## Scientific Production and Perception of Research among Students from Seven Dentistry Faculties in Peru

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### ABSTRACT

**Introduction:** There is limited evidence concerning the development of academic scientific research in the field of dentistry in Peru.

**Objective:** To determine the scientific production and perceptions about research among dentistry students and its association with gender, university affiliation, and academic year.

**Methods:** This multi-center, descriptive, and cross-sectional study was conducted on a non-probabilistic sample of undergraduate students from seven dentistry faculties in Peru. Participants were provided with a structured questionnaire to record general information and their views on scientific research and production. Chi-square and Fisher's exact tests were employed to correlate the study variables.

**Results:** A total of 468 students participated with an average age of 21.7 years. Of these, 66.9% were female. The majority rated their knowledge in the three assessed research areas as average. A higher number of monographs were produced by students from the Sierra region (p < 0.001). Greater production of clinical reports and theses (p < 0.001) was observed among fifth and sixth-year students. Only 11 (2.4%) students published scientific papers, predominantly from coastal universities (p = 0.027) and in their fifth and sixth academic years (p = 0.003).

**Conclusions:** The scientific production of dentistry students was found to be low. An association was identified between certain research perception variables and the students' university affiliation. Additionally, a correlation was observed between scientific publication and academic work with university or origin and year of study.

#### **ARTICLE INFORMATION**

#### **Keywords**

Education, Dental; Scientific Communication and Diffusion; Students, Dental; Peru

Received: August 19, 2022 Accepted: November 12, 2022

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**How to cite:** Pares-Ballasco JG, Sihuay-Torres MX, Lara-Verastegui R, Mattos-Vela MA. Scientific Production and Perception of Research in Students from Seven Dental Faculties in Peru. latreia [Internet]. 2024 Jan-Mar;37(1):85-96. https://doi.org/10.17533/udea.iatreia.214



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# Producción científica y percepción sobre la investigación en estudiantes de siete facultades de Odontología del Perú

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#### **INFORMACIÓN ARTÍCULO**

#### **Palabras clave**

comunicación y Divulgación Científica; Educación en Odontología; Estudiantes de Odontología Perú

Recibido: agosto 19 de 2022 Aceptado: diciembre 12 de 2022

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**Cómo citar:** Pares-Ballasco JG, Sihuay-Torres MX, Lara-Verastegui R, Mattos-Vela MA. Producción científica y percepción sobre la investigación en estudiantes de siete facultades de Odontología del Perú. latreia [Internet]. 2024 Ene-Mar;37(1):85-96.

https://doi.org/10.17533/udea.iatreia.214



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### RESUMEN

**Introducción:** existe poca evidencia sobre el desarrollo de la investigación científica universitaria en el área odontológica en el Perú.

**Objetivo:** determinar la producción científica y la percepción sobre la investigación en estudiantes de Odontología y su relación con el sexo, universidad de procedencia y año de estudio.

**Métodos:** estudio multicéntrico, descriptivo y transversal en una muestra no probabilística de estudiantes de pregrado de siete facultades de Odontología del Perú, a quienes se entregó un cuestionario estructurado para registrar datos generales y percepción sobre la investigación y producción científica. Se aplicaron las pruebas chi cuadrado y exacta de Fisher para relacionar las variables de estudio.

**Resultados:** participaron 468 estudiantes con una edad media de 21,7 años, de los cuales 66,9% fueron mujeres. La mayoría calificó como regular sus conocimientos en las tres áreas de investigación evaluadas. Se encontró una mayor producción de monografías en los estudiantes de la Sierra (p <0,001) y mayor producción de reportes clínicos y tesis (p <0,001) en los estudiantes de quinto y sexto años. Solo 11 (2,4%) estudiantes publicaron artículos científicos, la mayoría de las universidades de la costa (p = 0,027) y pertenecientes al quinto y sexto años de estudio (p = 0,003).

