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Descriptive analysis and trends of undergraduate theses in peruvian dental schools

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Abstract

Introduction: The analysis of dentistry thesis in Peru, provides valuable information to optimize efforts related to solving oral health problems. **Objective:** To analyze undergraduate dental theses from Peruvian universities during 2015-2019. Method: Descriptive, associative and quantitative study. 1389 theses from 14 public and private universities were analyzed. The variables: university name and type, number of authors, access to full text, academic-professional areas, type of research and orientation to prevalent diseases in the oral cavity, year and origin region. **Results:** Of the total number of theses, access to the full text was obtained in 66.5%, an 87.7% had only one author and the 66.7% was descriptive research. The most frequent academic-professional areas of study were: Pediatric and Social Stomatology with 27% and Surgical Medical Stomatology with 20.4%. The orientation to dental caries was 19.2%, to occlusion diseases 11.4% and to periodontal disease 8.1%. **Discussion:** The results were similar to other authors, with few studies related to the prevalent diseases. It is suggested that the faculties of Dentistry reorient research primarily to the needs and policies of oral health, to achieve a better contribution of academia to society.

Keywords: theses; documentary-analysis-dentistry; Peru.

Análisis descriptivo y tendencias de las tesis de pregrado en Facultades de Odontología peruanas

Resumen

Introducción: El análisis de tesis de odontología en el Perú proporciona información valiosa para optimizar esfuerzos relacionados a solucionar problemas de salud bucal. **Objetivo:** analizar tesis de pregrado de odontología, de universidades peruanas durante 2015–2019. **Método:** estudio descriptivo, asociativo y cuantitativo. Se analizaron 1,389 tesis de 14 universidades públicas y privadas. Las variables: nombre de la universidad, tipo de universidad, número de autores, acceso a texto completo o resumen, área académico-profesional, tipo de investigación, orientación a enfermedades prevalentes de la cavidad bucal, año y región de procedencia. **Resultados:** del total de tesis se tuvo acceso al texto completo en 66.5%,

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tesis con un autor 87.7% e investigaciones descriptivas 66.7%. Las áreas académicos-profesionales más frecuentes del estudio son: Estomatología Pediátrica y Social 27% y Estomatología Médico Quirúrgico 20.4%. Adicionalmente, el 19.2% están orientadas a la solución de caries dental, 11.4% a maloclusión y 8.1% a enfermedad periodontal. **Discusión:** los resultados alcanzados fueron similares a otros autores; no obstante, se presentaron escasos estudios con orientación a enfermedades prevalentes. Se sugiere que facultades de Odontología reorienten la investigación prioritariamente a las necesidades y políticas de la salud bucal, a fin de lograr una mejor contribución de la academia a la sociedad.
Palabras clave: tesis; análisis documental-odontología; Perú.

Introduction

Cavities, periodontal disease, and malocclusion constitute public health issues that most frequently affect developing countries, especially the poorest populations, making necessary to value and protect oral health in a preventive manner (WHO, 2004; PAHO/WHO, 2017; Glick et al., 2021).

Oral health in Peru is currently a public health issue that contributes to a heavy burden of morbidity and high treatment costs, even though most oral diseases are easily preventable with simple and effective procedures. Great advances have been made in understanding basic cellular and molecular mechanisms of oral pathologies, as well as the development of innovative and effective treatments; however, daily patient care is still missing from research (Glick et al., 2021). A comprehensive approach to the prevalent diseases of the mouth is required, applying effective health promotion and prevention measures, as these diseases share risk factors with chronic systemic disorders such as respiratory diseases, cardiovascular diseases, diabetes, and cancer (Ministry of Health [MINSA], 2007a; 2013).

Education is key for the sustainable development of countries (Superintendencia Nacional de Educación Superior Universitaria [Sunedu], 2018) and for economic growth and social development (United Nations Educational, Scientific and Cultural Organization [Unesco], 2014). As higher education has the strongest link with the productive sector and other development industries—delimited by health, nutrition, and labor policies—the role of universities is to generate new knowledge from the scientific exercise of its academic community (Werlinger et al., 2014), and to promote research that can aid in solving the population's problems, such as oral health (Chávez et al., 2019).

In Peru, research is an essential and mandatory function of the university, which must respond to the needs of society (Chávez et al., 2019) with a focus on the national reality (Moreira et al., 2019), in which the development and production of knowledge is encouraged, and where faculty members and students take part in the research activity. The approval of a thesis or work of professional sufficiency, as the final undergraduate assignment, done through research work with thematic aspects directed towards the solution of national problems, is a requirement for obtaining the professional degree in the 92 dental schools and academic programs licensed by Sunedu to date (2021) (Sunedu, 2018).

