



EMOTIONAL INTELLIGENCE IN TIMES OF COVID-19: A COMPARATIVE STUDY IN PERUVIAN UNIVERSITIES

Xiomara M. Calle-Ramírez¹
Ronald M. Hernández²
Claudio Olaya-Olaya³
Segundo Juan Sánchez Tarrillo⁴
Fernando Escobedo⁵
Jacqueline C. Ponce-Meza⁶
Miguel A. Saavedra-López⁷

ABSTRACT

Objective: The aim of the study was to compare emotional intelligence in Peruvian university students from public and private universities.

Theoretical framework: In higher education, emotionally intelligent students have the ability to interact appropriately with others, achieve good academic results, and reach personal and professional goals.

Method: The methodology was descriptive-comparative, the sample consisted of 838 university students of both sexes from public (471) and private (364) universities belonging to the coast, highlands and jungle regions of Peru. A sociodemographic form created for the study and the emotional intelligence scale (TMMS-24) were used as measurement instruments.

Results and conclusion: The results showed that university students over 30 years of age, women, those from the highlands and those who worked had high levels of emotional intelligence.

Implications of the research: It is necessary for university institutions to reorganize their academic conditions and provide the necessary inputs to apply socioemotional strategies to students. Researchers linked to the lines of research on emotional intelligence should develop predictive studies to know which factors may be predicting adequate or inadequate emotional intelligence in university students.

Originality: This study demonstrates that it is essential to attend to and provide emotional intelligence tools to those students who do not have the necessary resources to face different situations in the face of the COVID-19 pandemic and contributes to the training of educators, especially environmental educators in crisis contexts.

Keywords: Emotional Intelligence, University, COVID-19, Pandemic, Peru.

¹ Universidad Continental, Huancayo, Junín, Peru. E-mail: xmcaller07@gmail.com

Orcid: <https://orcid.org/0000-0002-7773-1800>

² Universidad Privada Norbert Wiener, Lince, Lima, Peru. E-mail: ronald.hernandez@outlook.com.pe

Orcid: <https://orcid.org/0000-0003-1263-2454>

³ Universidad Nacional de Tumbes, Tumbes, Tumbes, Peru. E-mail: colayao@untumbes.edu.pe

Orcid: <https://orcid.org/0000-0002-5324-5111>

⁴ Universidad Católica Santo Toribio de Mogrovejo, Lambayeque, Chiclayo, Perú.

E-mail: ssanchez@usat.edu.pe Orcid: <https://orcid.org/0000-0002-6763-760X>

⁵ Universidad César Vallejo, Piura, Piura, Perú. E-mail: fernanditoescobedo07@gmail.com

Orcid: <https://orcid.org/0000-0002-6443-1497>

⁶ Universidad Privada del Norte, Trujillo, Lima, Perú. E-mail: jaynita_22@hotmail.com

Orcid: <https://orcid.org/0000-0001-9241-4902>

⁷ Universidad Nacional de Tumbes, Tumbes, Tumbes, Peru. E-mail: msaavedral@untumbes.edu.pe

Orcid: <https://orcid.org/0000-0003-4913-933X>



INTELIGÊNCIA EMOCIONAL EM TEMPOS DE COVID-19: UM ESTUDO COMPARATIVO EM UNIVERSIDADES PERUANAS

RESUMO

Objetivo: O objetivo do estudo foi comparar a inteligência emocional em estudantes universitários peruanos de universidades públicas e privadas.

Estrutura teórica: No ensino superior, os alunos emocionalmente inteligentes têm a capacidade de interagir adequadamente com os outros, obter bons resultados acadêmicos e atingir metas pessoais e profissionais.

Método: A metodologia foi descritiva-comparativa, a amostra consistiu em 838 estudantes universitários de ambos os sexos de universidades públicas (471) e privadas (364) pertencentes às regiões costeira, montanhosa e de selva do Peru. Um formulário sociodemográfico criado para o estudo e a escala de inteligência emocional (TMMS-24) foram usados como instrumentos de medição.