**Conclusiones:** la producción científica de los estudiantes de Odontología fue baja. Se encontró relación entre algunas variables de percepción de la investigación con la universidad de procedencia. También hubo relación entre la publicación científica y la elaboración de trabajos académicos con la universidad de procedencia y el año de estudio.



## **INTRODUCTION**

Scientific research holds a pivotal role in the education of undergraduate students in health sciences. It facilitates the development of skills and abilities for independent inquiry, equips them with competencies to critically assess literature, fosters a deeper reflection and analysis to form judgments, encourages the application of the scientific method, enhances their organizational skills, and promotes the development and internalization of autonomous learning activities. These activities are perceived as an inherent part of their medical training, bolstering their understanding and integration of new knowledge into their clinical practice and laying a stronger foundation for postgraduate studies (1-3).

At present, studies conducted in universities from various countries, including China, Malaysia, the United States, Cuba, and Peru, indicate that dentistry students exhibit a keen interest in scientific research and can significantly contribute to the genesis of new knowledge (1,4-7). However, these students often report numerous challenges encountered during their undergraduate journey, such as time constraints, lack of proper guidance, inadequate or just average knowledge and skills pertaining to scientific research, absence of incentives, and funding shortages (1,4,5). This scenario potentially highlights a gap in integrating research within the curriculum, potentially compromising the training of future scientists.

Scientific production involves a spectrum of activities, many of which can be undertaken by students: participating in research groups, initiating student scientific journals, spearheading research projects, publishing articles, among other endeavors (8). Within the context of Latin America and the Caribbean, it is noteworthy that student contributions to 20 dentistry journals indexed in SciELO account for 2.3% of the articles published between 2005-2017 (9). In Peru specifically, a mere 3.5% of dentistry students have reported publications (10). Furthermore, the majority of student scientific societies in dentistry (or research groups) in Peru were established in 2020, and to date, there's no Peruvian student dental journal, in contrast to Chile, which boasts the ANACEO journal (11).

Literature showcases that the incorporation of scientific research in advanced dental education in Peru is lagging, and there's limited encouragement to publish standard academic works, such as theses or other similar projects (10,12). In various countries, the interest and perception of students in fields like stomatology, dental hygiene, and dentistry regarding research have been explored (1,4-6); despite this, evidence specific to Latin America and, more so, Peru remains scant and largely anecdotal. Additionally, there's limited research contrasting student scientific production with perceptions about research during undergraduate programs. For instance, a study by Castro Rodríguez et al. (10) delved into this subject within a Peruvian dentistry faculty. The understanding of students' perceptions towards scientific research across diverse regions of Peru remains elusive as studies concerning national dental scientific production suggest that this challenge is not confined to a singular Peruvian institution. With an intent to sketch a comprehensive landscape of the Peruvian scenario, this study aimed to ascertain the scientific output and research perceptions among students from seven dentistry faculties in Peru.

This research is poised to offer valuable insights when redirecting or reformulating the conventional approach to teaching scientific research within academic and clinical modules. It can aid in crafting educational proposals that align with student needs, inviting them to immerse in research activities and ultimately striving for a top-tier dental education.

## **METHODS**

A multicentric, descriptive, and cross-sectional study was conducted. The study population consisted of undergraduate students from seven faculties of dentistry from the following Peruvian

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universities (abbreviation-city): Federico Villarreal National University (UNFV-Lima), National University of San Marcos (UNMSM-Lima), National University San Luis Gonzaga (UNICA-Ica), San Juan Bautista University (USJB-Ica), National University of the Altiplano (UNA-Puno), Andean University Néstor Cáceres Velásquez (UANCV-Juliaca), and Peruvian University of the Andes (UPLA-Huancayo). The first four are situated in the coastal region, and the last three in the Sierra (Andean) region of Peru. The country's major cities, with a larger population and economic development, are located on the coast.

For the development of this study, collaboration was obtained from the Permanent Department of Scientific Research of the National Association of Dentistry Students of Peru, which is comprised of students from each of the seven faculties of dentistry aforementioned. Thus, the research team collaborated with students from each of the faculties who were trained in survey techniques (11).