Bibliometric techniques (Romaní & Cabezas, 2018)—through the evaluation and measurement of indicators (Moreira et al., 2019)—provide information regarding the quality of scientific publications and theses or degree works developed in university schools and allow describing trends in the use of information sources and topics for research in the area, which generates the need for bibliometric studies (Maggiorani et al., 2018; Moreira et al., 2019).

In the university context, there is a concerning waste of the knowledge presented by the theses, due to the scarce dissemination of the results and little availability of systematized information, as well as of the opportunity to conduct more analytical, longitudinal, retrospective studies, oriented towards the different dimensions and/or perspectives of each university profession. There is a greater interest in studying the theses produced, with different criteria (Moreira et al., 2019; Romaní & Cabezas, 2018). Thus, there are bibliometric studies with scientific production indicators (Castro-Rodríguez, 2018; Moreira et al., 2019; Moromi-Nakata & Delgado, 2015; Ordinola-

Sierra et al., 2014) and others referring to the generic structure, rhetoric, and characteristics of theses in the Hispanic-American field (Morales et al., 2020); contents with citation style, type of research, design, thematic areas, collaborative networks (Maggiorani et al., 2018; Ordinola-Sierra et al., 2014; Romaní & Cabezas, 2018; Parra & Cloquell, 2019); quality of the theses with quantitative analysis, number of authors, and the qualitative analysis of the content among others, with characteristics such as academic unit and discipline of various professional training schools in the health area (Perdomo et al., 2020; Zavaleta-Reyes & Tresierra-Ayala, 2017; San Martín & Pacheco, 2008).

In relation to oral health and its indicators, there are few studies that analyze whether such works are oriented towards the most prevalent diseases in both general health and oral health (Castro-Maldonado et al., 2015; Quispe-Juli et al., 2019; Sanabria-Rojas et al., 2011; Cuenca, 2013). Likewise, recommendations such as the need to "reorient its topics towards the priorities of the scientific community related to oral health" (Castro-Rodríguez, 2018, p.2) are found.

In the last epidemiological study conducted in 2012-2014, MINSA (2017) identified a dental caries prevalence of 59.15% in deciduous dentition, of 85.6% in mixed dentition, and of 57.6% in permanent dentition. Considering that dental caries is the second cause of morbidity in the general population (Lazo Meneses, 2015; MINSA, 2017), no improvement in these indicators is observed, especially in relation to children, despite the existence of standards and guidelines to improve the quality of care from early ages in promotion and prevention that should be implemented (MINSA, 2017). Likewise, there are provisions for the comprehensive care of adults (MINSA, 2006) due to the high prevalence of oral cavity diseases, which require attention within the health strategies (MINSA 2019, 2012), showing the relevance and need to direct future research to this field (Moreira et al., 2019).

The main objective of the present study was to analyze the undergraduate dental theses registered in repositories of Peruvian universities and to identify the behavior of the following variables: academic-professional area, type of research, and orientation towards the solution of prevalent diseases such as dental caries, periodontal disease, and malocclusions.

This study is also expected to promote the change of management/action paradigms on the part of authorities, thesis advisors, and students regarding the role of the university, in order to channel efforts for academic training and direct the professional work to demonstrate commitment and social responsibility towards the most vulnerable population.

Method

Design

The descriptive, quantitative study consisted of a documentary review of the undergraduate theses, with the analysis of the variables and their relationship based on the research objectives

Procedure

Data on licensed public and private universities that offer Dentistry or Stomatology programs was collected from the Sunedu Peru portal, and 14 universities were selected. The theses registered in the repositories of each university during the period 2015-2019 were reviewed, using the inclusion criterion of access to the full text or abstract of the thesis.

Instrument

The data was collected in a form designed according to the proposed study, based on the following variables: name of the university, type of public or private university, thesis title, number of authors, access to full text or abstract, academic-professional area (Basic Sciences, Pediatric Stomatology, Medical-Surgical Stomatology, Preventive and Social Stomatology, and Rehabilitative Stomatology), type of research (exploratory, descriptive, analytic, and experimental), orientation to the solution of prevalent diseases of the oral cavity (dental caries, periodontal disease, malocclusion, and others), year of publication (between 2015 and 2019), and region of origin of the university (Cusco, Junín,

Huánuco, Lima, Piura, Puno, and Tacna). For the analysis of the variable orientation towards the solution of prevalent diseases of the oral cavity, the levels of health promotion and prevention were taken into consideration: primary, secondary, tertiary and quaternary (Cabezas, 2010; Camacho et al., 2012; Glick et al., 2021; World Dental Federation, 2021; Santibáñez, 2011). To this end, the objectives, results, and conclusions were reviewed for each thesis.

