

Anggelo Carrizo.

CESFAM Boca Sur, San Pedro de la Paz, Chile.

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Corresponding author: Dr. Anggelo Carrizo.
2° Transversal 457, Boca Sur, San Pedro de la Paz, Chile. Phone: +56 41 2276262.
Email: dr.angelocarrizo@gmail.com.

Dentists' training in Chile and some iberoamerican countries. Considerations for education, health and job.

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Abstract: In recent years, several studies focused on the training of dentists in Chile and other Ibero-American countries and its implications have been published. However, there is no analysis of all the evidence at a regional level. The aim of this article is to review the changes in training for dentists in Ibero-America, the educational and/or sanitary policies associated to these changes and the impact that they have for dentists in the future in Chile and the region. In general terms, a strong increase in the amount of available places for studying dentistry, without a clear sanitary or educational planning to justify it, has been observed in several countries of the region this rise does not show a positive impact in the access to dental treatment, especially for the poorest populations. Although the levels of satisfaction are high among dentists, an unemployment rise and a salary decrease have been observed over the last few years, which could impact professional satisfaction. In Ibero-America, an exponential increase of dental schools, without a positive impact on the oral health of the population, but negatively affecting workforce, is observed.

Keywords: "Dentists"[MeSH], "Work"[MeSH], "Job Satisfaction"[MeSH], "Education, Dental"[MeSH], "Public Health"[MeSH].

Formación de dentistas en Chile y otros países iberoamericanos. Consideraciones en educación, salud y trabajo.

Resumen: En los últimos años se han publicado varias investigaciones centradas en el aumento de la formación de dentistas en Chile y otros países de Iberoamérica. Sin embargo, no existen análisis de toda la evidencia a nivel regional. El objetivo de este artículo es revisar los cambios en la formación de dentistas en Iberoamérica, las políticas educativas y/o sanitarias asociadas a dichos cambios y el impacto que han tenido en el futuro para los odontólogos de Chile y la región. En términos generales se observa un fuerte incremento en la cantidad de plazas disponibles para estudiar odontología en varios países del área, sin una clara planificación sanitaria o educativa que lo justifique. Este crecimiento no ha mostrado un impacto positivo en el acceso a atención odontológica, especialmente de aquellas poblaciones de escasos recursos. Si bien los niveles de satisfacción de los dentistas son elevados, en los últimos años se ha observado un aumento de la cesantía y una disminución de los sueldos, lo que podría impactar la satisfacción profesional. En Iberoamérica se observa un crecimiento exponencial en la formación de dentistas, que no ha impactado positivamente la salud oral de la población, pero sí negativamente a la fuerza laboral.

Palabras clave: Dentistas, Trabajo, Satisfacción Laboral, Educación Dental, Salud pública.

Introduction.

Historically, dentistry has had a good prestige associated with high academic demands and a good quality of life¹. Hence, dentistry was considered an elitist career and health service, which had a limited access only for a minority of the population, until a few years ago².

However, the strong development of the higher education industry throughout the world and especially in developing countries³ has led to the popularization of the access to various professions, including dentistry and other health professions⁴. This increased access to the career would involve a growth of the dental force to meet the oral health needs of the especially affected population in Latin American countries⁵.

The thought behind this and other phenomena

associated with health and education follow the logic of the neoliberal market⁶⁻⁷. The provision of goods and services (including basic ones) is controlled by the market, which under supply, demand and competition principles, among others, would develop and deliver quality goods and services which are accessible to the entire population. In general, this approach has been widely criticized, especially for its application in critical sectors such as health and education, where the market cannot cope with the existing conditions without affecting principles such as equity and quality⁶⁻⁸.

Considering the above, it is not clear how these policies have been implemented in dentistry training in Chile and other Ibero-American countries, but it is obvious the impact has not been all positive for the

profession². In any case, there are no articles analyzing this regional situation.

The aim of this study is to review the recent literature on the changes in the training of dentists in Chile and other Ibero-American countries, the educational and/or health policies associated with these changes and the impact they may have for dentists in the region in the future.

Dentist Training and health impact in Ibero-America

Recently, several analyses regarding the training of dentists in several Ibero-American countries have been published. Saliba *et al*⁶ described the training of dentists in Brazil in 2008 and various changes taking place over the last years. By that time, there were 191 higher education institutions offering dentistry, with a greater presence (exceeding 70%) of private institutions, offering more than 17,000 national vacancies and over 10,000 dentists graduating each year. This was basically concentrated in large urban centers, which is associated with a low coverage in small towns or rural areas.

In just thirteen years, from 1995 to 2008, 102 dental schools were created in Brazil. They were mainly associated with the private sector which increased its national share from half to the aforementioned 70%. This meant a 130% increase in the number of places available for first year students and 40% in the number of graduates per year⁹.

However, this marked increase of trained dentists has had little impact on the levels of oral morbidity of the Brazilian population. It is suggested this is due to poor health planning for dental training and human resource management⁹. This is also seen in other American countries as reported by Maupome *et al*¹⁰

Meanwhile, a similar situation is taking place in Colombia¹¹. Until 1969, there were four dental schools across the country, implying a ratio of 1 professional every almost 8000 people. By 2004, there were 30 dental schools, over 80% private, and the dentist per population ratio fell to about 1:1000. Again, it is observed that this notable increase of human resources in dentistry has not had the desired impact on oral health for Colombians¹².

In Colombia, this similar situation is also related to the lack of planning which has raised unemployment among dentists, around 29% in 2009. It is also related to the concentration in large metropolitan areas¹¹, similar to the situation in Brazil⁹.

