

Socioemotional Processes during the COVID 19 Pandemic in Graduate Students¹

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Abstract

Introduction: the changes in the academic life of graduate students due to the pandemic generated complex socioemotional processes that need to be explored. **Objective:** to compare the socioemotional processes in graduate students during the closure of universities according to the area of knowledge and sex. **Method:** exploratory-descriptive-comparative quantitative study with a cross-sectional design. A total of 119 questionnaires were analyzed using the Mann-Whitney U non-parametric statistical test to determine significant differences in the independent variables. **Results:** significant differences were identified before and during the pandemic in prosocial emotions and mood affectations in both groups of students due to the overload of academic-work activities and the differentiated conditions by area. Women in area 2 were more affected. **Discussion:** the socio-structural and situational context and the educational level condition socioemotional processes in a statistically significant way. Scope and limitations of the study are discussed.

Keywords: emotions; pandemics; COVID-19; education graduate.

Procesos socioemocionales durante la pandemia por COVID 19 en estudiantes de posgrado

Resumen

Introducción: los cambios de la vida académica del estudiantado de posgrado por la pandemia generaron procesos socioemocionales complejos que requieren ser explorados. **Objetivo:** Comparar los procesos socioemocionales en estudiantes

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de posgrado durante el cierre de las universidades en función del área del conocimiento y sexo. **Método:** estudio exploratorio-descriptivo-comparativo de tipo cuantitativo con un diseño transversal. Se analizaron 119 cuestionarios mediante la prueba estadística no paramétrica U de Mann-Whitney para determinar las diferencias significativas de las variables independientes. **Resultados:** se identificaron diferencias significativas antes y durante la pandemia en emociones prosociales y en las de afectaciones del ánimo en ambos grupos de estudiantes por la sobrecarga de actividades académico-laborales y las condiciones diferenciadas por área. Las mujeres del área 2 resultaron más afectadas. **Discusión:** el contexto socio-estructural, situacional y el nivel educativo condicionan los procesos socioemocionales de manera estadísticamente significativa. Se plantean alcances y limitaciones del estudio.

Palabras clave: emociones; pandemia; COVID-19; educación de posgrado.

Introduction

In March 2020, approximately 98% of the student population of Higher Education Institutions (HEIs) in Latin America faced the temporary closure of their educational centers due to the SARS-CoV-2 pandemic (UNESCO International Institute for Higher Education in Latin America and the Caribbean [UNESCO IESALC], 2020). The abrupt migration from on site to remote schools made university pedagogical continuity possible. However, university communities faced technical and logistical difficulties to achieve adequate virtual education. This phenomenon has been called coronateaching (Expósito & Marsollier, 2020; García, 2021; Pedró, 2021).

There are studies that refer to the psychosocial impacts of the pandemic on undergraduate students (Expósito & Marsollier, 2020; García, 2021; López & Cortijo, 2021; López & Robles, 2021; Pedró, 2021). Those of Rivera-Pérez (2021) and Rivera-Pérez and Mendoza-Becerril (2021) indicate the significance of the pandemic to the qualified training of graduate students. Other research has explored the effects of the closure of public graduate research institutions and centers

(Didriksson & Sarraute, 2021; Hernández & Morán, 2021). The research cited above has examined the material conditions and accessibility of research and documentation centers. They have also investigated the details of adjustments and modifications in laboratory experiments, academic mobility, and the various problems in maintaining fellowships and concluding specialization, master's, and doctoral programs.

However, little has been explored about the socioemotional processes that the HEI student community, particularly at the graduate level, has experienced during the COVID-19 pandemic (Hernández & Morán, 2021; López, Palumbo, & Nance, 2021; López & Robles, 2021; Mendoza, 2020; Pedró, 2021).

The psychosocial and emotional impact that this population has experienced is relevant because it is part of the professional cadres in training that will drive the scientific and technological development of the country. Figures from the Organization for Economic Cooperation and Development (OECD, 2019) show that, in Mexico, the percentages of students who pursue some level of graduate studies is very low and so is the terminal efficiency, because there is a dropout for various socioeconomic and personal reasons, now exacerbated by the pandemic (Hernández et al., 2014; Hernández & Morán, 2021).

In the first year of the pandemic, some reports such as RiseFree.Org (2020), UNESCO IESALC (2020) and research in different latitudes have explored the emotional consequences of virtual education in HEI students (Brooks et al., 2020; Lovón & Cisneros, 2020; Pedró, 2020). Most of them refer to alterations such as stress and frustration due to academic overload from exclusively psychological perspectives focused on skills or the lack of their development to cope with the emerging pedagogical dynamics mediated by virtuality. Some studies are about the social emotional impacts and their relationship with the modification of daily life, vulnerability, and pre existing psychological problems as situations that enhance the conditions of depression and anxiety. These approaches propose explanations based on individual disorders for what is a collective malaise (Illouz, 2007; Pedró, 2021;

[López, 2022](#)). It is necessary to conduct research with interdisciplinary approaches to explore the relationship between emotional life and socio structural conditions.

Therefore, the objective of this paper was to compare the socioemotional processes of graduate students according to field and gender related to changes in living conditions, scenarios of uncertainty worry, and emotional affectations during the closure of universities due to the pandemic.

Theoretical Framework

Emotions refer to different levels of reality: biological and neurological, behavioral, cultural, structural, and situational; depending on the aspect considered relevant to the researcher, a definition will emerge ([Turner, 2009](#)). From a sociocultural perspective, where the theoretical framework of this research is situated, emotions are conceived as social processes because the emphasis is placed on the symbolic level and the type of social ties where emotional life takes place. This approach also gives them a dynamic and contextual character because their expression, symbolization, and qualities of experience are regulated by an emotional culture ([Le Breton, 2012 2013](#)).