Data analysis

Descriptive statistics was used; the percentage analysis was considered, and the results were shown in tables and figures. Next, the association between the variables research area and prevalent disease orientation was determined using the chi-square and Cramer's V statistics. The first one using a p-value of 0.0 proved to be statistically significant. The analysis of the second statistic resulted in a value of 0.33, showing an intensity considered as moderate. Correspondence analysis (CA) was used to explore the relationship between the variables. Having already shown that the above variables are associated, CA will allow us to graphically visualize the relationship between the categories of the variables. CA is based on the transformation of the contingency matrix into distances, and through these distances it reflects the relationships between the categories: a smaller distance between the points represents a stronger relationship. The SPSS Statistics 27 software was used for the statistical analysis.

Results

In Peru, 32 universities licensed by Sunedu (2021) offer dental programs; 11 of them are public and 21 are private.

Training programs for Dental Surgeons are available in only 15 of the 25 regions. A sample size of 14 universities was defined according to the inclusion/exclusion criteria. For the study, access to full text was available for 65% of the theses, 87.7% of the theses were written by a single author, and 66.7% of them were descriptive research. In relation to the academic-professional areas, the most frequent ones were Pediatric and Social Stomatology with 27% and Medical and Surgical Stomatology with 20.4%. Of the theses oriented to the solution of prevalent diseases, 19.2% corresponded to dental caries, 11.4% to malocclusion, and 8.1% to periodontal disease, totaling 38.7%.

Characteristics of the Universities and Theses

The study analyzed 1,389 theses from 14 universities—five public with 792 theses (57%) and nine private with 597 (43%)—from seven regions of Peru. Table 1 shows the distribution of the theses according to the university type during the five years of assessment, and Figure 1 shows the percentage in relation to the total.

Moreover, Table 2 shows the number of theses published and the average during the years 2015 to 2019 for each university.

Another characteristic observed was that 87.7% (1,218) of the theses had a single author, 10.2% (142) had two authors, and 2.1% (29) had three or four authors. Likewise, access to the full text was available for 69.5% of the theses, while access was limited only to the abstract for 30.5%.

Of the total number of theses analyzed, the highest percentage corresponded to the area of Preventive and Social Stomatology (27.6%), Medical and Surgical Stomatology (20.4%), Pediatric Dentistry/Orthodontics (16.4%), Rehabilitative Stomatology (16.3%), Basic Sciences (16%), and other areas (3.2%).

Based on the classification presented by Rojas (2015), the highest percentage of research works corresponded to the descriptive type (including exploratory) (66.8%), followed by experimental (20%) and analytical (13.2%).

In relation to the theses oriented towards the solution of prevalent diseases of the oral cavity, based on the criteria of health promotion and prevention levels, this aspect only corresponds to 38.7% (19.2% for dental caries, 8.1% for periodontal disease, and 11.4% for malocclusion), and 61.3% of the theses are oriented to non-prevalent diseases and other aspects different from oral health problems.

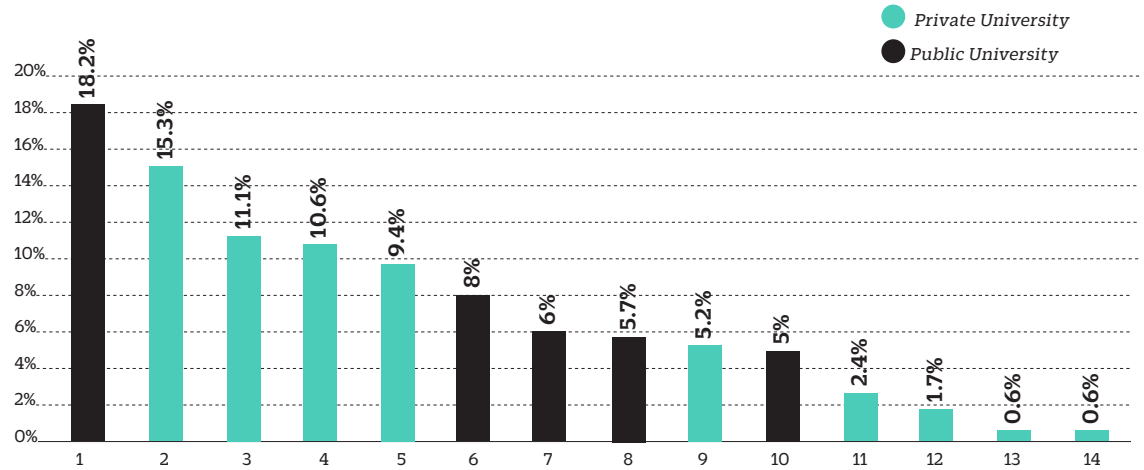
Table 1

Number and Percentage of Theses from Universities Classified as Private or Public, 2015-2019.

