Artículo original

Accessibility and public information of medical students' Facebook profiles in a Peruvian medical school: A call to adapt e-professionalism guidelines in the Latin American context

Accesibilidad e información pública de los perfiles de Facebook de estudiantes de medicina de una facultad de medicina peruana: un llamado a adaptar las guías de e-profesionalismo al contexto latinoamericano

Carlos Jesús Aragón-Ayala<sup>1,2</sup> https://orcid.org/0000-0001-9536-2247

Henry Rodriguez-Carrillo<sup>1,2</sup> https://orcid.org/0000-0003-1076-7427

Aldo Patricio Cornejo-Estrada<sup>1</sup> https://orcid.org/0000-0003-2937-771X

Cender Udai Quispe-Juli<sup>3\*</sup> https://orcid.org/0000-0003-0633-8339

<sup>1</sup>Universidad Nacional de San Agustín de Arequipa. Arequipa, Perú.

<sup>2</sup>Sociedad Científica de Estudiantes de Medicina Agustinos (SOCIEMA). Arequipa, Perú.

<sup>3</sup>Universidad Peruana Cayetano Heredia. Lima, Perú.

\*Corresponding author: cender.quispe@upch.pe

#### **ABSTRACT**

The use of Facebook poses new challenges for adoption of e-professionalism. In this study, we describe the accessibility of Facebook profiles in medical students from a Peruvian university, the disclosure of personal and professional information, and its association with sex and year of study. Through a systematic search on Facebook, the profiles of medical students from the 2nd to the 7th year were located using fictitious profiles. The presence of different types of information in accessible profiles was evaluated. The proportion of the



disclosed content was calculated. The data were compared according to year of study and sex. Approximately 80% of the students (488/611) had public access profiles, although these were not significantly different according to year of study (p = 0.098) and gender (p = 0.912). Proportion of disclosed content was greater in higher years: 2nd and 3rd (p = 0.022), 2nd and 6th (p < 0.001), and 2nd and 7th (p = 0.002) and in men (33.25 ± 12.47) compared to women (30.38 ± 11.95) (p = 0.01). Photos (p = 0.009) and links to other social networking sites (p = 0.036) were more commonly visible in women's profiles, while showing the university (p = 0.017), medical school (p = 0.043) and sexual orientation (p = 0.001) was more common amongst men. Most of the Facebook profiles of medical students were accessible, the disclosed content was greater in senior and male students. It is necessary to create and implement guidelines on e-professionalism in Latin America.

Keywords: medical students; privacy; professionalism; social media; Peru.

#### **RESUMEN**

El uso de Facebook plantea nuevos desafíos para la adopción del e-profesionalismo. En este estudio se describe la accesibilidad de los perfiles de Facebook en estudiantes de medicina de una universidad peruana, la divulgación de información personal y profesional y su asociación con el sexo y el año de estudio. A través de una búsqueda sistemática en Facebook, se localizaron los perfiles de los estudiantes de medicina de 2° a 7° año, utilizando perfiles ficticios. Se evaluó la presencia de diferentes tipos de información en los perfiles accesibles. Se calculó la proporción del contenido divulgado. Los datos se compararon, según año de estudio y sexo. El 80 % de los estudiantes (488/611) tenían perfiles de acceso público, aunque estos no fueron significativamente diferentes, según el año de estudio (p = 0.098) y el género (p = 0.912). La proporción de contenido divulgado fue mayor en los años superiores: 2° y 3° (p = 0.022), 2° y 6° (p < 0.001), 2° y 7° (p = 0.002)y en hombres (33,25  $\pm$  12,47) frente a las mujeres (30,38)  $\pm$  11,95) (p = 0,01). Las fotos (p = 0,01). = 0,009) y los enlaces a otros sitios de redes sociales (p = 0,036) fueron más visibles en los perfiles de las mujeres, mientras que mostrar la universidad (p = 0.017), la facultad de medicina (p = 0.043) y la orientación sexual (p = 0.001) era más común entre los hombres. La mayoría de los perfiles de Facebook de los estudiantes de medicina fueron accesibles, el contenido divulgado fue mayor en los estudiantes de último año y del sexo masculino. Es necesario crear e implementar lineamientos sobre el e-profesionalismo en América Latina.