Resultados e conclusão: Os resultados mostraram que os estudantes universitários com mais de 30 anos de idade, as mulheres, os que moram na região serrana e os que trabalham apresentaram altos níveis de inteligência emocional.

Implicações da pesquisa: É necessário que as instituições universitárias reorganizem suas condições acadêmicas e forneçam os insumos necessários para aplicar estratégias socioemocionais aos alunos. Os pesquisadores ligados às linhas de pesquisa sobre inteligência emocional devem desenvolver estudos preditivos para saber quais fatores podem estar prevendo uma inteligência emocional adequada ou inadequada nos estudantes universitários.

Originalidade: Este estudo demonstra que é essencial atender e fornecer ferramentas de inteligência emocional aos alunos que não têm os recursos necessários para enfrentar diferentes situações diante da pandemia da COVID-19 e contribui para a formação de educadores, especialmente educadores ambientais em contextos de crise.

Palavras-chave: Inteligência Emocional, Universidade, COVID-19, Pandemia, Peru.

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1 INTRODUCTION

The COVID-19 pandemic has impacted worldwide, affecting the behavior and well-being of people (Vannabouathong et al., 2020; Kirkpatrick, et al., 2022), so due to the rapid spread of the virus, unprecedented measures were taken to control the pandemic (Moreno et al., 2020).

In the educational context, authorities worldwide closed higher education institutions as a precautionary measure to reduce interpersonal contact and reduce the transmission of the virus (Chandra, 2021; Weeden & Cornwell, 2020); a situation that led to adapt to the new context and change the teaching methodology, moving from classroom training to online education (Cranfield et al., 2021; Tarkar, 2020; Pereira et al. 2023).

Thus, a fundamental variable to adequately deal with high-impact situations such as the COVID-19 pandemic is emotional intelligence. Dhungana & Kautish (2020) refer that emotional intelligence is the ability of a person to analyze and manage their own emotions, thinking and behaviors. Also Hogeveen et al. (2016); (Dhillon et al., 2021) posit that emotional intelligence can predict success in the real world, as it enables people to interpret and respond to their environment adaptively.



In other words, emotional intelligence is linked to the capacity to adapt to the demands of a changing environment, as a result of developing capacities to perceive dangers, fear and avoid them; emotions play a fundamental role in life, allowing to identify triggers, act quickly in the face of a stimulus, improve memory and create behaviors that promote attention and social awareness (Regalado, 2022). Therefore, emotional intelligence is an extremely important variable for the proper development of social dynamics, due to the impacts on behavior and interpersonal relationships (Pérez-Correa et al., 2022).

The authors Cabrera and Frías (2022) considered that emotional intelligence should be sized according to the situation in which it is present; in this research, the dimensions of emotional attention, emotional facilitation, understanding and regulation of emotions were determined. Likewise, emotional intelligence shows different aspects from which the different emotions are described, whether positive or negative; interpersonal, motivational and affective relationships are determined by the development of emotions. In addition, it allows focusing on developing individual assets, which are favored through reading, meditation and solitary reflection as an intersubjective moment (Torres et al., 2022).

In higher education, emotionally intelligent students have the ability to interact adequately with others, achieve good academic results and achieve the personal and professional goals they set for themselves (Nayeem, 2022). The university education stage is considered a positive event that will influence and generate great opportunities for individual development; however, this transition is an experience of learning and social practice, where adaptation to new academic, social and personal demands is characteristic (Navarro et al., 2022; Sathya & Velmurugan 2022).

Several studies on emotional intelligence have been developed, but few comparative research on university students from public and private institutions during the COVID-19 pandemic. The authors Stevens Rodríguez & Moral Jiménez (2022) found that self-esteem is a representative factor for decision making regarding their vocational motivation in which their own emotional intelligence skills stand out in emphasis to the choice of their professional careers. Mérida-López et al. (2022); Bermedo-García et al. (2022) report that higher levels of emotional intelligence are associated with greater personal satisfaction and commitment.