Emotions constitute fused cultural and social elements because, as [Illouz \(2007\)](#) argues, they express concrete and immediate social relations of action and their symbolic charge. In the case of gender divisions—a basic dimension that organizes societies—what becomes evident is that gender producing and reproducing social hierarchies contain “implicit emotional divisions, without which men and women would not reproduce their roles and identities” ([Illouz, 2007, p. 17](#)). This division gives rise to value judgments towards behaviors culturally associated with rationality that are linked to prestige and trustworthiness, while those related to emotions and feelings are devalued ([Lutz, 1986](#)).

According to [Hochschild \(1979\)](#), emotions are conditioned by social norms and expectations, configured by three fundamental dimensions:

normative, expressive, and political. The first one contemplates the feelings rules that are organized according to social expectations. The expressive dimension regulates the ways of sharing the emotional experience through language, that is, it orients the linguistic terms used to communicate emotions. The political dimension refers to the intention of the communication of emotion that always generates a change or adjustment in the interaction with others.

In line with the above, the sociorelational theory of emotions ([Kemper, 1978](#)) and the theory of interaction ritual chains ([Collins, 2009](#)) argue that emotions, affects, and feelings are at the core of sociability. For the former, emotions are a product of social relations, and emotional experience—satisfactory and unsatisfactory—will depend on the power and status of people in social interactions. For the second theory, social life goes through routine channels in which people establish interaction rituals with loads of emotional energy with the capacity to modulate social dynamics: successful rituals based on prosocial emotions such as joy, trust, happiness, and gratitude raise the emotional energy of the participants in the interactions and lead to experiences of certainty. On the contrary, failed rituals characterized by mood-affecting emotions such as fear, distress, despair, sadness, and worry decrease emotional energy and generate experiences of uncertainty ([Bericat, 2018; Collins, 2009](#)).

Certainty and uncertainty are psychic attributes, but also social, because they organize the interactions of people in their daily lives ([Illouz, 2020](#)). These types of interactions were deepened by sociological theory of bonds ([Scheff, 1977](#)), according to which the *insecure type* is characterized by too much distance or excessive control. Meanwhile, the *secure type* is the result of relationships that recognize social differences and mutual mental and emotional understanding. In addition, they promote more bearable affective states and strengthen the self esteem of the people involved in social encounters because it gives them personal (biographical) recognition.

In socio anthropological terms, socioemotional processes specify the emotional management ([Lively & Weed, 2014](#)) in place and in context

of people according to their social position, which is concomitant with their gender, sexual, generational, social stratification, and educational identities, and their vital biographical situations ([Morales & López, 2020](#)).

Method

descriptive comparative study, quantitative in type with a cross sectional design ([Taylor & Bogdan, 1987](#)). We analyzed the responses of two groups of graduate students corresponding to the following fields: 1) Physical, Mathematical, and Engineering Sciences (CFMI) and 2) Biological, Chemical, and Health Sciences (CBQS). These were retrieved from a self report questionnaire applied online at the beginning of the pandemic.

Participants

The sample consisted of 119 graduate students from fields 1 (CFMI, 54.6%) and 2 (CBQS, 45.4%) of the Universidad Nacional Autónoma de México (UNAM). The study population was selected intentionally because these fields host the largest number of students in graduate programs at public HEIs in Mexico. The sample size was defined based on the participation of the students who answered the five sections and the open ended questions that make up the self report questionnaire elaborated by the Interdisciplinary Research Project on Body, Emotions, and Gender of the Iztacala School of Higher Education of UNAM in April 2020.

The sociodemographic data on age, sex, marital status, number of children, and level of graduate studies (specialization, master's, and doctorate) of the population studied are described (Table 1).

Instrument

To investigate the psychosocial effects and socioemotional processes in graduate students generated by the health control measures to contain the COVID-19 pandemic, a retrospective self report online questionnaire was designed. This type of questionnaire is relevant because it facilitated the exploration of different aspects of

life throughout the pandemic ([Sandín et al., 2020](#)).

The questionnaire is structured in five sections: 1) demographic data, 2) living conditions during confinement, 3) health and emotional life, before (retrospective inquiry) and during the first months of the pandemic, 4) academic activities, and 5) section of open questions: a) need for psychological support, b) knowledge of psychological support services provided by UNAM, and c) free comments on the topics explored.

Procedure

This research was organized in three stages: in the first stage, a self report questionnaire was designed on the Google Forms platform to identify and analyze the psychosocial impact and explore the socioemotional processes of university students facing social confinement due to the COVID-19 pandemic. In the second stage, between April 28 and August 31, 2020, the questionnaire was answered by the student community. Support was provided by the General Coordination of Graduate Studies of UNAM and other academic authorities for its dissemination through institutional social networks. Participation was voluntary and informed consent was obtained. The protection of personal, sensitive, and delicate data was guaranteed in accordance with the Federal Law for the Protection of Personal Data ([Cámara de Diputados del H. Congreso de la Unión, 2010](#)). A total of 4,359 questionnaires were collected from undergraduate and graduate students at UNAM. In the third stage, those that met the inclusion criteria were selected, that is, 119, corresponding to graduate students in fields 1 and 2.