**Palabras clave:** estudiantes de medicina; privacidad; profesionalismo; redes sociales; Perú.

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#### Introduction

The use of social networking sites has increased during the last decade, particularly Facebook. (1) Among its multiple uses, the academic and scientific approach stands out in university students. (1) The public, permanent, and unpredictable nature of this platform (2) poses new challenges by extending the concept of the adoption and maintenance of professionalism in the digital age or e-professionalism. (3) Several cases of non-professional behavior in social networking sites of medical students or residents have been reported (4,5,6,7) despite the establishment of international and institutional recommendations on eprofessionalism. (3,8) One of these recommendations is that users should identify and then reflect upon their digital identity and goals for using social media. (3) In this way, users can adjust the type of disclosed content on their profile, specifying the appropriate recipients of the shared content, and the accessibility of their profiles by the search engine of the social network or external browsers. Being aware of this configuration and adjusting it according to personal needs reduces the disclosure of potentially inappropriate and personal content on the network, thus reducing the negative consequences on the image of the user (student or health professional), the institution to which they belong, the profession, and personal safety of the user. (7) However, students generally do not recognize or are unaware of these risks.(9)

Previous research studied the accessibility of Facebook profiles of health professionals or students, as well as the type of disclosed content. (4,5,7,10,11,12,13) Only three studies were done in undergraduate medical students. (4,12,13) In India, a study in medical students found that most of their participants use Facebook settings privately to hide information from other users. (12) Another study evidenced the importance of interventions with policies on the use



of social networks, demonstrating a significant change in the behavior of its participants in networks. (4) There are no similar studies conducted in Latin America. Therefore, the purpose of this study was to explore the public accessibility of Facebook profiles of medical students from a Peruvian university and the disclosure of personal and professional information, as well as its association with sex and the year of studies.

#### **Methods**

#### Study design

A cross-sectional observational study was carried out in students of the School of Medicine of the "Universidad Nacional de San Agustín de Arequipa", located in southern Perú. The School of Medicine has a traditional study program lasting seven years; with three years of preclinical training, three years of clinical training and one year of medical internship. The study was carried out during March and April 2020.

## **Study population**

The list of students enrolled in this public university was obtained through its public digital platform. Then, all students enrolled in grades two through seven who had an accessible Facebook profile during the study period were included since first year students were not enrolled in the university during the research period. In the case of duplicates in the lists, the highest year of study was considered. Students who were part of the research team of this study were excluded.

#### **Variables**

The categorical variables studied were the presence of the following types of content within the Facebook profiles: university, school of medicine, current city, home town, email, mobile phone number, postal address, websites and social links, complete date of birth (month, day and year), birthday (month and day), year of birth, sexual orientation ("Interested in"), languages, religious views, political views, relationship, family members,



own description, other names, favorite quotes, life events, personal interests (presence of any of the following: music, movies, sports, books, etc.), likes, check-ins, reviews, groups, friends, photos, profile picture, videos, and any visible post.

The numerical variable evaluated was the proportion of disclosed content. For this, a score of one was assigned to each of the 30 types of content evaluated if there was any information in each section. Subsequently, the disclosed content score was transformed into a percentage (30 points = 100%).

#### **Procedures**

First, the authors utilized their personal Facebook profiles for actively searching the Facebook profiles of each of the listed students (through the Facebook search engine, or by reference from friends and colleagues) in order to determine the presence of their Facebook profiles.

Second, it was determined whether a profile was publicly accessible by a Facebook search engine using fictitious profiles (recently created by the authors, with no relationship or mutual friends with the study participants, or previous activity on Facebook). This in order to simulate the profile of a person outside the social circles of the students who searches and reviews the profiles of students. The search was carried out by combining the real names and surnames of the students (no abbreviations, pseudonyms, or diminutives were used) and applying city or university filters in the case of homonyms or when there were more than 20 results. The Facebook profile was considered publicly accessible when the result obtained coincided with the student's profile previously located by the authors. The sex of the students was determined according to the names registered in the enrollment lists.

Third, only the publicly accessible profiles were evaluated for the presence of the aforementioned categorical variables. Then the proportion of disclosed content was calculated.