Type of University	University Name	Quantity	
		Number	%
Private	Universidad Andina del Cusco	213	27.0
	Universidad Privada Norbert Wiener	154	19.4
	Universidad Peruana Cayetano Heredia	147	18.6
	Universidad Peruana de Ciencias Aplicadas	131	16.5
	Universidad César Vallejo (filial Piura)	72	9.1
	Universidad de Huánuco	33	4.2
	Universidad de San Martín de Porres	24	3.0
	Universidad Científica del Sur	9	1.1
	Universidad Continental	9	1.1
	Total for private universities	792	100.0
Public	Universidad Nacional Mayor de San Marcos	253	42.4
	Universidad Nacional del Altiplano	111	18.6
	Universidad Nacional San Antonio Abad del Cusco	84	14.1
	Universidad Nacional Hermilio Valdizán	79	13.2
	Universidad Nacional Jorge Basadre Grohmann	70	11.7
	Total for public universities	597	100.0

Figure 1

Total Percentage of Dentistry Theses from Public and Private Universities, 2015-2019.



1 Universidad Nacional Mayor de San Marcos
2 Universidad Andina del Cusco
3 Universidad Privada Norbert Wiener
4 Universidad Peruana Cayetano Heredia
5 Universidad Peruana de Ciencias Aplicadas
6 Universidad Nacional del Altiplano
7 Universidad Nacional de San Antonio Abad del Cusco
8 Universidad Nacional Hermilio Valdizán
9 Universidad César Vallejo (filial Piura)
10 Universidad Nacional Jorge Basadre Grohmann
11 Univenidad de Huánuco
12 Universidad de San Martín de Porres
13 Universidad Continental
14 Universidad Científica del Sur

Table 2
Number of Theses by University, Year of Publication and Average, 2015-2019

University	2015	2016	2017	2018	2019	Average 2015-2019
Universidad Científica del Sur	0	0	3	5	1	1.8
Universidad de San Martín de Porres	1	9	5	2	7	4.8
Universidad Peruana Cayetano Heredia	24	20	18	54	31	29.4
Universidad Peruana de Ciencias Aplicadas	24	32	26	32	17	26.2
Universidad Norbert Wiener	21	1	41	35	56	30.8
Universidad Nacional Herminio Valdizán	13	18	19	16	13	15.8
Universidad de Huánuco	0	0	0	0	33	6.6
Universidad Continental	0	0	1	3	5	1.8
Universidad Nacional de San Antonio Abad del Cusco	7	13	31	13	20	16.8
Universidad Nacional del Altiplano	13	10	36	23	29	22.2
Universidad Nacional Jorge Basadre Grohmann	12	8	17	14	19	14
Universidad Andina del Cusco	25	19	42	74	53	42.6
Universidad César Vallejo (Piura site)	1	0	30	23	18	14.4
Universidad Nacional Mayor de San Marcos	52	40	67	52	42	50.6
Total	**193**	**170**	**336**	**346**	**344**	**277.8**

To determine the association of the research areas with prevalent diseases, the chi–square test with a statistically significant result ($p \leq 0.01$) is used. The correspondence analysis is applied to explain in detail this association, allowing to graphically observe the association of the variables. In our case, these associations are represented in two dimensions, which help to analyze the contrasts

The names of each dimension depend on the knowledge of the reality of the study; thus, dimension 1 is called *treatment*, which in Figure 3 opposes Pediatric Dentistry to Medical-Surgical. Dimension 2 is called *prevention and treatment*, which opposes Preventive and Social to Medical-Surgical.

Of the total number of theses analyzed (1,389), the correspondence analysis of the variables academic-professional area and prevalent diseases of the oral cavity shows that the Medical-Surgical area has a close correspondence to periodontal disease, and Pediatric Dentistry/Orthodontics to malocclusion. The Preventive and Social area has a close correspondence to dental caries, while Rehabilitative Stomatology and Basic Sciences have no correspondence relevant to prevalent diseases of the oral cavity (Figure 3).

As shown in Figure 4, in the case of private universities, the area of Surgical Medicine corresponds to periodontal disease and Pediatric Dentistry/Orthodontics with malocclusion. The Preventive and Social area has correspondence to

dental caries, while Rehabilitative Stomatology and Basic Sciences do not show a relevant correspondence with prevalent diseases of the oral cavity compared to Pediatric or Preventive and Social Dentistry.