Data Analysis

The 119 selected questionnaires were organized in a Microsoft Excel database to carry out the systematization process of the quantitative data. Initially, the sociodemographic information and the socioemotional experience in different educational scenarios due to the pandemic were analyzed with descriptive statistics, reporting the absolute and relative frequencies as appropriate. Subsequently, the Mann Whitney U non parametric statistical test was used to

Table 1
Sociodemographic Data of the Total Study Population and by Field

Variables		Total population		Field 1 Physical, Mathematical, and Engineering Sciences		Field 2 Biological, Chemical, and Health Sciences	
		n	%	n	%	n	%
		Age range	21-23	4	3.4	3	4.6
	24-26	23	19.3	17	26.2	6	11.1
	27-29	29	24.4	14	21.5	15	27.8
	30-32	34	28.6	17	26.2	17	31.5
	33-35	9	7.6	3	4.6	6	11.1
	36+	20	16.8	11	16.9	9	16.7
Sex	Women	69	58.0	33	50.8	36	66.7
	Men	50	42.0	32	49.2	18	33.3
Marital status	Single	80	67.2	43	66.2	37	68.5
	Married	22	18.5	13	20.0	9	16.7
	Partnered	14	11.8	7	10.8	7	13.0
	Separated	3	2.5	2	3.1	1	1.9
Number of children	No children	97	80.7	54	83.1	42	77.8
	1-3 children	23	19.3	11	16.9	12	22.2
Graduate level	Specialization	56	47.1	7	10.8	49	90.7
	Master's	39	32.8	36	55.4	3	5.6
	Doctorate	24	20.2	22	33.8	2	3.7

Note: n=number of participants; %=percentage

compare the data obtained from the two areas of knowledge, using the IBM SPSS Statistics v.21 and GraphPad Prism version 6.00 statistical programs. A degree of significance ≤ 0.05 was established to consider differences between groups.

The answers to the open ended questions are taken up in the discussion as testimonial evidence of the quantitative data analyzed. It is important to mention that the feasibility of the joint interpretation (statistical and experiential) of the information is supported by sociocultural approaches to emotions (Ahmed, 2015; Bericat, 2000; Collins, 2009; López, 2019).

Results

The results are presented below in three thematic axes differentiated by sex and field: 1) general living conditions in the first months of the pandemic, 2) scenarios of greater uncertainty and concern, and 3) emotional effects before and during the pandemic.

General Living Conditions in the First Months of the Pandemic

According to the results of the questionnaire, 30.3% of the study population always maintained confinement during the three stages of voluntary

social distancing stipulated by the Mexican Ministry of Health (from March 23 to May 31, 2020, and the stage of return to essential face to face activities with restrictions on students at all educational levels). 53.8% maintained it almost always, 12.6% sometimes, and 3.4% never. When analyzing social confinement by sex, significant differences were found between women (n=33) in field 1 vs. women (n=36) in field 2 (U=385.0, p=.006).

The reasons reported for leaving home were presented as follows: 84.9% to buy food and medicine, 38.7% for work-related reasons, 9.2% for academic activities, and 8.4% left for other causes. The reasons for leaving related to work activities for students in field 2 (CBQS) were 75.9% in contrast to 7.7% in field 1 (CFMI). Male students in field 1 (CFMI) reported leaving more due to work related issues (12.5%) compared to females (3.03%) in the

same field. On the other hand, female (77.7 %) and male (75 %) students from field 2 (CBQS) left with the same frequency for academic and work related matters. The reasons to live within this group were to attend hospital shifts and medical residencies 44.5% of graduate students lived with their family of origin during the three stages of pandemic confinement, 28.6% with their partners with or without children, 16.0% with roommates, 8.4% reported living in single person households, 1.7% lived in another condition, and 0.8% with friends.

A total of 24.4% of the population indicated important effects on their income, where 38.7% considered these effects to be moderate, 16.8% considered them to be minimal and 20.2% did not perceive them. Regarding the financial effects analyzed by field and sex, the information is presented together with some of the students' experiences related to this topic (Table 2).

Table 2
Financial Impact of the Study Population by Gender and Field

Field	Financial impact of the pandemic	Population by field		Woman		Man	
		n	%	n	%	n	%
Physical, Mathematical, and Engineering Sciences	Completely	9	13.8	3	9.1	6	18.8
	Moderately	30	46.2	14	42.4	16	50
	Scarcely	12	18.5	7	21.2	5	15.6
	Absolutely no	14	21.5	9	27.3	5	15.6
Biological, Chemical, and Health Sciences	Completely	20	37	14	38.9	6	33.3
	Moderately	16	29.6	12	33.3	4	22.2
	Scarcely	8	14.8	3	8.3	5	27.8
	Absolutely no	10	18.5	7	19.4	3	16.7
Verbatims Field 1	There is anxiety and uncertainty. On the one hand, there is the economic part, but on the other hand, there is the academic part in terms of the work for the degree, since it becomes complicated to communicate with some officials or professors about the dissertation. M, S/SH, specialization in engineering. My sleep rhythm is totally out of control. Night is my day, I try to work, but I can only manage to concentrate for a few minutes, I have the economic pressure of finishing the 24 months of the master's degree and not knowing what to do since I have not been able to make enough progress despite my efforts.... I really do, but I lose focus very easily. I am afraid of not being able to finish the thesis or the master's degree and not knowing what to do next since I am a foreigner. H, S/SH, Master's degree in mechanical engineering.						
Verbatims Field 2	These situations are really distressing because I have no certainty that I will be okay, both financially and biologically. M, S/SH, Specialization in Stomatology in primary care. What causes stress is the uncertainty of not knowing when daily activities will be resumed and not knowing who might get sick, in addition to worrying about economic issues, as well as my development in the academic field. H, C/CH, Anesthesiology Residency.						