## Statistical analysis

Statistical analysis was performed in STATA 14 and R software version 4.0.2. The categorical variables were described in frequencies and percentages. The proportion of each



type of content according to sex and year of study was compared using Pearson's chi-square test (expected frequencies > 5) or Fisher's exact test (expected frequencies <5). The mean proportion of disclosed content was compared according to sex using the student's t-test (normal distribution and equal variances), or, failing that, Mann-Whitney U test; and according to year of study by analysis of variance (ANOVA), assessing the equality of the variances with the Barlett's test ( $p \ge 0.05$ ). Post-hoc tests of pairwise comparisons were performed for the study year with Bonferroni correction. A p-value <0.05 was considered statistically significant. The strength of association was measured with the prevalence ratio (PR), taking the female sex as a reference category. Multivariate regression analysis was not performed because the intention of the study was not causal, so the confounder control was not included in the design or analysis.

#### **Ethical considerations**

This study was carried out guided by the principles of scientific integrity, reserving the anonymity of the participants. Approval by an ethics committee was not necessary, because observational studies on social networking sites (where researchers do not require contact with human subjects and access public information on social networks) are usually exempt from approval by an ethics committee. (14,15) Furthermore, the information evaluated from Facebook profiles is information openly and voluntarily shared with the general public after accepting the privacy conditions of the social networking site. (16,17) The knowledge of the students about the present research was minimized since it could affect the results, (10) for that reason a special consent was not requested from the students.

#### **Results**

The total number of students initially identified was 636. After excluding the authors and eliminating duplicate names, 621 students were evaluated (fig. 1).

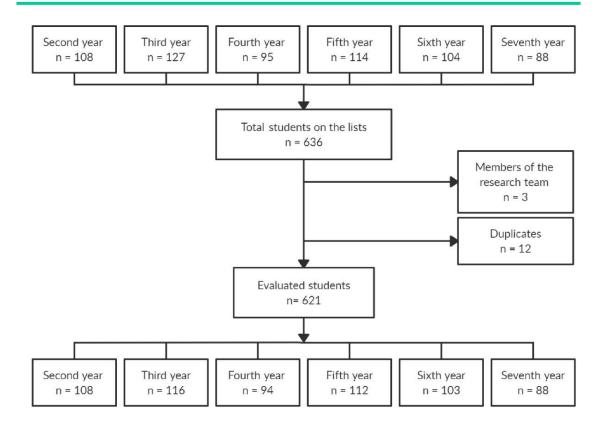


Fig. 1 – Flowchart about the selection of participants for the study.

#### Facebook profile and publicly accessible profile of medical students

Through an active search, it was confirmed that of the total number of evaluated students (n = 621), 98.4% (n = 611) had a Facebook profile, 0.5% (n = 3) did not have a Facebook profile, and the presence or absence of a Facebook profile could not be determined in 1.1% (n = 7) of cases.

Students with publicly accessible profiles represented 79.9% (n=488) of those with a Facebook profile (n=611) (table 1). No statistically significant difference was found among the percentage of publicly accessible profiles between the different years of study (p=0.098) or between the sexes (p=0.912). These p-values were calculated using chi-square test.



**Table 1** - Frequency of medical students with a Facebook profile and with a publicly accessible profile, according to year of study and sex

	Total numbe	er of students		a Facebook ofile	Presence of a publicly accessible Facebook profile			
	N	%	N N	0/0*	N N	0/0**		
Year of study								
Second	108	100	107	99.1	77	72.0		
Third	116	100	113	97.4	87	77.0		
Fourth	94	100	93	98.9	76	81.7		
Fifth	112	100	109	97.3	86	78.9		
Sixth	103	100	102	99.0	86	84.3		
Seventh	88	100	87	98.9	76	87.4		
Sex								
Female	267	100	261	97.8	209	80.1		
Male	354	100	350	98.9	279	79.7		
Total	621	100	611	98.4	488	79.9		

Legend: \*Regarding the total number of students evaluated (n = 621), by year of study or sex; \*\*Regarding those who had a Facebook account (n = 611), by year of study or sex.

Source: Own elaboration based on facebook.com

## Type of disclosed content by sex

The type of disclosed content according to sex is observed in table 2. The visibility of some posts on their wall (p = 0.002), some photos (p = 0.009), and links to other social networking sites (p = 0.036) was significantly higher in women. On the other hand, men had more disclosed information related to their university (p = 0.017), their medical school (p = 0.043), sexual orientation (p = 0.001), languages (p = 0.046), their own description (p = 0.022), and friends (p = 0.001).