In addition, Ramírez-Hurtado et al. (2022) reported that emotional intelligence directly influences university students who develop their pre-professional and professional practices; also, it allows affirming that emotional intelligence influences the improvement of employability and the level of student satisfaction. Jamba-Pedro da Fonseca et al. (2022) determined that it is essential to conduct research on emotional intelligence in university students, since the emotions of young people can influence physical health, the quality of interpersonal relationships and academic performance, associated with empathy and reduction of behavioral problems.

That is why it is essential that higher level students develop emotional skills to face new academic challenges, achieve personal well-being and goals they set for themselves (Cañero et al., 2019), as mental health problems will continue to occur during the pandemic and will increase significantly (Hernández et al., 2021).

Likewise, the development of the present study was important, since it allowed to know and compare the emotional intelligence of university students from public and private institutions in Peru in difficult times such as the COVID-19 pandemic, in order to propose prevention and intervention strategies for the benefit of university students, since similar studies comparing these populations in pandemic contexts have not been carried out. Therefore, the research objective was to compare the characteristics of emotional intelligence in Peruvian university students from public and private universities.



2 METHODOLOGY

2.1 Type and Design of Research

The research was of a comparative descriptive type, since it allowed a description of the emotional intelligence variable in relation to sociodemographic and university characteristics in students (Hernández-Sampieri & Mendoza, 2018). Being a research that was developed with university students at the Peruvian level. In addition, the research was basic, since it allowed gathering information of the emotional intelligence variable evidencing the phenomenon and its behavior (Barriga, 1974). It is a transversal study of non-experimental design, since it did not manipulate the information, collecting the data at a specific time (Hernández-Sampieri and Mendoza, 2018).

2.2 Sample

The population of Peruvian university students is 1,379 593 (Superintendencia Nacional de Educación Superior Universitaria [SUNEDU], 2021), calculating the study sample using the formula for finite samples with a margin of error of 5% and confidence level of 95% the sample should have consisted of 385 students (Hernández-Sampieri and Mendoza, 2018), however, by obtaining a sample of 838 students from public (471) and private (364) universities belonging to the Peruvian coast, highlands and jungle, the authors decided to keep the figure in order to have broad information on the phenomenon studied.

2.3 Instruments

The instrument administered was the emotional intelligence scale (Trait Meta Mood Sacale-24 TMMS-24), the instrument has three dimensions, each composed of 8 items: Attention (1-8); Understanding (9-16); Regulation (17-24) using the version adapted by (Perez et al., 2020).

Likewise, for the purposes of the research, internal validity was calculated using Cronbach's Alpha (0.945) and inter-test validity (0.106 - 0.724), allowing us to verify that the instrument is valid and reliable for the present research.

2.4 Data Analysis

The statistical package Statistical Package for Social Sciences (SPSS V. 25.0) and Microsoft Excel were used for data analysis. Likewise, the analysis was carried out with frequency tables, percentages and cut-off points. Finally, Cronbach's Alpha reliability analysis and inter-test validity of the items of the instruments were used.

3 RESULTS AND DISCUSSION

Table 1. Characteristics of the study population

		%
Sex	Man	30,5%
	Woman	69,5%
Age	18 to 29 years old	87,9%
	30 years and older	12,1%
Place of origin	Costa	80,3%
	Sierra	13,7%
	Jungle	6,0%



Work	No	53,1%
	Yes	46,9%
They live with	Parents	72,0%
	Couple	10,9%
	Other persons	8,5%
	Only	8,7%
Type of university	Public	56,6%
	Private	43,4%
Professional career to which you belong	Economic Sciences	33,7%
	Social Sciences	22,9%
	Health Sciences	20,6%
	Engineering	3,1%
	Other	16,2%
	Political Science	3,5%

% = Percentage.