All dentistry students (from the first to the sixth year of studies) enrolled in academic Cycles I and II of 2020 were included, excluding those who chose not to participate in the study. Even though students in their first two years might have less knowledge about research and chances of publication, they were included in this study to capture a comprehensive view of the variables studied and to compare results with other studies that also included these students. A non-probabilistic sampling type was chosen due to the social isolation and physical distancing measures implemented by the Peruvian government as preventive actions against COVID-19.

Evaluation by a research ethics committee was deemed unnecessary due to the low risk to the study subjects. Data collection was done through a survey; however, consent to participate in the study was requested at the beginning of the questionnaire, ensuring confidentiality of the information provided among other assurances.

A questionnaire adapted from the study by Castro-Rodríguez et al. (8) was used, which was prepared using Google Forms. A pilot was previously conducted with 12 students applying the virtual form, noting certain annotations applied in the final execution.

The instrument consisted of 15 questions divided into four sections. The first section collected information about age, gender, university of origin, academic year, and participation in research groups. The second section evaluated student perception through interest in research, the importance of publishing, and the limitations for research during undergraduate studies. The third section assessed the students' self-perception through questions with gradual responses (none and deficient, regular, good, and very good) regarding knowledge of research methodology, scientific writing, and information search. The fourth section evaluated scientific production through academic works, publication of scientific articles, and the type of article published. The DOI or article title was also requested to verify the information provided.

The questionnaire was delivered to each participant via social media (Facebook and Whats-App) from September to December 2020; no incentives were offered for completing it. A researcher was responsible for verifying the data collected in each survey and selecting those that would be included in the study. An anonymous database was created, allowing a blind evaluation by two researchers.

Data analysis was performed using the SPSS statistical package version 25. Surveys that did not complete the requested information were excluded from the final analysis. Descriptive statistics were applied to the study variables using frequency distribution tables. Additionally, a bivariate analysis was conducted linking the variables of interest with gender, university of origin, and year of study using the chi-square and Fisher's exact tests. To facilitate statistical analysis and understanding in the presentation of the results, the university of origin was dichotomized into universities from the Costa region and universities from the Sierra region. Similarly, study years were grouped into first and second year, third and fourth year, and fifth and sixth year. A significance level of 5% was applied.



## RESULTS

A total of 492 completed questionnaires were obtained, of which 24 were eliminated mainly due to missing or inconsistent information. The final study sample consisted of 468 students from seven faculties of dentistry in Peru, with an average age ( $\pm$  standard deviation) of 21.7 ( $\pm$  3.5) years. The most frequent age group was 21 to 24-year-olds (214 students, 45.7%), females (313, 66.9%), students from the National University of the Altiplano (73, 15.6%), those in their third academic year (94, 20.1%), and those not belonging to a research group (266, 56.8%) (Table 1).

Variable	n	%
Age		
17-20 years	186	39.7
21-24 years	214	45.7
25-28 years	53	11.3
29 or more years	15	3.2
Gender		
Male	155	33.1
Female	313	66.9
University		
Andean University Néstor Cáceres Velásquez	66	14.1
National University of the Altiplano	73	15.6
Federico Villarreal National University	68	14.5
National University of San Marcos	72	15.4
National University San Luis Gonzaga	64	13.7
Peruvian University of the Andes	66	14.1
San Juan Bautista University	59	12.6
Academic Year		
1 <sup>st</sup> year	83	17.7
2 <sup>nd</sup> year	83	17.7
3r <sup>d</sup> year	94	20.1
4t <sup>h</sup> year	93	19.9
5 <sup>th</sup> year	85	18.2
6 <sup>th</sup> year	30	6.4
Participation in Research Groups*		
Student Research Group	174	37.2
Professor and Student Research Groups	28	6.0
Does not belong to any Research Group	266	56.8
Others	5	1.1