**Table 2** - Type of disclosed content by sex of medical students with a publicly accessible Facebook profile

Type of disclosed content		(ale : 209)		nale 279)		tal 488)	P - value	PR***	
	N	%	N	%	N	%			
Professional information								1	
University	142	67.9	160	57.4	302	61.9	0.017*	1.2	
School of Medicine	82	39.2	85	30.5	167	34.2	0.043*	1.3	
Personal information									
Current city	155	74.2	188	67.4	343	70.3	0.105*	1.1	
Home town	138	66.0	162	58.1	300	61.5	0.074*	1.1	
Sex	196	93.8	252	90.3	448	91.8	0.168*	1.0	
Year of birth (yy)	15	7.2	10	3.6	25	5.1	0.075*	2.0	
Complete date of birth (mm/dd/yy)	13	6.2	9	3.2	22	4.5	0.115*	1.9	
Birthday (mm/dd)	30	14.4	29	10.4	59	12.1	0.184*	1.4	
Sexual orientation	69	33.0	45	16.1	114	23.4	0.001*	2.0	
Relationship	48	23.0	59	21.2	107	21.9	0.631*	1.1	
Family members	74	35.4	95	34.1	169	34.6	0.755*	1.0	
Friends	101	48.3	91	32.6	192	39.3	0.001*	1.5	
Life events	73	34.9	46	27.2	149	30.5	0.068*	1.3	
Own description	27	12.9	19	6.8	46	9.4	0.022*	1.9	
Other names	47	22.5	49	17.6	96	19.7	0.176*	1.3	
Favorite quotes	23	11.0	21	7.5	44	9.0	0.184*	1.5	
Languages	47	22.5	43	15.4	90	18.4	0.046*	1.5	
Contact information									
Mobile phone number	2	1.0	1	0.4	3	0.6	0.579**	2.7	
Postal address	0	0.0	1	0.4	1	0.2	N/A	0.0	
Email	0	0.0	0	0.0	0	0.0	N/A	N/A	
Religious and political views									
Religious views	5	2.4	3	1.1	8	1.6	0.297**	2.2	
Political views	3	1.4	1	0.4	4	0.8	0.318**	4.0	
Interaction on social networking site									
Any visible post	196	93.8	276	98.9	472	96.7	0.002*	0.9	
Likes	177	84.7	239	85.7	416	85.3	0.764*	1.0	
Personal interests	177	84.7	234	83.9	411	84.2	0.806*	1.0	

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Check-ins	46	22.0	59	21.2	105	21.5	0.819*	1.0							
Reviews	45	21.5	53	19.0	98	20.1	0.489*	1.1							
Websites and social links	6	2.9	20	7.2	26	5.3	0.036*	0.4							
Groups	0	0.0	0	0.0	0	0.0	N/A	N/A							
Multimedia content	Multimedia content														
Photos	192	91.9	271	97.1	463	94.9	0.009*	0.9							
Profile picture	128	61.2	187	67.0	315	64.6	0.186*	0.9							
Videos	37	17.7	66	23.7	103	21.1	0.111*	0.7							

Legend: N/A: not applicable; \*Pearson's chi-squared test; \*\*Fisher's exact test; \*\*\*Prevalence Ratio, reference category: female sex

Source: Own elaboration based on facebook.com

## Type of disclosed content according to year of study

The type of disclosed content according to year of study is observed in table 3. A statistically significant difference was found by year of study in terms of information on family members (p=0.007), specifically between the second and third year (p=0.027), second and fourth (p=0.006), second and fifth (p=0.038). Likewise, an important difference was found in the visibility of the medical school according to year of study (p=0.001), specifically between the second and fourth year (p=0.02), second and fifth (p=0.001), second and sixth (p=0.008), second and seventh (p=0.001), third and fifth (p=0.016), third and seventh (p=0.005). There was also an important difference in the disclosure of check-ins according to the year of study (p=0.001), particularly between the second and fifth year (p=0.047), second and sixth (p=0.001), second and seventh (p=0.001), and third and seventh (p=0.047).