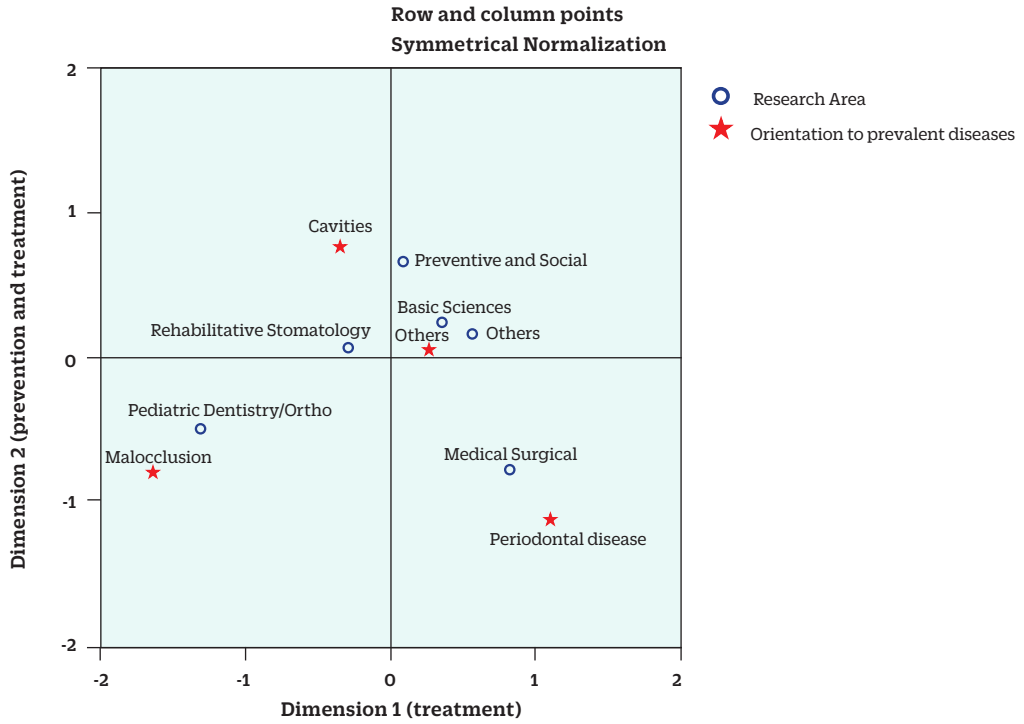
In the analysis of theses of the public universities (Figure 5), there is correspondence of the Surgical Medicine area to periodontal disease, Pediatric Dentistry/Orthodontics to malocclusion, and Rehabilitative Stomatology to dental caries, while the areas of Basic Sciences and Preventive and Social Sciences do not show a strong correspondence to prevalent diseases of the oral cavity.

Discussion

The results correspond to the analysis of 1,389 undergraduate theses, registered between the years 2015 and 2019, and 44% of the Dental Programs. An increase in publications was observed between the years 2015 and 2016 (170-193), and the number remained stable between 2017 and 2019 (336-346). Universidad Nacional Mayor de San Marcos (UNMSM) presents the highest number of publications, with an annual average of 51 theses, followed by Universidad Andina del Cusco with an average of 43 theses; these are public and private universities,

Figure 3

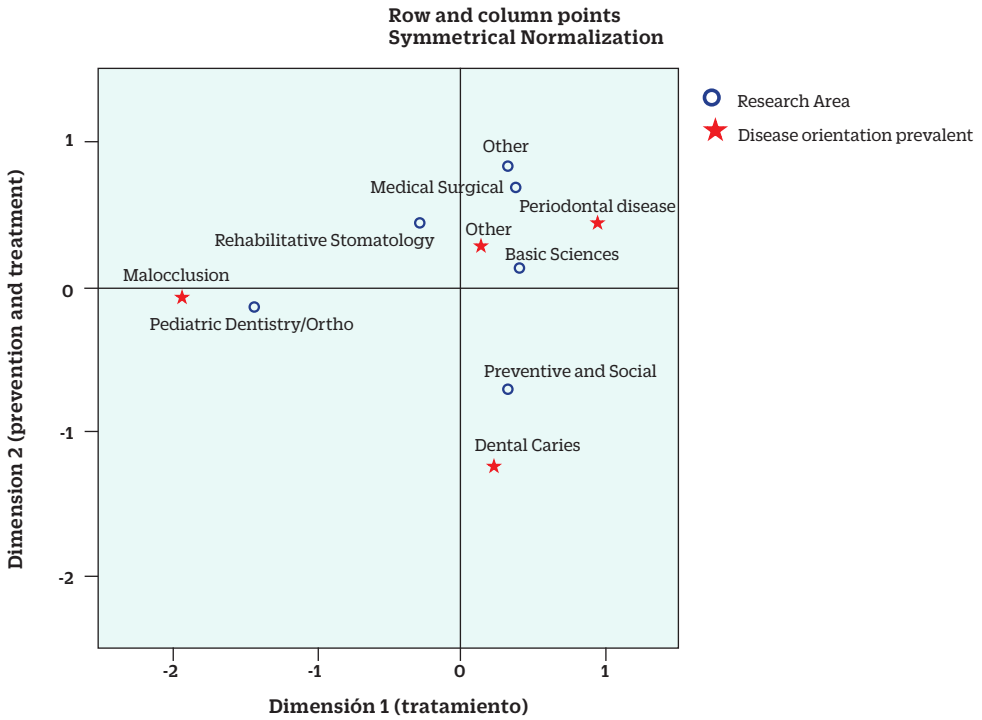
Correspondence Analysis of the Academic-Professional Areas to Prevalent Diseases of the Oral Cavity