Note: n=number of participants; %=percentage; M=female; H=male; S=single; UL=partnered; SP=separated; C=married; SH=childless; CH=with children; Verbatims= testimonies of women and men related to Financial Affect during social distancing

When comparing the presence of financial impairment, significant differences were observed ($U=402.0, p=.016$) between the groups of women in field 1 ($n=33$) vs. field 2 ($n=36$), the latter being the most affected (70%).

Students in fields 1 (CFMI) and 2 (CBQS) indicated complications in the structure and organization of time to carry out academic activities at a distance. The options selected were the following: *I do not have a schedule or routine, and it is difficult for me to comply with my school activities, 29.4%; sometimes I maintain a routine to comply with my school activities, 26.9%; I maintain a schedule and routine that allow me to comply with my school activities, 26.1%; and sometimes I get disorganized and do not comply with my school activities, 17.6%*. Table 3 reports the change

in the structure and organization of time during social distancing by field and sex, as well as some comments that serve as social context.

Students in both fields (CFMI and CBQS) carried out their academic activities on the following devices: laptop, 91.6%; cell phone, 78.2%; and desktop computer, 18.5%. Of the total, 76.5% did not share their electronic equipment. Of the population that did share it, significant differences were found between women ($n=33$) and men ($n=32$) in the CFMI field ($U=411.0, p=.027$).

The spaces used to carry out academic activities were reported as follows: academic activities in the bedroom, 63.9%; dining room, 37%; living room, 31.1%; study at home, 17.6%; kitchen, 5%; and other spaces in the house, 1.16%.

Tabla 3

Cambios en la estructura y organización del tiempo durante el distanciamiento social por área de conocimiento y sexo

Field	Structure and organization of time	Population by field		Woman		Man	
		n	%	n	%	n	%
1. Physical, Mathematical, and Engineering Sciences	<i>I maintain a schedule and routine that allows me to complete my school activities.</i>	16	24.6	10	30.3	6	18.8
	<i>I sometimes maintain a routine to complete my school activities.</i>	16	24.6	10	30.3	6	18.8
	<i>I sometimes get disorganized and do not complete my school activities.</i>	19	29.2	9	27.3	10	31.3
	<i>I have no schedule or routine and it is difficult for me to complete my school activities.</i>	14	21.5	4	12.1	10	31.3
Biological, Chemical, and Health Sciences	<i>I maintain a schedule and routine that allows me to complete my school activities.</i>	15	23.1	10	27.8	5	27.8
	<i>I sometimes maintain a routine to complete my school activities.</i>	16	24.6	11	30.6	5	27.8
	<i>I sometimes get disorganized and do not complete my school activities.</i>	2	3.1	2	5.6	0	0.0
	<i>I have no schedule or routine and it is difficult for me to complete my school activities.</i>	21	32.3	13	36.1	8	44.4

Verbatims
Field 1

Personally, what I have found most difficult has been to adapt my daily routine to the circumstances. I was used to having an ample schedule for myself and my tasks, but with the confinement it has been very complicated, since my family is present all the time and I find it very difficult to concentrate. M, S/SH, Master's degree in Energy.

Before [the pandemic] I was traveling 6 hours and no scholarship, now my GPA went up, I eat on time, and avoid travel exhaustion, so this benefited my academic competence. H, S/SH, Master's degree in mathematical sciences.

Personally, it is complicated for me to keep up with the same progress since I have to take care of my children during school hours. H, C/CH, Ph.D. in Computer Science and Engineering.

Verbatims
Field 2

I continue to work now in COVID areas, which generates a lot of stress, and I have stopped my school activities. I spend my time trying to decrease stress with activities that help me to avoid situations. I have not really been in confinement at home. M, SP/CH, PhD in Medical Sciences.

Before the confinement I had a lot of stress in graduate school, during the confinement that stress decreased, but I don't want to go back to academic activity, the thought of going back to classes or internships makes me very anxious. H, UL/SH, Specialization in Rehabilitation Nursing

Note: n=number of participants; %=percentage; M=female; H=male; S=single (or); UL=partnered; SP=separated (or); C=married (or); SH=childless; CH=with children; Verbatims= testimonies of women and men related to the change in the Structure and organization of time during social distancing.al.

Scenarios of Increased Uncertainty and Concern

The situations of greatest uncertainty and concern for students in both fields were the following: *academic situation (75%), personal and family financial situation (60.8%), modifications of personal plans (51.7%), and modification of professional plans (50%)*. When comparing the scenarios of greatest concern for women (n=33) vs. men (n=32) in the CFMI field, the differences were found in the item of modifications of personal plans (U=374.0, p=.020). When this same analysis was performed on the CBQS students, the differences were identified in the response of "other scenarios" (U=216.0, p=.006). Table 4 shows the comparison by sex for both fields; the significant differences in women in both groups are identified in *the personal and family financial situation, academic situation, missing internships on site, and modifications to my personal plans. In the case of men, the significant items were personal and family financial situation and missing internships on site*. This information is complemented by experiential data from some members of the student community.

Emotional Effects before and during the Pandemic

Modifications in emotions grouped under the category of *prosocial emotional styles* in both groups of graduate students in fields 1 and 2 reported before and during the pandemic are highlighted as follows: happiness², 65.5% and 11.8%; tranquility, 62.2% and 23.5%; confidence, 47.1% and 7.6%; and gratitude, 33.6% and 12.6%. While those grouped in *emotional styles of mood affectations* before and during the pandemic were expressed as follows: stress, 54.6% and 64.7%; anxiety, 37.8% and 52.1%; sadness 13.4% and 39.5%; depression, 14.3% and 33.6%; concern, 31.9% and 67.2; uncertainty, 14.3% and 60.5%; anxiousness, 10.9% and 51.3%; and fear, 5.9% and 34.5%.