The scenario is repeated in the Spanish case. There has been a sharp increase in the number of dental schools lately, with a clear trend in favor of private schools. The number of graduates increased by 44% between 2001/2002 and 2009/2010. Student selection

has also been influenced by this tendency. The higher number of admissions to private schools is only filtered by the purchasing power of students. On average, there is a difference of 650% in tuition fees. The public university system selection is similar to that of Chile, where students have to take an entrance examination to the University (Prueba de Acceso a la Universidad, PAU) and dentistry has the highest cut scores, limiting joining options. This way, about 1,500 new dentists are produced every year¹³.

In Mexico, the situation continues to be similar. The lack of planning appears as a major issue, as well as the lack of updated standards for human resources training. Unfortunately, the large dental supply has not improved the oral health of Mexicans either, since there is a no work plan for Dental Education and Dentistry Human Resource Training to effectively treat the population. Most of dentists in Mexico compete to take care of the group of people who are able to afford the cost of the dental treatment¹⁰.

In Peru, the situation is no different. Since 2000, the number of dental schools, mainly private, has greatly increased. This has been associated with a decrease in professionals' income which affects different aspects of their lifestyle (home, car, technology, etc.). Moreover, training of future dentists is questioned because there would not be enough academic staff, mainly affecting new graduates¹⁴.

Chile has not been immune to this phenomenon. From 1997 to 2011, dental schools increased from five (belonging to five universities) to thirty-four (belonging to twenty universities). In this scenario, enrollment increased from 1,447 to 12,325. Tuition also increased well above inflation rates, from 80UF (U.S. \$ 3,900) to 220 UF (U.S. \$ 9,800), representing an increase of 175%. In 2025, it is foretold there will be a dentist every 525 people, well above the recommendation of 1 per 2,000 inhabitants. In Chile, one of the factors of concern is that only 25% of dental schools are accredited. Accreditation itself only assures the school adheres to the minimum requirements of the Board of Higher Education².

In all these countries, there is a direct entry for secondary education graduates to the dentistry program which is 5-years duration, with the exception of Chile where it is 6-years.

Motivations and expectations of dental students

As previously mentioned, the dental career has historically shown prestige and social desirability¹. However, changes in education and employment experienced by the Ibero-American dentistry in recent decades could be impacting perceptions and thus motivations for becoming a dentist.

Most of research on expectations of dentists has

been done in Brazil. Overall, admission to dentistry is motivated by the love for the dental career (vocation) and the influence of others¹⁵⁻¹⁶, but it being a liberal profession and economic ambition are also influencing¹⁵.

As for job prospects, most students would prefer working in both the public and private system at the same time, as well as taking a dental specialty¹⁵.

Regarding salary expectations, Rezende *et al*⁶ shows students' aspirations meet the salaries earned by recent graduates which increase according to the years in practice in Brazil.

Work satisfaction among dentists

Again, this issue has been investigated in Brazil. Ponte *et al* shows that dentists working in a private company in Sao Paulo globally show a good satisfaction level. Their relationship with the patients and care get the highest scores. On the other hand, personal and professional time, as well as economic income, gets the lowest ones. This study contrasts the reality of dentists working in private and public places in Brazil, the first ones presenting higher satisfaction¹⁷.

Meanwhile, in Mexico¹⁸, an analysis on satisfaction among dentists working in the capital city reports that most of them feel satisfied with their practice, given the activities with patients, the staff and their training phase. However, one in five respondents would consider another profession, mainly medicine.

Discussion.

The four analyzed countries clearly evidence how the emergence of private education has led to a growth in enrollment which reaches over 600% in less than 15 years, as in the Chilean case².

Besides, it is seen the overpopulation of dental professionals has not meant an improvement in the oral health of the population. The low levels of access to dental care have rather maintained. The economic gap due to the high costs of dental treatments remains unresolved. To this, the fact that dentistry is still seen as an elite career at the time of graduation must be added. Despite salary expectations in line with reality¹⁶, the oversupply makes it difficult to obtain a stable job.

A low service vocation expressed by students¹⁴ and a strong preference for caring for patients with greater

purchasing power can be seen in the region. Actually, the fact that contributing to people's health is among the less named options is not less important. This differs from that reported by Rashid *et al* in the United Arab Emirates¹⁹ where the "desire to work in public service" is the second most voted option among 5th-year students. In the UK, 5th-year students' hopes at the University of King's College in London are divided between working in a specific area of dentistry, or in primary health care or taking a specialty. Another group that is not certain yet. Most of them base their decision on work-life, economic stability and professional development balance. As a special case, female students based their answers on their commitment to parenting. That is why they are also more attracted to work in the NHS (National Health Service)²⁰. Even if it is unrelated to this study, it is certainly interesting to further analyze the influence of race on the motivation to study dentistry, among African American and Caucasian students in the region²¹.

In Chile, specific studies on students' motivation for choosing dentistry as a career to pursue in college are lacking. There is a lack of information about graduates and their current activities. This is mainly given by their exponential increase and lower adherence to professional associations. Regional studies show that there is satisfaction in exercising the dental profession, but with some variations¹⁷⁻¹⁸. Some studies outside Ibero-America²² display different information, indicating that more than half of the surveyed professionals would not choose dentistry as a career again.

In developed countries, this has caused a clear decline in enrollment in dentistry, including some schools closure. Perhaps, it is because the problem regarding a saturated field for dentists is something which has been happening for longer in first world countries and documentation in this regard is more abundant²³. Then, it would be necessary to investigate this area and the contrast with the Ibero-American reality.

Unlike other Ibero-American countries, where there is a unison voice demanding regulation of new dental schools and opening of new work places for graduates, e.g. Spain²⁴, Chile is still passive. Only some focuses of concern are emerging² and a few warning voices manifest⁵ under criticisms for being a profession with poor union association development and historically defending economic interests which makes the social responsibility of health professions questionable²⁵.

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