Note: Total sample n=1,389 cases, where Dimension 1 "treatment" refers to the characterization that contrasts the pediatric dentistry research area (with malocclusion) to the medical-surgical area (with periodontal diseases). Dimension 2 "prevention and treatment"" differentiates the medical-surgical area (with periodontal diseases) and pediatric dentistry (with malocclusion) from the preventive and social area (with dental caries).

Figure 4

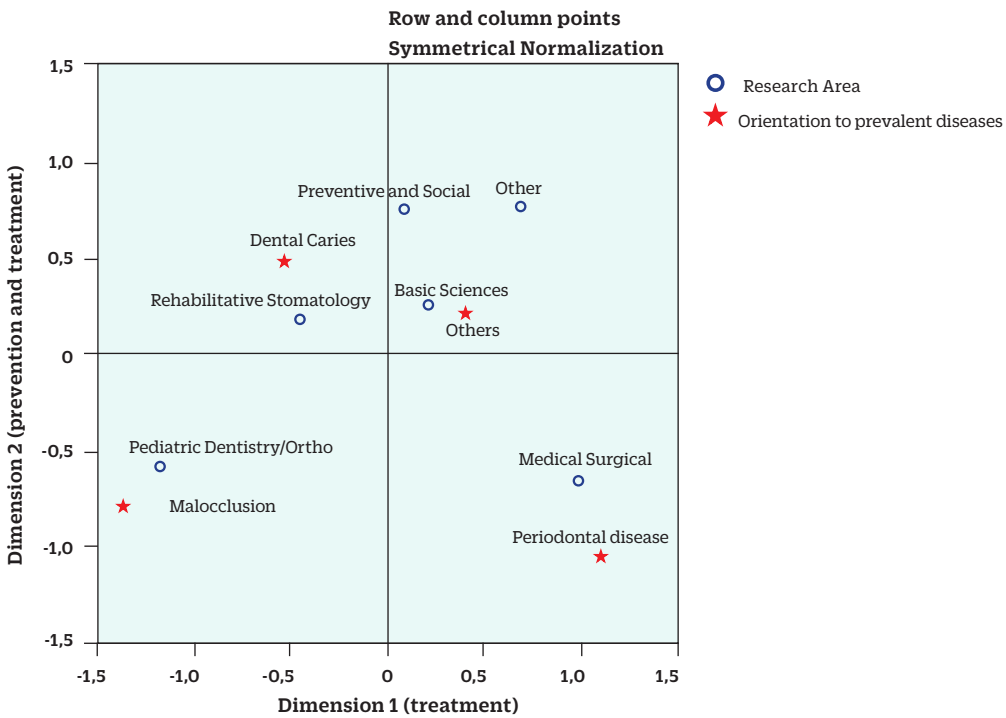
Correspondence Analysis of the Academic Areas of Private Universities and Prevalent Diseases



Note. Total sample n=792 cases, considering the same dimensions as in Figure 3.

Figure 5

Correspondence Analysis of Academic Areas of Public Universities and Prevalent Diseases of the Oral Cavity.



Note. Total sample n=597 cases considering the same dimensions as in Figure 3.

respectively. Three private universities started the registration of theses in their repositories continuously only since 2017 and 2018, due to requirements of the new University Law 13320 (2014), unlike public universities, which showed consistency during the years studied.

Registering and providing access to the thesis works is highly important, as this allows to know the contributions and new knowledge generated, being the role of universities to promote research towards the solution of the main oral health problems of the population based on each reality, in accordance with Werlinger et al. (2014), Chávez et al. (2019) and Moreira et al. (2019).