When comparing the emotional affects, significant differences were observed in the *prosocial styles*: tranquility, happiness, and confidence showed a decrease during the pandemic. For the emotions included in the category of *mood affects*,

² Percentages correspond to findings before and during the pandemic, respectively.

fear and anguish showed significant differences in the group of women in field 1 and in both groups of participants in field 2. Uncertainty and anxiety were significantly different in the group of women in field 1 and in both groups of participants in field 2.

Uncertainty and worry (*mood affectations*) increased in both women and men in both graduate fields (Table 5).

It is worth noting that students in field 2 experienced greater changes between the presence/absence of the different emotions

encompassed in the categories of *prosocial emotional styles and mood affectations*.

When contrasting *emotional styles* between women (n=33) vs men (n=32) in field 1, significant differences were identified in stress (U=391.5, p=.044) before the pandemic. While for women (n=36) vs men (n=18) from field 2, differences were found in depression (U=225.0, p=.038) during the pandemic. Table 5 shows the totality of the results of this thematic axis, accompanied by a selection of related testimonies.

Table 4
Scenarios of Increased Uncertainty and Concern during the Pandemic

Scenario	Women CFMI (n=33) vs Women CBQS (n=36)		Men CFMI (n=32) vs. Men CBQS (n=18)	
	U	p	U	p
Personal and family financial situation	456.0	.042	195.0	.029
Situación académica	433.5	.008	239.0	.203
Missing internships on site	214.5	< .000	80.0	< .000
Modifications to my personal plans	396.0	.006	238.0	.243

Verbatims
Field 1
Not finishing my research topic on time, hence the fellowship period worries me, I would have to look for a job and neglect my thesis work. M (CFMI), S/SH, Master's degree in Civil/Hydraulic Engineering.
CONACYT has not commented on the submission of the dissertations of the students of PUEI (Single Program of Engineering Specialization), my research work is on hold because the digital library of the UNAM does not have the titles on which I focus my work, and due to my financial situation, I have not been able to acquire any to continue advancing. H (CFMI), S/SH, Engineering Specialization.

Verbatims
Field 2
That the hospital doesn't care that we spend many hours exposed to infected patients, with no sleep and no equipment for care. M (CBQS), S/SH, Internal Medicine Specialization. In the hospital, we are not doing high specialty related activities. Adjunct faculty make us see COVID patients on their on-call schedules. We do not receive health insurance nor salary. H (CBQS), S/CH, Cardiology Specialization

Note: n= number of participants; U= Mann Whitney U; p= significance value; M= female; H= male; CFMI=field 1; CBQS=field 2; S=single (or); UL=partnered (or); SP=separated (or); C=married (or); SH=childless; CH=with children; Verbatims= testimonies of women and men related to the Scenarios of Concern during the pandemic.

Table 5

Intragroup Comparison: Prosocial Emotions and Mood Affects before and during the First Months of the COVID-19 Pandemic

Emotional styles	Women CFMI (n=33)		Men CFMI (n=32)		Women CBQS (n=36)		Men CBQS (n=18)	
	U	p	U	p	U	p	U	p
Peace of mind	379.5	.024	288.0	.001	396.0	.001	90.0	.015
Happiness	198.0	<.000	304.0	.001	324.0	<.000	54.0	.000
Trust	297.0	<.000	288.0	.000	450.0	.006	99.0	.007
Gratitude	412.5	.066	480.0	.707	432.0	.001	135.0	.443
Sadness	429.0	.111	416.0	.106	378.0	.000	135.0	.401
Anxiety	445.5	.217	496.0	>.999	486.0	.056	135.0	.499
Depression	462.0	.239	464.0	.572	396.0	.000	153.0	>.999
Stress	544.5	>.999	416.0	.207	558.0	.336	153.0	>.999
Fear	379.5	.008	448.0	.256	432.0	.000	90.0	.007
Anguish	330.0	.001	400.0	.059	457.5	.016	81.0	.001
Uncertainty	247.5	<.000	368.0	.044	324.0	<.000	72.0	.000
Concern	313.5	.001	352.0	.023	450.0	.017	99.0	.040

Verbatims
Field 1

The confinement has increased my stress level, especially having very small spaces to continue with my academic work. M (CFMI), C/SH, Ph.D., Graduate Degree in Computer Science and Engineering. Positive: I am happy without people around me. Negative: increased academic load during online classes. H (CFMI), S/SH, Master's degree in Electrical Engineering. Uncertainty in the work aspect and new order of priorities, spending too much time in front of a computer and too little physical activity. H (CFMI), S/SH, PhD in Civil Engineering.

Verbatims
Field 2

We as health professionals, at least in my case, have been in the presence of multiple emotions, not only from dealing with COVID-19 patients and how stressful it is in every way (anguish, helplessness, disappointment, sadness, anger) but also due to the fact that in protecting your family you have to stay away from them (children)...M (CBQS), UL/CH, Family Medicine Specialization. Being a medical resident brings with it a high emotional and responsibility burden, including more workload. M (CBQS), UL/SH, Family Medicine Specialization. As a surgical specialist, it is very distressing to carry out clinical work with COVID patients because of the fear of becoming infected. Since one does not know how to handle them, it causes anxiety because we are forced to do so at our hospital. H (CBQS), S/SH, Surgical Specialization.