**Table 3** - Type of disclosed content according to the year of study of publicly accessible Facebook profiles of medical students

Type of	e of Second		T	hird	Fo	Fourth		Fifth		Sixth		Seventh		tal	<i>p</i> -value
disclosed content	(n	(n = 77)		(n = 87)		(n = 76)		(n = 86)		(n = 86)		(n = 76)		488)	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Professional in	formation	1													



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University	36	46.8	52	59.8	49	64.5	58	67.4	57	66.3	50	65.8	302	61.9	0.070*
School of	12	15.6	20	23	27	35.5	38	44.2	33	38.4	37	48.7	167	34.2	0.001*
Medicine	1-	10.0	-0							2011	0,	1017	10,	02	0.001
Medicine															
Personal															
information															
Current city	46	59.7	69	79.3	52	68.4	56	65.1	61	70.9	59	77.6	343	70.3	0.058*
Home town	45	58.4	62	71.3	48	63.2	46	53.5	50	58.1	49	64.5	300	61.5	0.227*
Sex	76	98.7	79	90.8	69	90.79	80	93.02	78	90.7	66	86.84	448	91.8	0.163*
Year of birth	4	5.2	4	4.6	0	0	5	5.8	6	7	6	7.9	25	5.1	0.170**
(yy)	4	3.2	4	4.0	U	U	3	3.6	0	/	0	7.9	23	3.1	0.170
Complete date of	3	3.9	4	4.6	0	0	5	5.8	6	7	4	5.3	22	4.5	0.248**
birth (mm/dd/yy)															
Birthday	9	11.7	8	9.2	5	6.6	13	15.1	16	18.6	8	10.5	59	12.1	0.205*
(mm/dd)															
Sexual	13	16.9	17	19.5	22	29	22	25.6	27	31.4	13	17.1	114	23.4	0.116*
orientation															
Relationship	19	24.7	17	19.5	21	27.6	11	12.8	23	26.7	16	21.1	107	21.9	0.188*
Family members	14	18.2	35	40.2	35	46.1	33	38.4	28	32.6	24	31.6	169	34.6	0.007*
Friends	30	39	37	42.5	31	40.8	31	36.1	31	36.1	32	42.1	192	39.3	0.917*
Life events	15	19.5	28	32.2	29	38.2	31	36.1	21	24.4	25	32.9	149	30.5	0.088*
Own description	7	9.1	11	12.6	5	6.6	7	8.1	10	11.6	6	7.9	46	9.4	0.754*
Other names	8	10.4	23	26.4	17	22.4	15	17.4	22	25.6	11	14.5	96	19.7	0.061*
Favorite quotes	5	6.5	6	6.9	5	6.6	4	4.7	15	17.4	9	11.8	44	9.0	0.059**
Languages	11	14.3	16	18.4	17	22.4	13	15.1	21	24.4	12	15.8	90	18.4	0.454*
Contact informati	on			1											
Mobile phone	0	0	0	0	0	0	3	3.5	0	0	0	0	3	0.6	N/A
number															
Postal address	0	0	1	1.2	0	0	0	0	0	0	0	0	1	0.2	N/A



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Email	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	N/A
Religious and poli	tical														
views															
Religious views	0	0	2	2.3	0	0	0	0	4	4.7	2	2.6	8	1.6	N/A
Political views	0	0	0	0	0	0	0	0	3	3.5	1	1.3	4	0.8	N/A
Interaction on soc	ial net	working	site												
Any visible post	72	93.5	83	95.4	75	98.7	82	95.4	84	97.7	76	100	472	96.7	0.173**
Likes	59	76.6	78	89.7	66	86.8	76	88.4	76	88.4	61	80.3	416	85.3	0.114*
Personal interests	58	75.3	78	89.7	63	82.9	72	83.7	78	90.7	62	81.6	411	84.2	0.083*
Check-ins	5	6.5	14	16.1	13	17.1	19	22.1	28	32.6	26	34.2	105	21.5	0.001*
Reviews	11	14.3	12	13.8	18	23.7	21	24.4	16	18.6	20	26.3	98	20.1	0.197*
Websites and social links	5	6.5	8	9.2	4	5.3	5	5.8	4	4.7	0	0	26	5.3	0.119**
Groups	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	N/A
Multimedia content															
Photos	69	89.6	81	93.1	73	96.1	83	96.5	82	95.4	75	98.7	463	94.9	0.187**
Profile picture	53	68.8	49	56.3	42	55.3	55	64	62	72.1	54	71.1	315	64.6	0.087*
Videos	10	13	15	17.2	17	22.4	15	17.4	23	26.7	23	30.3	103	21.1	0.073*

Legend: N/A: not applicable; \*Pearson's chi-squared test; \*\*Fisher's exact test.