Source: Prepared by the authors (2023).

Table 1. It can be seen that the highest percentage of the population is female (69.5%), also in relation to age it is observed that young university students (87.9%) are in the majority, with those over 29 years of age (12.1%) having a lower tendency. In terms of place of origin, 80.3% are from the coast, 13.7% from the highlands and 6% from the jungle. Likewise, 53.1% are exclusively dedicated to their professional training, as opposed to 46.9% who work. In relation to who they live with, there was a tendency to live with their parents (72%), with a partner (10.9%), with other people (8.5%) and alone (8.7%). Regarding the type of university where they are educated, 56.6% of the study sample is in a public university and 43.4% in a private university. Finally, the Faculty of Economics is the one with the highest number of students (33.7%), while engineering (3.1%) has the lowest participation in this study.

Figure 1 identified the level of emotional intelligence according to type of university; the results show that at the high level, students from private universities have higher emotional intelligence (49.5%) as opposed to students from public universities (39.2%). As for the medium level, a greater tendency is observed in students from public universities (48.9%) as opposed to those from private universities (33.8%). Likewise, students from private universities present lower levels of emotional intelligence (16.8%) in relation to those from public universities (11.8%).

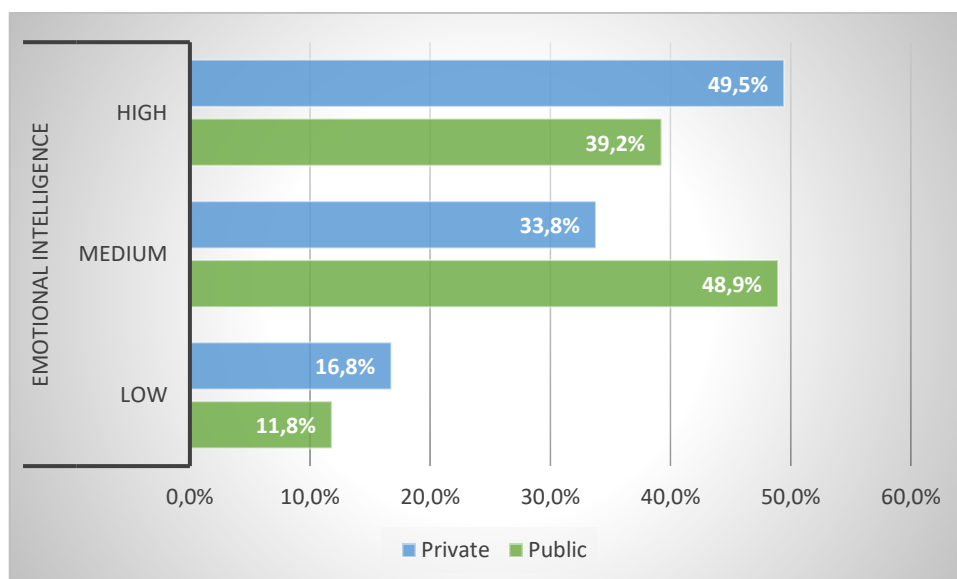


Figure 1. Levels of emotional intelligence according to type of university.

Source: Prepared by the authors (2023).



Regarding the dimensions of emotional intelligence, it was identified that in the emotional regulation dimension, students from private universities present higher levels (45.3%) in relation to those from public universities (36.9%). Regarding the medium level, the higher tendency is found in public universities (39.2%) in relation to the (25.8%) presented by students from private universities. In the dimension of understanding of feelings, it was identified that students from private universities present a high level of understanding (45.9%) in comparison to students from public universities (37.1%). Likewise, it is the students from public universities who present the greatest difficulty in understanding feelings by obtaining a low level (20.9%) as opposed to students from private universities (17.9%). Regarding the dimension of perception of one's own feelings, students from public universities have higher levels (56.3%) and students from private institutions (55.2%) (Figure 2)