Note: n=number of participants; U= Mann Whitney U; p= significance value; M=female; H=male; CFMI=area 1; CBQS=area 2; S=single (or); UL=partnered; SP=separated (or); C=married (or); SH=childless; CH=with children; Verbatims=women's and men's testimonies related to prosocial emotions and mood affects before and during the first months of COVID-19 pandemic.

The need for psychological support of the total study population (49.6%) corresponds to the presence of what has been referred to here as *emotional styles of mood disorders*. Women in both fields expressed a greater need for psychological support (57.6% field 1 CFMI, 70.4% field 2 CBQS) than men (39.4% field 1 CFMI and 29.6% field 2 CBQS). However, only 2.5% said they received some type of professional help (two men in field 1 and one woman in field 2). More than half of the students (53.8%) said they were unaware of the psychological support offered by the university.

Discussion

The results from this research allow us to establish that the emotional management of the study population is related to the sociocultural conditions of gender, social status (attributed to the field of study), and financial affectations during voluntary confinement. The findings are consistent with the theses of socio anthropological approaches to emotions that highlight that emotional life is contextual and situational ([Lively & Weed, 2014](#); [Morales & López, 2020](#)).

Initially, statistically significant differences were found related to the frequency and reasons for leaving home, showing that women and men in field 2 were the ones who went out more during the period of confinement. The data allow highlighting two relevant aspects: emotional management is linked to the fulfillment of the students' responsibilities in biomedical areas, where the feelings rules oriented the professional practices of care ([Hochschild, 1979](#)). And the higher frequency of men leaving in field 1—compared to women in the same field—due to work issues confirmed that emotional life is associated with the sexual division of labor and social expectations of gender roles ([Illouz, 2007](#)).

The concern for others' well-being during the health situation caused by COVID-19 led to drastic changes in the way of cohabitation of the population of students in field 2. Stress, fear, and uncertainty about the possibility of contagion led them to stop seeing their loved ones, having

to move to apartments shared with colleagues in the biomedical field as a preventive measure. This decision is part of the political dimension of emotions, as stated by [Hochschild \(1979\)](#), which refers to the intention of the action, as well as to the emotional management of uncertainty, since fear functioned as a psychic and social catalyst of emotional energy in care actions ([Collins, 2009](#); [Illouz, 2020](#)).

Another finding of this study evidenced that women in field 2 experienced financial affectation during the period examined, a fact that makes visible the inequalities experienced by female students in the health field, which in turn coincides with the gender asymmetries related to economic stability that have been described in other research ([López & Cortijo, 2021](#); [López et al., 2021](#); [López & Robles, 2021](#)).

The complications in the structure and organization of time to carry out academic activities remotely reported in this work involve emotional management to deal with social distancing. In addition, when analyzing some testimonies (verbatim), it was observed that gender roles were a determining factor in the organization of time management to carry out academic work from home, where the success of virtual education depends not only on access and availability of the Internet, but also on the quality of the connection and the exclusivity in the use of the devices, aspects that were not equitable for the entire student population ([López et al., 2021](#); [López et al., 2022](#)).

In general, in this research, difficulties were observed in domestic life, self and family care, and the use of the spaces by graduate students. However, some of the testimonies allow us to identify the pendulous nature of the distribution of home and family care activities, highlighting that, sometimes, caregiving for students in field 1 was assumed by the women and occasionally by men. Such data open the discussion to problematize the link between socio structural aspects (gender, educational level, social class, among others) and the emotional experience in the face of pandemic phenomena such as COVID-19 ([Simon & Lively, 2010](#)).

Emotional management reproduces gendered social dispositions, since women reported

that domestic chores such as cooking and housekeeping helped them disconnect from their worries, while men carried out recreational activities for the same purpose. These types of leisure activities coincide with the claim by [Simon and Lively \(2010\)](#) when they point out that leisure and rest are the privilege of men.

The situations that represented the greatest concern for students in the two fields were those related to academic matters, followed by financial, personal, and family conditions. The importance of these concerns reflects an emotional management based on interests in line with *societal* societies ([Hochschild, 1979](#); [Illouz, 2007](#)).

Regarding the change in *emotional styles*, women in field 2 reported significant data in the decrease of prosocial emotions and an increase in those of mood affectations, which were associated with the perception of risk and work overload in hospitals. The close relationship between social position, norms, and emotional experience is observed ([Bericat, 2018](#)).

The perception of the students in field 1 regarding academic work referred to an unnecessary overload and low formative efficiency. This group expressed uncertainty and concern about the absence of communication with the faculty. They also complained about the lack of institutional empathy in the face of excessive academic and work demands. The students in field 2 pointed out the precariousness of their work as residents in hospitals. The shortage of protective equipment—as documented by different journalistic media and by socio anthropological research ([Barragán, 2022](#); [Muñoz, 2021](#))—triggered concern, fear, and uncertainty due to the risks of contagion.

The students' perception of the relationship established with the institutional figures financing the scholarships, the tutors, and the internship hospitals gave rise to what [Scheff \(1977\)](#) called *insecure bonds*, characterized by high levels of sadness, anguish, fear, anxiety, worry, and stress, as well as low levels of trust, happiness, and tranquility. The results are consistent with other research where it is evident that *insecure bonds* produce alienation, disintegration, conflict, anxiety, and stress due to the overload and lack of empathy from the HEIs ([López & Cortijo, 2021](#)).

Of the student population in this research, 50% reported the need for psychological support, of which only 2.5% reported getting some type of professional help. Women in both fields of knowledge expressed the need for psychological support. These data reveal the need to incorporate emotional life into academic life from sociocultural perspectives. In this sense, the socioemotional processes of the population studied tell us about ways of living social relationships ([Sirimarco & Spivak, 2019](#)) marked by social, gender, professional, and labor precariousness hierarchies among the young adult population of this country that finds in graduate programs a delay in entering the labor market.