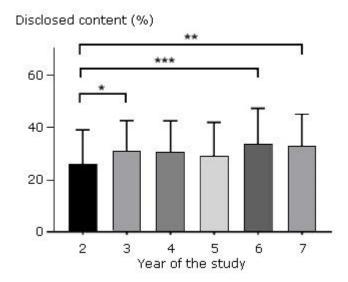
Source: Own elaboration based on facebook.com

## Proportion of disclosed content by year of study and sex

A significant difference was found between the mean of the proportion of disclosed content according to year of study (p = 0.003), particularly between second and third year (p = 0.022), second and sixth (p < 0.001), and second and seventh (p = 0.002) (Fig. 2). Regarding



sex, it was found that men  $(33.25 \pm 12.47)$  had a higher proportion of disclosed content compared to women  $(30.38 \pm 11.95)$  (p = 0.01).



Legend: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001: ANOVA test and post-hoc tests of pairwise comparisons with Bonferroni correction.

Note: Data is expressed as mean and standard deviation.

**Fig. 2** – Proportion of publicly visible content by year of study.

#### **Discussion**

To our knowledge, this is the first study that explores the public accessibility of Facebook profiles of medical students in the Latin American context, as well as the type of disclosed content and its relationship with sex and year of study.

## Facebook profiles and publicly accessible profiles of medical students

In our study, almost all (98%) the medical students had a Facebook profile, similar to findings of an Australian national survey, (18) although the sample in this study was biased towards students who used Facebook. In addition, almost 80% of these profiles could be accessible by Facebook users outside the close circle of students, similar to results of an Indian (78%) and Canadian study (80%). The similarity with these countries is probably due to the absence of e-professionalism guidelines, and therefore of their teaching (at least when these studies were published). On the other hand, our findings were higher



than those of Ireland (62%),<sup>(5)</sup> Pakistan (67%),<sup>(13)</sup> England (50%)<sup>(10)</sup> and the United States of America (70%).<sup>(11)</sup> These lower percentages could be explained by the presence of guidelines on the use of social networking sites for health professionals, such as the guidelines set by the General Dental Council in the United Kingdom.<sup>(5)</sup> In Perú and Latin America, guidelines on the proper use of social networking sites should be started and established.<sup>(19)</sup> A basic recommendation for the protection of personal information would be the selective concealment of sensitive information when students wish to expose some other type of information, whether for academic or professional purposes,<sup>(18,20)</sup> or even for vanity or narcissism.<sup>(12)</sup>

In our study, as in a study in India,<sup>(12)</sup> the percentage of publicly accessible profiles was similar according to year of study (aprox. 80%), and slightly higher to findings of a study carried out in the United States of America (aprox. 70%).<sup>(11)</sup> It is possible that no difference according to year of study was found given the cross-sectional nature of our study, so future longitudinal investigations should be conducted to test this hypothesis.

## Type and proportion of disclosed content

Regarding professional information, the university and medical school of origin were disclosed in approximately 60% and 30% of their Facebook profiles, respectively. These findings are higher than those found in Canada, <sup>(4)</sup> but lower than those found in India. <sup>(12)</sup> On the other hand, male students and seniors showed this type of information more. One possible explanation would be identification or pride in belonging to the university. Another explanation would be the professional utility given to the Facebook profile, such as the formation of academic, scientific and work networks ("digital curriculum vitae"), as referred to by medical students from the United Kingdom, <sup>(20)</sup> even more so in students who are close to the world of work.