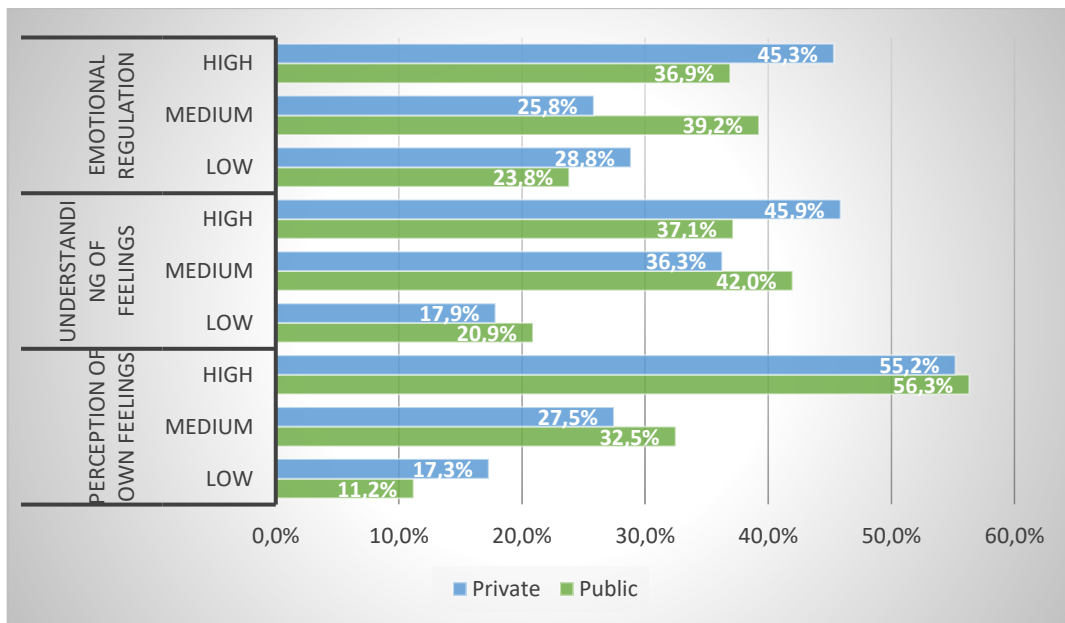


Figure 2. Levels of emotional intelligence dimensions according to type of university.
Source: Prepared by the authors (2023).

Table 2. Level of emotional intelligence according to sociodemographic variables

		Emotional Intelligence		
		Under	Medium	High
		%	%	%
1. Age	18 to 29 years old	13,2%	43,7%	43,1%
	30 years and older	19,8%	32,7%	47,5%
2. Sex	Man	16,8%	40,6%	42,6%
	Woman	12,7%	43,1%	44,2%
3. Place of origin	Costa	13,1%	43,8%	43,1%
	Sierra	17,4%	35,7%	47,0%
	Jungle	18,0%	38,0%	44,0%
4. Work	No	13,5%	45,8%	40,7%
	Yes	14,5%	38,4%	47,1%
5. They live with	Parents	13,1%	44,6%	42,3%
	Only	23,3%	21,9%	54,8%
	Other persons	15,5%	47,9%	36,6%
	Couple	11,0%	39,6%	49,5%

% = Percentage.

Source: Prepared by the authors (2023).



Table 2 shows the levels of emotional intelligence according to the sociodemographic variables of the university students, highlighting the following information: 1. In terms of age, it is the university students aged 30 years or older who present a higher level with 47.5% in comparison with young adults who presented 43.1%. 2. In terms of gender, it is women who presented high levels of emotional intelligence with 44.2% in relation to men who obtained 42.6%. Likewise, it is men who scored higher in the low level with 16.8% compared to women who only 12.7% presented this level. 3. According to the place of origin, it was identified that those students who belong to the highlands presented a high level of emotional intelligence (47%) followed by the jungle (44%) and the coast (43%), despite these results, it was identified that only 13.1% of the students from the coast presented a low level of emotional intelligence. 4. Regarding work status, it was found that university students who are working have a higher level of emotional intelligence (47.1%) compared to 40.7% of university students who are not working. 5. In relation to who they live with, students who live alone have the highest emotional intelligence (54.8%) followed by those who live with a partner (49.5%), live with their parents (42.3%) and those who live with other people (36.6%).