\* More than one possible answer

Source: Own elaboration

Regarding the perception of research, the vast majority of students expressed interest (94.7%). 405 (86.5%) believed that the importance of academic publishing is to increase scientific knowledge, and 320 (68.4%) identified the lack of adequate guidance as the main limitation for research during undergraduate studies. When comparing these three variables with gender, university of origin, and year of study, only a statistically significant relationship was found between interest in research (p = 0.014) and the importance of publishing academic papers (p < 0.05) with the university of origin. It was observed that interest in research and the perception of the importance of various motives for publishing were greater in universities from the Sierra region. Also, the year of study was related to the perception of the importance of research as it contributes to increasing scientific knowledge (p = 0.046), and this was perceived as more important by upper-year students (Table 2).

		Ge	nder		Region	of origin		Year of study				
Research perception	Total (%n)	Male (%n)	Female (%n)	р	Univ. Coast (%n)	Univ. Sierra (%n)	р	1st-2nd (%n)	3rd-4th (%n)	5th-6th (%n)	р	
Interest												
Yes	443 (94.7)	144 (92.9)	299 (95.5)	0.235	243 (92.)	200 (97.6)	0.014	154 (92.8)	178 (95.2)	111 (96.5)	0.357	
No	25 (5.3)	11 (7.1)	14 (4.5)		20 (7.6)	5 (2.4)		12 (7.2)	9 (4.8)	4 (3.5)		
Importance												
Increases prestige	71 (15.2)	30 (19.4)	41 (13.1)	0.076	51 (19.4)	20 (9.8)	0.004	26 (15.7)	32 (17.1)	13 (11.3)	0.384	
Enhances CV	81 (17.3)	23 (14.8)	58 (18.5)	0.320	58 (22.1)	23 (11.2)	0.002	21 (12.7)	39 (20.9)	21 (18.3)	0.120	
Increases scientific knowledge	405 (86.5)	133 (85.8)	272 (86.9)	0.744	237 (90.1)	168 (82.0)	0.010	135 (81.3)	166 (88.8)	104 (90.4)	0.046	
Stimulates the student	170 (36.3)	57 (36.8)	113 (36.1)	0.887	116 (44.1)	54 (26.3)	<0.001	61 (36.7)	69 (36.9)	40 (34.8)	0.924	
Other reasons	3 (0.6)											
Limitations												
Lack of proper guidance	320 (68.4)	103 (66.5)	217 (69.3)	0.529	182 (69.2)	138 (67.3)	0.664	109 (65.7)	132 (70.6)	79 (68.7)	0.608	
Lack of research equipment	188 (40.2)	65 (41.9	123 (39.3)	0.584	113 (43.0)	75 (36.6)	0.162	69 (41.6)	70 (37.4)	49 (42.6)	0.606	
Lack of proper mentors	248 (53.0)	77 (49.7)	171 (54.6)	0.312	147 (55.9)	101 (49.3)	0.154	79 (47.6)	103 (55.1)	66 (57.4)	0.205	
Lack of time	177 (37.8)	52 (33.5)	125 (39.9)	0.180	106 (40.3)	71 (34.6)	0.209	72 (43.4)	62 (33.2)	43 (37.4)	0.141	
Lack of knowledge	209 (44.7)	61 (39.4)	148 (47.3)	0.104	127 (48.3)	82 (40.0)	0.074	74 (44.6)	80 (42.8)	55 (47.8)	0.693	
Lack of academic incentives	133 (28.4)	42 (27.1)	91 (29.1)	0.655	78 (29.7)	55 (26.8)	0.501	43 (25.9)	56 (29.9)	34 (29.6)	0.669	
Others	1 (0.2)											

#### Table 2. Perception of Research among Dentistry Students by gender, region of origin and year of study, 2020

Univ. Coast: Universities from the Coast region. Univ. Sierra: Universities from the Sierra region Source: Own elaboration

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The majority of students believed that their knowledge in research methodology (54.9%), scientific writing (55.8%), and information search (50.2%) was average. When relating these variables to gender, university of origin, and year of study, only a statistically significant relationship was found between the perception of knowledge in research methodology (p = 0.002) and information search (p = 0.006) with the university of origin; there was a higher positive perception among students from the Sierra region (Table 3).