In conclusion, this research offers theoretical methodological clues to deepen the analysis of the relationship between the contextual (socio structural) and situational (contingent) conditions in which the socioemotional experience of the students of HEIs takes place during the long period of the pandemic to understand that the investigation of collective discomforts are heuristic strategies to explore the relationships between social structures and microgroups.

The inquiry of the emotional life of students using questionnaires is limited because the exploration of sensitive life information requires qualitative approaches that recover *the point of view of the actor* through interviews, ethnographic observations, and participants to deepen the experience and emotional expression. For that, it is necessary to develop a qualitative and interdisciplinary methodological strategy.

References

- Ahmed, S. (2015). *La política cultural de las emociones*. Universidad Nacional Autónoma de México.
- Barragán, A. (2022). Representaciones, experiencias y prácticas del equipo de Enfermería. En R. A. Rosas, R. Aparecida de Melo, A. Barragán, A. R. Castro, O. Angeles, & N. K. Rivera (Coords.), *Enfermería en una Unidad Temporal COVID-19: Miradas Multidisciplinarias* (pp. 125-164). ENEO-UNAM.
- Bericat, E. (2018). *Excluidos de la felicidad: La estratificación social del bienestar emocional en España*. Cen-

- tro de Investigaciones Sociológicas.
- Bericat, E. (2000). La sociología de la emoción y la emoción en la sociología. *Papers, Revista de Sociología*, 62, 145-176. <https://doi.org/10.5565/rev/papers/v62n0.1070>
- Brooks, S., Webster, R., Smith, L., Woodland, L., Wessely, S., Greenberg, N., & James, G. (2020). The Psychological Impact of Quarantine and How to Reduce it: Rapid Review of the Evidence. *Lancet*, 395, 912-20. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Cámara de Diputados del H. Congreso de la Unión. (2010, julio 5). *Ley Federal de Protección de Datos Personales*. Diario Oficial de la Federación. <http://www.diputados.gob.mx/LeyesBiblio/pdf/LFPDPPP.pdf>
- Collins, R. (2009). *Cadenas de rituales de interacción*. *Anthropos*.
- Didriksson, A., & Sarraute, M. (2021). *Educación superior y pandemia en Iberoamérica*. Universidad Autónoma de Madrid/FES Cuautitlán-UNAM.
- Expósito, E., & Marsollier, R. (2020). Virtualidad y educación en tiempos de COVID-19. Un estudio empírico en Argentina. *Educación y Humanismo*, 22(39), 1-22. <https://doi.org/10.17081/eduhum.22.39.4214>
- García, L. (2021). COVID-19 y educación a distancia digital: preconfinamiento, confinamiento y posconfinamiento. *Revista Iberoamericana de Educación a Distancia*, 24(1), 9-32. <https://doi.org/10.5944/ried.24.1.28080>
- Hernández, I., & Morán, J. D. (2021, septiembre 23). *La incertidumbre de vivir el Covid-19 en el extranjero. Factores que inciden en las experiencias emocionales de estudiantes de posgrado en condición de movilidad ante las medidas de distanciamiento social* [Ponencia]. VII Coloquio de Investigación: Las emociones en el marco de las ciencias sociales: Perspectivas Interdisciplinarias-RENISCE, Tlaquepaque, Jalisco, México.
- Hernández, O. K., Pérez, R., & González, G. (2014). La deserción en los posgrados, un problema no menor. *Diálogos sobre educación. Temas actuales en investigación educativa*, 5(8), 1-18. <https://www.redalyc.org/articulo.oa?id=553457062009>
- Hochschild, A. (1979). Emotion Work, Feeling Rules, and Social Structure. *American Journal of Sociology*, 85(3), 551-575. <https://www.jstor.org/stable/2778583>
- Illouz, E. (2007). *Intimidades congeladas*. Katz.
- Illouz, E. (2020). *El fin del amor: una sociología de las relaciones negativas*. Katz.
- Instituto Internacional de la UNESCO para la Educación Superior en América Latina y el Caribe. (2020). *COVID-19 y educación superior: De los efectos inmediatos al día después*. Instituto Internacional de la UNESCO para la Educación Superior en América Latina y el Caribe (IESALC). <https://www.iesalc.unesco.org/wp-content/uploads/2020/05/COVID-19-ES-130520.pdf>
- Kemper, T. (1978). *A Social Interactional Theory of Emotions*. John Wiley & Son.
- Le Breton, D. (2012-2013). Por una antropología de las emociones. *Revista Latinoamericana de Estudios sobre Cuerpos, Emociones y Sociedad*, 4(10), 67-77. <https://www.redalyc.org/articulo.oa?id=273224904006>
- Lively, K. J., & Weed, E. A. (2014). Emotion Management: Sociological Insight into. What, How, Why, and to What End? *Emotion Review*, 6(3), 202-207. <https://doi.org/10.1177/1754073914522864>
- López, O. (2019). *Extravíos del alma mexicana. Patologización d las emociones en los diagnósticos psiquiátricos (1900-1940)*. Universidad Nacional Autónoma de México-Facultad de Estudios Superiores Iztacala.
- López, O. (2022). Bienestar Emocional: La simplificación de la vida afectiva en el paradigma hegemónico de la salud mental en tiempos pandémicos. En L. Anapios y C. Hammerschmidt (Coords.), *Política, afectos e identidades en América Latina* (pp. 283-303). CLACSO/CALAS. https://www.academia.edu/79540176/Bienestar_emocional_La_simplificaci%C3%B3n_de_la_vida_afectiva_en_el_paradigma_hegem%C3%B3nico_de_la_salud_mental_en_tiempos_pand%C3%A9micos
- López, O., & Cortijo, X. (2021). Procesos socioemocionales de estudiantes universitarios por medidas sanitarias COVID-19: resultados preliminares. *South Florida Journal of Development*, 2(1), 4147-4162. <https://doi.org/10.46932/sfjdv2n3-028>
- López, O., & Robles, A. L. (2021). Procesos socioemocionales de universitarios ante la escolarización remota de emergencia a causa de las medidas sanitarias por COVID 19. *RELACES*, (36), 12-24. <http://www.relaces.com.ar/index.php/relaces/article/view/447>
- López, O., González, E., & Villeda M. (2022). Experiencias socioemocionales de universitarios ante la educación virtual por Covid-19. *Nómadas*, (56), 153-171. <https://dx.doi.org/10.30578/nomadas.n56a8>
- López, O., Palumbo, M., & Nance, D. (2021). Procesos socioemocionales de estudiantes de enfermería de la Sierra Sur de Oaxaca ante la COVID 19. *Boletín Científico Sapiens Research*, 11(2), 34-40. <https://www.srg.com.co/bcsr/index.php/bcsr/article/view/426>
- Lovón, M., & Cisneros, S. (2020). Repercusiones de las clases virtuales en los estudiantes universitarios en el contexto de la cuarentena por COVID-19: El caso de la PUCP. *Propósitos y Representaciones*, 8 (SPE3), e588. Doi: <http://dx.doi.org/10.20511/pyr2020.v8nSPE3.588>
- Lutz, C. (1986). Emotion, Thought, and Estrangement: Emotion as Cultural Category. *Cultural Anthropology*, 1(3), 287-309. <http://www.jstor.org/stable/656193>
- Mendoza, J. J. (2020). Impacto de la COVID-19 en la salud mental. *Medscape*. Recuperado de <https://espanol.medscape.com/verarticulo/5905131>
- Morales, R., & López, O. (2020). La experiencia del desplazamiento interno forzado: una mirada desde los procesos socioemocionales. *Revista Electrónica Cultura y representaciones sociales*, (15), 425-451. Recuperado de <http://www.culturayrs.unam.mx/>