Table 3. Level of emotional intelligence according to educational variables

		Emotional Intelligence		
		Under	Medium	High
		%	%	%
1. Professional career to which you belong	Economic Sciences	12,8%	52,1%	35,1%
	Social Sciences	12,0%	38,5%	49,5%
	Health Sciences	12,7%	35,8%	51,4%
	Political Science	20,7%	37,9%	41,4%
	Engineering	15,4%	50,0%	34,6%
	Other	19,1%	35,3%	45,6%
2. Year of study	First Year	11,2%	39,6%	49,3%
	Second Year	12,1%	47,8%	40,1%
	Third Year	11,5%	46,2%	42,3%
	Fourth Year	16,6%	47,1%	36,3%
	Fifth Year	11,3%	34,9%	53,8%
	Sixth Year	7,1%	42,9%	50,0%
	Seven plus	20,6%	35,5%	44,0%
3. Reasons for choosing the career	Taste	11,2%	39,3%	49,5%
	Job opportunities	15,9%	47,8%	36,2%
	Family tradition	25,0%	12,5%	62,5%
	Did not enter another	16,7%	50,0%	33,3%
	Easy	0,0%	50,0%	50,0%
	No reason	25,4%	44,4%	30,2%
	Others	17,0%	51,1%	31,9%

Source: Prepared by the authors (2023).

Regarding the levels of emotional intelligence linked to the study variables, 1. With respect to the professional career to which they belong, high levels were identified in students of health sciences in 51.4%, followed by social sciences (49.5%), other careers (45.6%), political sciences (41.4%), economic sciences (35.1%), and finally engineering presented a lower percentage (34.6%). As for the low level, it was observed that 20.7% of political science students had difficulty in emotional intelligence, followed by other careers (19.1%) and engineering with 15.4%. 2. In relation to the year of study, it was identified that the last years of study reflect the highest percentage of students in the high level, ranging between 44 - 53.8%. 3. According to the reasons for choosing the career, high levels of emotional intelligence were identified in those students who chose the career for family tradition (62.5%), followed by those who consider that the professional career is easy (50%), also, it was identified that students who



chose the career for no reason in particular 25.4% are found with deficiencies in emotional intelligence.

Table 4. Measures of central and inferential tendency of emotional intelligence according to type of university.

	Type of university	N	M	DS	PL	t	Sig.
Emotional intelligence in university students	Public	474	84,08	14,44	,00	-,874	,382
	Private	364	85,10	18,16			

N=Sample; M= Mean; SD= Standard Deviation; t= t Student; PL= Levene's test; Sig= Significance value.

Source: Prepared by the authors (2023).

Table 4 shows that the general score of emotional intelligence in university students according to type of university reached a score of PL (.00) not assuming equal variances, likewise, as for the significance it was presented at an inappropriate level (Sig. > 0.05), showing the "t student" value (-.874) demonstrating that there is no difference between the samples according to the university, whether public or private where they are trained.

4 DISCUSSION

During the COVID-19 pandemic, problems related to mental health increased, so it is important to develop research that contributes to the well-being of people (Saavedra et al., 2022). Many studies have stated the possible impact of the pandemic on indices such as depression, anxiety and intolerance to uncertainty (Palloto et al, 2019). Richaud de Minzi et al. (2020) reported that rates of depression, anxiety were on the rise, as were dysfunctional coping strategies. Faced with this, one of the variables that contributes to the mental health of people is emotional intelligence, which has to do with the person's perception of their emotions, understanding them and using them appropriately for the well-being of themselves and others (Srinivasan, 2015).