	Total	Gender			Region	of origin		Year of study			
Perception	n (%)	Male (%n)	Female (%n)	р	Univ. Coast (%n)	Univ. Sierra (%n)	р	1st- 2nd (%n)	3rd- 4th (%n)	5th- 6th (%n)	р
Research meth	odology										
None-Poor	47 (10)	17 (11.0)	30 (9.6)	0.424	25 (9.5)	22 (10.7)	0.002	20 (12.0)	16 (8.6)	11 (9.6)	0.391
Regular	257 (54.9)	90 (58.1)	167 (53.4)		163 (62.0)	94 (45.9)		82 (49.4)	112 (59.9)	63 (54.8)	
Good-Very good	164 (35.0)	48 (31.0)	116 (37.1)		75 (28.5)	89 (43.4)		64 (38.6)	59 (31.6)	41 (35.7)	
Scientific writir	ng										
None-Poor	88 (18.8)	28 (18.1)	60 (19.2)	0.880	51 (19.4)	37 (18.0)	0.162	25 (15.1)	40 (21.4)	23 (20.0)	0.314
Regular	261 (55.8)	89 (57.4)	172 (55.0)		154 (58.6)	107 (52.2)		91 (54.8)	107 (57.2)	63 (54.8)	
Good-Very good	119 (25.4)	38 (24.5)	81 (25.9)		58 (22.1)	61 (29.8)		50 (30.1)	40 (21.4)	29 (25.2)	
Information sea	arch										
None-Poor	30 (6.4)	7 (4.5)	23 (7.3)	0.261	16 (6.1)	14 (6.8)	0.006	14 (8.4)	12 (6.4)	4 (3.5)	0.133
Regular	235 (50.2)	85 (54.8)	150 (47.9)		149 (56.7)	86 (42.0)		78 (47.0)	104 (55.6)	53 (46.1)	
Good-Very good	203 (43.4)	63 (40.6)	140 (44.7)		98 (37.3)	105 (51.2)		74 (44.6)	71 (38.0)	58 (50.4)	

## Table 3. Self-perception of research knowledge among Dentistry Students by gender, region of origin and year of study, 2020

Univ. Coast: Universities from the Coast region. Univ. Sierra: Universities from the Sierra region Source: Own elaboration

Regarding scientific production, all Dentistry students indicated they engaged in academic activities within the university setting. The most frequent activities were the preparation of monographs (414 [88.5%]), followed by reports (326 [69.6%]) and literature reviews (256 [54.7%]). Only 11 (2.4%) students published scientific articles, all of which were original, and some reported a second publication: a review article (9.1%) and a letter to the editor (9.1%). A higher production of monographs was found among students from the Sierra region (p <0.001) and a higher production of clinical reports (p <0.001) and theses (p <0.001) among fifth and sixth-year students. Additionally, more scientific article publications were found among students from universities in the Costa region (p = 0.027) and those in the fifth and sixth years of study (p = 0.003) (Table 4).