- [index.php/CRS/article/view/751/pdf](#)
- Muñoz, R. (2021). Covid-19 and Social Stigma in Hospitals: A New Epidemic of Signification? *Medical Anthropology*, 40(7), 667-681. <https://doi.org/10.1080/01459740.2021.1974021>
- Organización para la Cooperación y el Desarrollo Económico (OECD). (2019). *Higher Education in Mexico: Labour Market Relevance and Outcomes, Higher Education*, OECD Publishing. <https://doi.org/10.1787/9789264309432>
- Pedró, F. (2021). COVID-19 y educación superior en América Latina y el Caribe: efectos, impactos y recomendaciones políticas. En M. Bas, H. Camacho, D. Carabantes, M. de Luca, I. Dussel, A. Reinoso, P. Ferrante, G. Gallego, P. Martínez, L. Leopoldo, J. Portocarrero, S. Yépez, F. Pedró, D. Pulfer, I. Sanabria, J. A. Sanahuja, G. Xarles y E. Herrera, *La educación superior en Iberoamérica en tiempos de pandemia. Impacto y respuestas docentes* (pp. 23–37). Fundación Carolina. <https://www.fundacioncarolina.es/wp-content/uploads/2021/06/LibroLaeducacionSuperiorEnIberoamerica.pdf>
- Rivera-Pérez, C. (2021). Efecto de la pandemia en los estudiantes de posgrado de México. *Sistema de Centros Públicos de Investigación Conacyt*. <https://centros-conacyt.mx/noticia/efecto-de-la-pandemia-en-los-estudiantes-de-posgrado-de-mexico/>
- Rivera-Pérez, C., & Mendoza-Becerril, M. A. (2021). Efecto de la pandemia COVID-19 en el quehacer científico: docencia e investigación. *Recursos Naturales y Sociedad*, 7(2), 35-45. <https://doi.org/10.18846/renay-soc.2021.07.07.02.0003>
- Sandín, B., Valiente, R. M., García-Escalera, J., & Chorot, P. (2020). Impacto psicológico de la pandemia de COVID-19: Efectos negativos y positivos en población española asociados al periodo de confinamiento nacional. *Revista de Psicopatología y Psicología Clínica*, 25(1), 1–22. <https://doi.org/10.5944/rppc.27569>
- Scheff, T. (1977). The Distancing of Emotion in Ritual. *Current Anthropology*, 18(3), 483-505. <https://doi.org/10.1086/201928>
- Simon, R. W., & Lively, K. (2010). Sex, anger and depression. *Social Forces*, 88(4), 1543-1558. <https://doi.org/10.1353/sof.2010.0031>
- Sirimarco, M., & Spivak, A. (2019). Antropología y emoción: reflexiones sobre campos empíricos, perspectivas de análisis y obstáculos epistemológicos. *Horizonte Antropológico*, 25(54), 299-322. <https://doi.org/10.1590/S0104-71832019000200012>
- Taylor, S. J., & Bogdan, R. (1987). *Introducción a los métodos cualitativos de investigación*. Paidós.
- Turner, J. H. (2009). The Sociology of Emotions: Basic Theoretical Arguments. *Emotion Review*, 1(4), 340-354. <https://doi.org/10.1177/1754073909338305>