Regarding the objective of identifying the level of emotional intelligence according to the type of university, it was found that students from private university institutions present higher levels of emotional intelligence than students from public universities, however, the differences are not significant. Different results were reported in the study conducted by Rehana (2018) in a sample of university students in Pakistan, where students from public sector universities present higher emotional intelligence, as in Mexico, in a sample of young university students under an online study modality (Montero Saldaña et al, 2022). Also in the study conducted by Ahmed (2016) they found that students from public universities presented higher levels of emotional intelligence than students from private universities, due to the fact that in public universities in Pakistan they receive better education that includes the teaching of interpersonal and soft skills, as well as more attention from teachers.

Also, it was found that females presented higher levels of intelligence than males. Similar results were reported in the study developed by Irfan et al. (2019) in Pakistani health science students, where female students presented significantly higher emotional intelligence than male students. In addition, women historically take on more academic and work effort, this being necessary to be able to succeed and achieve their goals in a society which favors men, among other psychosocial issues (Vázquez, 2013; Montero Saldaña, 2022). On the other hand, women have tools to solve their conflicts, considering themselves less prone to suffer some psychological phenomena (Barraza et al., 2017; Ríos et al., 2019).

Students from the highlands region reported higher levels of emotional intelligence compared to students from the coast and jungle regions. For Arizábal and Tapia (2019) found that there are differences between young people from Lima (Coast region) and Cusco (highlands region) in the interpersonal component of emotional intelligence, with students from



Lima presenting adequate levels. Different results found by Mejía et al, (2020) indicated that students from the Lima region, having greater access to opportunities, suggest that cultural differences, especially those associated with socioeconomic status, have an impact on the characteristics of interpersonal relationships.

Students in professional careers in medical sciences and social sciences, those who were working, students who were in their last years, those over 30 years old and students who lived alone, presented higher levels of emotional intelligence. Similar results were found in the study by Aristovnik et al. (2020) who found that social science students had a better standard of living and were more satisfied with the teaching measures taken by the university during the pandemic. Similarly, Cáceres González et al, (2021) found that Paraguayan students of the Faculties of Humanities and Medicine, have an adequate emotional perception, emotional understanding and emotional regulation, demonstrating a positive attitude, emotional support, empathy and self-control, mental health factors necessary to face the COVID-19 pandemic.

About the limitations of the study, we can mention the difficulty of access to the subjects, due to the context of isolation, the data collection was carried out exclusively virtually, which reduces the scope of the population. In addition, the sample design was cross-sectional, which does not allow studying all the lines of development of the psychological variables, future research should conduct longitudinal studies in order to contemplate the progress of this variable.

Based on what has been studied, it is suggested to promote attention guidelines for situations that do not favor the decrease of emotional intelligence in the university student, in this way it will be possible to face instances of social isolation.

5 CONCLUSION

The health emergency caused by the COVID-19 pandemic generated an adverse coping and adaptation situation for people around the world. In the present study, students from private university institutions and women were found to have higher levels of emotional intelligence. Students from the sierra region reported higher levels of emotional intelligence compared to other regions. Finally, students from professional careers in medical sciences and social sciences, who were older than 30 years, presented higher levels of emotional intelligence. It is demonstrated that the importance of having an adequate emotional regulation allows us to face situations that are beyond our control, allowing us to have a good mental health. Likewise, it is essential to attend and provide emotional intelligence tools to those students who do not have the necessary resources to face different situations in the face of the COVID-19 pandemic.

It is recommended to researchers linked to lines of research on emotional intelligence, to develop predictive studies, to know which factors may be predicting an adequate or inadequate emotional intelligence in university students. It is also recommended that mental health professionals carry out prevention and intervention programs on emotional intelligence linked to strengthening the emotional intelligence of this population.

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