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Scientific	Tatal	Ge	nder	Region of origin			Year of study				
Production	Total (%n)	Male (%n)	Female (%n)	р	Univ. Coast (%n)	Univ. Sierra (%n)	р	1st-2nd (%n)	3rd-4th (%n)	5th-6th (%)	р
Academic Works											
Monograph	414 (88.5)	136 (87.7)	278 (88.8)	0.732	220 (83.7)	194 (94.6)	<0.001	145 (87.3)	166 (88.8)	103 (89.6)	0.837
Literature reviews	256 (54.7)	80 (52.9)	174 (55.6)	0.582	142 (54.0)	114 (55.6)	0.727	92 (55.4)	98 (52.4)	66 (57.4)	0.681
Reports	326 (69.6)	144 (73.5)	212 (67.7)	0.198	187 (71.1)	139 (67.8)	0.441	110 (66.3)	122 (65.2)	94 (81.7)	0.005
Clinical report	128 (27.4)	42 (27.1)	86 (27.5)	0.931	72 (27.4)	56 (27.3)	0.989	15 (9.0)	59 (31.6)	54 (47.0)	<0.001
Thesis	50 (10.7	20 (12.9)	30 (9.6)	0.274	22 (8.4)	28 (13.7)	0.066	10 (6.0)	7 (3.7)	33 (28.7)	<0.001
Other	13 (2.8)										
Article published in	n scienti	ific jour	nal								
Yes	11 (2.4)	3 (1.9)	8 (2.6)	1	10 (3.8)	1 (0.5)	0.027	0 (0)	4 (2.1)	7 (6.1)	0.003
No	457 (97.6)	152 (98.1)	305 (97.4)		253 (96.2)	204 (99.5)		166 (100)	183 (97.9)	108 (93.9)	
Type of published	article										
Original article	11 (100)										
Review article	1 (9.1)										
Short communi- cation	0 (0)										
Letter to the editor	1 (9.1)										
Other	0 (0)										

Table 4. Scientific production of Dentistry Students by gender, region of origin and year of study, 2020

Univ. Coast: Universities from the Coast region. Univ. Sierra: Universities from the Sierra region Source: Own elaboration

### DISCUSSION

This study showed that almost all students from seven faculties of dentistry in Peru are interested in scientific research and recognize its importance in contributing to knowledge. This aligns with reports from dentistry faculties in Peru and Cuba (10,13). No significant differences were found based on gender or academic year. This information should be leveraged by the relevant authorities to promote research activities from the early years of training as well as equitable participation of both males and females to reduce gender inequality in scientific research (14). These findings differ from those of Corrales et al. (6), who argue that interest increases as students progress through their academic cycles and is higher in males; this contrasts with the findings of Alarco et al. (14). Furthermore, one study reported that students from public management universities have a higher interest in scientific research (15), contrasting with this study where students from the Sierra region (two of the three studied universities are private) showed greater interest in research (15).

A possible explanation for these results, regarding interest and the importance of scientific research perceived regardless of gender and academic year, is the context under which the study was conducted. The COVID-19 pandemic highlighted the necessity and significance of research through

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the generation and dissemination of knowledge on prevention, diagnosis, treatment, and control of the new disease. It also emphasized the scientific contributions of various health professions in the search for solutions (16). However, it is essential for students to recognize the benefits of their practice on personal, professional, and institutional levels (17). Students from the Costa region placed more importance on publishing academic papers than students from the Sierra region, which might be attributed to more exposure and opportunities for publishing in their academic environments.

This interest can progressively decrease as students encounter obstacles during their undergraduate training for scientific research (18). This study highlighted three challenges: lack of proper guidance, mentorship, and knowledge. This aligns with the findings of studies like that of Mayta-Tristán et al. (19) among medical students in eight Latin American countries (6,10,13).

Most surveyed students perceived their research knowledge as average. This was previously reported by Castro-Rodríguez et al. (10), and similar findings were found by Brito et al. (20) and Nakandari et al. (21) in multicentric studies among medical students in 12 Latin countries and 19 Peruvian faculties, respectively. This shows that this issue isn't new or exclusive to Peruvian dentistry. On the other hand, students from the Sierra region had a better perception of their knowledge in research methodology and information searching, which translates into a higher production of monographs as self-reported. However, this did not translate into more scientific publications.

A potential solution to the perceived average knowledge is student scientific societies. These extracurricular learning communities aim to develop research skills in their members through methodological seminars, writing workshops, information search workshops, critical reading clubs, research project development, and participation in scientific conferences (22). This study identified that only 37.2% of respondents belong to a student research group. However, it is important to consider that in Peru, most student scientific societies in Dentistry were established in 2020 (23). The current situation of these societies is concerning, as it was reported that out of 10, only 2 have institutional recognition, and 4 are inactive (23). This contradicts the fundamental role of the university in promoting scientific activity (24).