Regarding authorship, out of the total number of theses analyzed, 88% registered an author, particularly in public universities. No other similar studies were found in the Dentistry field; only the work of Quispe-Juli et al. (2019) shows that, in the case of the School of Medicine of Universidad Nacional San Agustín, 624 (100%) of the theses studied registered an author, suggesting that each School or Academic Program establishes its standards based on the complexity of the topics researched.

Regarding access to the theses studied, access to the full text was available for 70% of them, and 30% allowed accessing the abstracts. It was observed that public universities give greater importance to full access to the theses, and it was not identified whether the published abstracts were conditioned to publications in indexed journals.

In relation to the academic-professional area, out of the total number of theses analyzed, the highest percentage corresponded to Preventive and Social Stomatology considered as a preclinical area with 27.6%. No similar studies were found. The areas of Oral Medicine, Pediatric Dentistry/Orthodontics and Rehabilitative Stomatology considered as clinical areas together represented 53%.

The area of Medical and Surgical Stomatology—which includes Oral Medicine, Periodontics, Oral and Maxillofacial Surgery, and Dental and Forensic Radiology—corresponded to 20.4% of the theses; similar results were found in the study presented by Maggiorani et al. (2018), which considers as thematic content: Periodontics, Oral Surgery, Radiology, and Legal and Forensic Dentistry, representing 27.7%. On the other hand, Ordinola Sierra et al. (2014), in a study of 464 dental theses from a Peruvian university from 2005 to 2013, classify Oral Medicine and Pathology, Periodontics, Surgery, Radiology, and Forensic Dentistry as dental specialties, with the percentages totaling 20.9%, showing similar figures.

In the Pediatric Dentistry/Orthodontics area, 16.4% of the theses were obtained, showing similar values to those presented by theses of different denominations as in the study by Ordinola Sierra et al. (2014), which considers Pediatric Dentistry and Orthodontics specialties, finding 15.5%, and the study by Castro Rodríguez (2018), which analyzed 186 Dental theses from the years 2013 to 2017 that consider Pediatric Dentistry and Orthodontics as subjects, finding 12.4%; both cases considered a single school. Higher values such as 36% were found by Parra & Cloquell (2019) in 62 degree works in the specific area of Pediatric Dentistry because they correspond to special works in that same area. The percentages found are similar, despite the different criteria for their grouping as areas, specialties, and topics, except in the latter study.

For the area of Rehabilitative Stomatology, 16.34% of the theses were found, including Dental Surgery, Biomaterials, Endodontics, Rehabilitative, Prosthodontics, and Occlusion. Another study considering the same specialties mentions the finding of 28.23%. (Ordinola Sierra et al., 2014); however, when studying 515 undergraduate papers of the dental operatory area of a school from the years 2005-2017, the finding mentioned is 73% (Maggiorani et al., 2018). Notorious discrepancies are observed in these areas, due to the various criteria in which they are included as subjects such as dental operatory, biomaterials, endodontics, and others, as the dental operatory area or rehabilitation specialty of the same area.

Regarding the area of Basic Sciences: Human Anatomy, Histology-Embryology, Biochemistry, Physiology, Microbiology, Pharmacology, and Pathology, 16% was obtained of the thesis, a percentage similar to that found in other studies

showing 14% and 12.5% respectively (Castro Rodríguez, 2018; Ordinola Sierra et al., 2014), and grouping topics of Pharmacology, Histology, and Microbiology in the latter case. For this analysis, no differentiation was made between public and private universities.

Regarding the analysis of research types, various criteria and classifications are observed, some considered as types and others as study designs. Out of the 1,389 theses analyzed, 66.8% are of the descriptive type, including exploratory ones; this result is close to the findings made by Maggiorani et al. (2018), with 58% of the 515 theses analyzed in the School of Dentistry of the Universidad de los Andes, and it is different from what was found by Ramírez et al. (2020) and Parra & Cloquell (2019), with 28% and 45% respectively, called special degree works for the professional title, in the School of Dentistry of the same university (Maggiorani et al., 2018; Perdomo et al., 2020). Ordinola Sierra et al. (2014) classified the theses according to the observational design, with 45.3% and Castro-Rodríguez (2018) with 65.1%. Castro-Maldonado et al. (2015) found 76% of the medical theses to be descriptive.

The experimental type of thesis found represented 20%. This number differs from the work presented by Castro Rodríguez (2018) with 34.9%, and Ordinola Sierra et al. (2014), which includes the quasi-experimental design with 47%. These values are higher than the present study, and these results could be influenced by the infrastructure facilities, the costs they demand and the execution time.

