and the half of May that I was at home I was also happy , I needed that, I had a lot of time to reflect on what happens to me as an endodontist. On a family level, it was the possibility of sharing a lot with my husband ... (E5).

However, as we suggested before, the work crisis was already advancing and with the current situation resulting from the pandemic it deepened, in such a way that some had to resort to family solidarity.

... my husband was the one who was covering all the expenses of the house, he had his normal source of income up to that point and so he could cover all those expenses, such as: the mortgage of the house, the girl's school, market ... (E1).

On the other hand, the scenario of decreased income not only for the particular dental office or clinic owner, but also for their partners led to making family decisions that implied a reduction in family expenses. In other cases, arrangements or changes in family dynamics were in search of that would allow facing the moment of family economic crisis.

... we had to make all the financial arrangements with all the credits, cards, that is, we were barely having income for what was food, I told my husband, if we have food and we have money for the girls, we are good (E4).

Meanwhile, we found a contradiction is that dentists often neglect taking care of their own health. Thus, compared to the diseases that were valued by the interviewees as having work-related origin, there are several that were documented. However, the regularity is that this type of ailments has been managed as a general illness, which, in addition to the under-reporting of this type of work-related pathologies, may not be comprehensively addressed from the perspective of health and safety in workspaces.

Yes, I have carpal tunnel syndrome [...] no, we are only in the process with the EPS, so, eh, in order to get to the ARL, we have to do the entire process with the EPS first, so I am in appointments with the physiatrist, with the orthopedist, doing therapies (E4).

In short, the quality of life of dentists was seriously affected by the decrease in income due to the closure of dental facilities and the increase in care costs. However, the quality of life and well-being of these health personnel is subject to constant precariousness, which began in the 1990s with the creation of the General Social Security Health System and the proliferation of dental schools that increased competition without symmetrically increasing the opportunities and working conditions of these professionals.

## DISCUSSION

The present study inquired how the health measures adopted by the government in the face of the Covid-19 pandemic affected the owners of private dental offices and clinics in Bogotá and if they are perceived to aggravate the ongoing crisis of the dental profession. A qualitative study was conducted through semi-structured interviews to seven dentists who owned dental clinics or particular offices. The interviews explored working conditions, economic changes, hiring conditions, and participation in professional organizations during the pandemic.

Based on our findings, we confirmed the perception about the dental profession as facing a crisis, which was more pronounced because of the health measures ordered by the government as a consequence of the Covid-19 pandemic. Interviewees also referred to the lack of a leadership voice from government offices to timely establish care protocols within the framework of the pandemic, which could affect the reactivation of services. Moreover, the management of dental services during the pandemic varied based on the capabilities between dental clinics and particular dental private offices. In addition, the pandemic and the restrictions on mobility linked to it allowed improvements in time shared within families. However, over time, this affected revenue, leading dental clinics and offices to changes their income and expenses dynamics.

Dental practice in Colombia, as well as other health professions, has been affected by a series of political, economic, and social measures while influenced by globalizing processes and the international division of labor at the end of the previous century (44,45). This is evident in an increasingly flexible

labor market and the emergence of new dynamics and interactions that deteriorate work conditions, eliminate contributions to social security as a right, and undermines the very value of workers and their bargaining capacity (46,47).

Through the interviews, we confirmed that, in recent decades, the precariousness of working conditions of dental professionals has been settled down, which includes participation in the labor market through variable work hours and pay-per-task, goals, or outputs with decreasing wages (46). In addition, dentistry as a practice takes place in an environment of competition, innovation, and entrepreneurship linked to the generation of new products and services. In this way, the dental professional must face new training requirements, which have further segmented the delivery of dental services, tending more towards training that is oriented more towards financial profit than towards promoting practices favorable to dental health (48).

In this context, the pandemic represented a management challenge for the owners of dental offices and clinics, which was more complex given the need of previous resources to face the emergency health measures. They consisted of initial suspension and subsequent gradual opening of dental care services. Measures like these were also debated and implemented in other countries (15). The implementation of such measures intended to control the transmission of the virus and related mortality (49) affected the income for dental professionals (20,23), who needed to reorganize their practice. Government subsidies (50) or special financial aid (51) were created to compensate somehow for the business losses. Likewise, access to loans and subsidies was facilitated in the country, which the interviewees referred to as easy for dental clinic owners, but not for those of particular dental offices.

These findings also show how the incorporation of the dental practice into the service sector includes competition in unequal conditions between corporations that have more developed financial and management and structure and individual dental professionals. Practitioners who do not join said market as individual professionals create strategies to continue participating in the delivery of private dental services, which do not always result in better conditions for practice.

The interviewees perceived that, at the beginning of the pandemic, the guidelines to return to patient care were not entirely clear. This is explained as a result of the lack of knowledge available about the behavior and forms of contagion of Covid-19. Thus, as societies learned more about the pandemic and ways to address it, the implementation of guidelines for patient care was delayed (52). Throughout the pandemic, a series of professional consensuses were issued to provide guidelines for dental care in various parts of the world. The guidelines included maintaining strict infection control practices, using personal protective equipment, strengthening disinfection protocols, reducing aerosol production during dental procedures, improving air quality, and maintaining social distancing, among others (53-55).

In relation to the well-being of the interviewed dentists, it was interesting to notice that the beginning the quarantine allowed professionals to share more time with their families, which was seen as positive. Nevertheless, over time, this developed into a reduction of income and the implementation of financial arrangements, including the control of expenses. Effects on the psychological well-being of dentists in the context of the pandemic have been previously described. Those effects are related to the decrease in revenue and the uncertainty about the reactivation of professional practice (20-22). The interviews were carried out 5-6 months after the beginning of the pandemic and the dental emergency care measures had already been authorized. Therefore, at that time, the interviewees were already receiving some income.

## **Limitations of the Study**

This study was qualitative in nature and looked at investigating the effects of the government health emergency measures due to Covid-19 on dental practice in a group of dental clinic and private office owners. Even though the purpose was not to produce generalizable results, the findings show a bit of

reality that may be similar to what other property owners in the city or other cities in the country may experience.

Considering that the pandemic and the health emergency measures lasted a little more than a year, it is important to consider the moment in which the interviews were conducted, since only 5-6 months had passed since the onset of the pandemic. Hence, this study gives an account of the dental clinic/office owners' stories in relation to the health emergency measures for that specific period and not for the entire time in which the dental care restriction measures were enforced.

On the other hand, participants in the study could have ignored, forgotten, or changed the story of their experience in the context of the pandemic, as well as their experiences prior to the confinement measures. However, in both the research design this was considered and was the subject of discussions within the research group. To this end, in each of the interviews the interviewees were informed of the relevance of their contributions, the purpose, and importance of providing accurate and honest responses.

## CONCLUSIONS

Dentistry has experienced a crisis for many years, which became more evident during the lockdown imposed by the government to control the Covid-19 pandemic. The restrictions, within the context of the health emergency, affected the well-being of the dentists interviewed due to the closure and subsequent gradual opening of services, which was characterized by a decrease in income and an increase in the costs of dental care, as well as the challenging access to state aid, especially by the owners of particular dental offices more than the owners of dental clinics who participated in this study.

## RECOMMENDATIONS

Situations such as the Covid-19 pandemic show the need for continued education of dental professionals on patient care protocols during emergencies. This article confirmed the deteriorating work conditions of dental professionals, a crisis that dates back several decades. Likewise, the participation of the dental union in spaces that allow the establishment of regulations for both work and health care, aimed at improving working conditions is important.

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