It is essential for professors who teach research subjects or are thesis advisors to take responsibility for promoting student scientific production, to which, ideally, they should be continuously linked (25). In contrast, studies show the low publication of articles by Peruvian health career advisors (26-29). In a Peruvian faculty, it was shown that out of 344 theses defended between 2010-2018, only 14 (4.06%) were published as scientific articles (12). This might suggest deficiencies in strategies to conclude the research process. This study reports that the most common curricular academic works are monographs, reports, and literature reviews, and only 11 students (2.4%) managed to publish a scientific article. This implies that the habit of scientific production is scarcely encouraged in dentistry faculties, which is counterproductive since the mentioned activities mainly require students to search, select, and synthesize information under a teacher's supervision.

Additionally, the preparation of theses and clinical reports was statistically more frequent in the last two years of training. Students nearing the end of their undergraduate studies might prefer to advance with their theses because Peruvian Law N° 30220 requires them to defend them to obtain a professional degree. Likewise, clinical procedures increase as students progress in their training. It is essential for these academic works not to be perceived merely as a final grade for a subject but as an opportunity for updating literature and possibly generating and developing research ideas. It is recommended for the guiding teacher to act as a coach, motivating the student, listening and attending to them, being competent, using a clear and precise methodology, and showing commitment to training future researchers (30).

On the other hand, other studies agree with the low percentage of student publication reported in this study. For example, in a faculty of dentistry in Peru, it was found that student publication was 3.5% (10). At the Latin American and Caribbean level, Peruvian student participation was low (3.3%) in scientific journals indexed in SciELO, surpassed by Brazil (50.3%), Colombia (19.7%), and Chile (15.8%) (9). The reality of student scientific production does not differ from the national scientific production of dentistry, which, according to the Scimago Journal and Country Rank, is ranked

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51st worldwide (31). However, Mayta-Tovalino et al. (32), despite reporting low publication frequencies, supported significant growth in scientific production of dentistry faculties after the establishment of University Law N° 30220. This was enacted in 2014 to seek the continuous improvement of the university educational model in Peru (24).

For Peruvian medical students, Torres-Huamanchuco et al. (33) indicated that 20% managed to publish a manuscript. At the Latin American level, Sánchez-Duque et al. (34) determined that 19.2% had authorship in a scientific article. However, it should be considered that the samples addressed in these studies were students enrolled in extracurricular online training courses on writing and scientific publication, which could lead to higher participation of students linked with research. Additionally, a reliable record of student publications wasn't provided. One strength of this study was verifying this information by requesting the DOI or title of the research, which was not done in the aforementioned studies, so the frequency of scientific publications they reported might be overestimated (10,33-34).

Students from the Costa region and those in the final years of study published more scientific articles. In the first case, this might be interpreted as larger, more established universities with more resources and research support being located in this region. In the second case, it might be due to students having a longer study trajectory and, therefore, more publication opportunities than first-year students.

Since non-probabilistic sampling was used, the identified statistical relationships cannot be extrapolated but should be assumed referentially. However, this is a preliminary approach to the evaluated problem, as information was collected from dentistry students from different regions of Peru. More research is needed, albeit with probabilistic samples, to corroborate the findings of this study.

## CONCLUSION

In conclusion, the majority of students expressed interest in scientific research and recognized its importance in contributing to knowledge. The most perceived limitation for scientific research during undergraduate studies was the lack of proper guidance. Furthermore, most students rated their knowledge in research methodology, scientific writing, and information searching as average.

A relationship was only found between the perception of interest in research, the importance of publishing, and knowledge in research methodology and information searching with the university of origin. On the other hand, scientific publication by undergraduate dentistry students in Peru was low, with the most commonly published type being original articles and the most frequent academic work being monographs. Lastly, there was a relationship between scientific publication and the preparation of academic works with the university of origin and the year of study.

## **CONFLICT OF INTERESTS**

The authors declare they have no conflicts of interest.

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