Personal information, such as current city and hometown, were visible in 60% and 70% of cases respectively, higher than other studies. (10,13) The sex of students was visible in 91.8% of the accessible profiles, slightly higher than students from Pakistan, (13), India (12) and dental professionals. (10) The complete date of birth and birthday was visible in 5% and 12% of cases respectively, which is below that reported in medical students from Canada, India, and Pakistan (greater than 15%). (4,12,13) Sexual orientation was visible in 20% of profiles, higher than previous studies with less than 15%, (5,10) but lower than the study in India with 30%. It



is striking that in India, this content is shown mostly in the early years, while in our study very few first-year students did. On the other hand, male students showed their sexual orientation more frequently than women. In terms of contact information, mobile phone number, postal address and email address did not exceed 1%, similar to dental professionals,<sup>(10)</sup> but lower than medical students from Pakistan, where almost 40% and 10% showed their postal address and email respectively.<sup>(13)</sup> Religious views and political views were visible in less than 2%, which is lower than the study in India with approximately 8%.<sup>(12)</sup> These variations could be explained by demographic, socio-cultural or religious factors, whose role should be considered in the development and implementation of guidelines on professionalism, as in the United Arab Emirates.<sup>(21)</sup>

Regarding their interaction on social networks, the Likes were public at around 85%, higher than the 65% found in dental professionals. (10) Regarding the publication of multimedia content, profile picture were present in approximately 60%, lower than that reported in Pakistan where 90% was found. (13) In addition, female students more frequently showed a link to another social networking site, photos, and any post on their wall. This may be explained since women are much more likely to use social networks in order to maintain or establish close social ties compared to men. (22)

In relation to the proportion of disclosed content, we found that students of higher years disclosed a higher proportion of information. This is different to previous studies<sup>(12)</sup> which suggested that the use of social networking sites, like Facebook, in professional circles decreased over the years, suggesting the impact of factors such as time and self-awareness.<sup>(5)</sup> On the other hand, male students disclosed more information compared to females, this difference was not found in previous studies.<sup>(4)</sup> This could be due to the fact that harassment through social networks is more frequent in women, which is why they protect themselves by minimizing the exposure of personal information on their networks.<sup>(23)</sup> In addition to the risk of harassment, it is important for the student to be aware that the public information on their social media profile can be used for commercial or unforeseen political purposes.<sup>(2)</sup> An example of this, is the case of Cambridge Analytical where, through a psychological targeting strategy, psychological profiles were developed that allowed directing content that influences their behavior in presidential elections in different countries.<sup>(2)</sup>

Our work is one of the few studies worldwide that presents information from an entire medical school. This study has some limitations, the findings are not generalizable to other



contexts given their local restriction. However, it is the first study that shows an important approach on the subject in the Latin American context. A qualitative evaluation of the content was not carried out, so we cannot specify the characteristics of this information. Likewise, it was not an objective of the study to determine the veracity of this content or if it was aligned with general guidelines of digital professionalism. It should be noted that our findings do not suggest that a greater proportion of disclosed information or the presence of publicly accessible profiles is an unprofessional act or that it deserves some type of punishment.

#### **Conclusions**

In conclusion, given the social nature of Facebook and the unpredictable effects of the content that is made public, medical students should be aware of the potential impact that their disclosed information could have on the perception of the public on their professionalism. Social networking sites have become part of the lives of medical students and health professionals, and consequently what is done through them influences them directly or indirectly. The precise suggested limits on what information should and should not be publicly accessible is still debated today. In addition, the heterogeneous behaviors related to e-professionalism within the same socio-cultural context show the need to create and implement guidelines, frameworks, and training on e-professionalism in Latin America. It is recommended to promote educational strategies that raise awareness about the privacy settings of Facebook profiles and thus adequately control what can and cannot be shown.

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#### Conflict of interest

No potential conflict of interest relevant to this article was reported.

#### **Authors' contributions**

Conceptualization: Carlos Jesús Aragón-Ayala, Aldo Cornejo Estrada, Cender Udai Quispe-Juli.

Data curation: Aldo Cornejo Estrada.

Investigation: Carlos Jesús Aragón-Ayala, Henry Rodríguez Carrillo, Aldo Cornejo Estrada, Cender Udai Quispe-Juli.

*Methodology:* Carlos Jesús Aragón-Ayala, Henry Rodríguez Carrillo, Aldo Cornejo Estrada, Cender Udai Quispe-Juli.



Writing – original draft: Carlos Jesús Aragón-Ayala, Henry Rodríguez Carrillo, Aldo Cornejo Estrada, Cender Udai Quispe-Juli.

*Writing – review & editing:* Carlos Jesús Aragón-Ayala, Henry Rodríguez Carrillo, Aldo Cornejo Estrada, Cender Udai Quispe-Juli.