For the analytical type that includes the correlational, a 13.2% percentage was found, a lower value than that obtained by Castro-Maldonado et al., (2015) with 24% and Maggiorani et al., (2018) with 19%, classified as comparative, correlational, explanatory, and analytical type. As shown, most studies were of the descriptive type and observational design, followed by those of the experimental and analytical design.

These results may be influenced by economic factors, access, and infrastructure facilities, equipment, and support from advisors, among others, which complicate deciding on the feasibility of the approval, execution, and completion of the work for the thesis candidate. Another important aspect for analyzing the results is to consider the diversity of criteria for classification, for which the suggestion proposed by Rojas (2015)was considered for the present study.

The analysis of the theses oriented towards the solution of prevalent diseases of the oral cavity in Peru shows a low overall percentage: 19.2% were oriented to dental caries, 8.1% to periodontal disease, and 11.4% to malocclusion. In total, only 38.7% of the theses analyzed were related to one of these diseases, while the other majority were oriented towards various aspects, such as other non-prevalent diseases, use of technologies, biosafety, education, etc. The analysis of these aspects is expected to be expanded in future works. Unlike the study conducted by Vallejos-Ragas & Tineo-Tueros (2014) on bachelor's degree thesis research from a private university in Peru, only 14.2% is related to oral health priorities based on the criteria proposed by Alarcón MINSA (2007b). Another study mentions that most of the works are not related to oral health priorities, hence the low impact of their citations (Castro-Rodríguez, 2018). On the other hand, regarding medical theses, only 27.1% are related to health research priorities (Castro Maldonado et al., 2015). This precarious production of research in oral health, which fails to consider the needs of the country, is evident not only in undergraduate theses but also in master's theses presented in the School of Medicine of a public university in terms of their social relevance (Sanabria Rojas et al., 2011).

It is important to point out that the aforementioned research works present diverse criteria of comprehensive and oral health priorities, such as orientations towards prevalent diseases in the country, health research priorities, and social relevance. This aspect is evident not only in dental theses, but also in undergraduate medical theses; however, it can be observed that the percentages are low for both cases.

On the other hand, out of the 38.7% of theses from the three areas oriented towards the solution of prevalent diseases of the oral cavity, the area of Preventive and Social Stomatology has

an association of close correspondence to dental caries, and Pediatric Dentistry/Orthodontics to malocclusion. Similarly, Medical-Surgical Stomatology is associated with periodontal disease; however, 61.3% of the thesis are not directly oriented to priority needs of the population. These associations show the topic trends selected by thesis students, and the role played by the advisor in evaluating the criteria for the selection of research topics and those who evaluate and approve the projects, as well as the lines of research proposed by the universities. These are not related to the national and global public health policies, whose mission is to ensure access to health services and health promotion at all levels, as well as improving life quality and disease prevention (Glick et al., 2021).

A recent study conducted in a medical school reveals that the scientific production made by 31 thesis advisors, during the 2008-2018 period, is scarce; in addition, half of the population studied had managed to develop only one article in their professional careers (Contreras Córdova et al., 2021). This precarious production in oral health research, which fails to consider the needs of the country, is also evident in another study on the priority scientific production in oral health (Sanabria-Rojas et al., 2011).

The university, as part of its role for the benefit of society, must lead research oriented towards the solution of prevalent diseases at various levels, encourage the analysis and application of the knowledge generated, and identify the needs of the population for the solution of the health issues of the country, especially those of the most vulnerable population.

The analysis of these aspects should lead to a commitment to better proposals for solutions.

The present study has allowed to characterize the undergraduate theses with a priority focus on oral health, and to establish the orientation and correspondence, from the point of view of the academic-professional areas, towards prevalent oral diseases. On the other hand, the scarce publication of studies that have an approach similar to the present one limits a broader discussion.

The more detailed differentiation between public and private universities and the analysis of the topics classified as other in the academic-professional areas are expected to be developed in future studies. Finally, the conclusion is that, of the total number of licensed universities offering academic training programs for Dental Surgeons considered in the present study, the largest number corresponded to private universities and the greatest production to public universities. Most of the theses were of the descriptive type, followed by experimental and analytical, with access to full text mainly in the public universities and predominantly with a single author. Less than half of the theses were oriented towards prevalent diseases such as dental caries, periodontal disease, and malocclusion. Correspondence associations between areas and diseases were as expected, except for Basic Sciences.

Although further analysis is required, this first study reinforces the necessity to highlight the needs in all areas: political, academic, and scientific. Therefore, the institutional research policy of each university's professional training program should consider the priorities of oral health, in order to achieve a real contribution made by the academia to the care and solution of the main oral problems of the population. The responsibility lies on the authorities, managers, faculty, thesis advisors, and the thesis students themselves, committed to their training and professional work with the social responsibility attributed to them.

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