10.4067/S0718-48082023000200253

TERAPIA PSICOLÓGICA
ISSN: 0718-4808

Anxiety, emotions and threat perception in COVID-19 context: differences between Spanish teachers and students

Ansiedad, emociones y percepción de amenaza en contexto de COVID-19: diferencias entre profesores y estudiantes españoles

Marcos Pascual-Soler[1,2]
0000-0001-7862-3855
marcos.pascual@esic.edu

José Berríos-Riquelme[3]
0000-0003-2947-4739
jberrios@uta.cl

Irene Gómez-Frías[4]
0000-0001-9141-5380
irene.gf7@hotmail.com

Dolores Frías Navarro[4*]
0000-0003-4298-1313
m.dolores.frias@uv.es

[1]ESIC University, Madrid, España
[2]ESIC Business & Marketing School. Valencia, España
[3]Universidad de Tarapacá. Iquique, Chile
[4]Universidad de Valencia, Valencia, España
*Corresponding author

Recibido: 20 de abril de 2023 – Aceptado: 06 de octubre de 2023
Editado por: Jaime Silva Concha, Universidad del Desarrollo, Chile
Revisado por: Mauricio Espinoza, Universidad del Desarrollo, Chile.
Martin Castro, Universidad del Desarrollo, Chile.

Abstract:
Introduction: Our study compares the emotional impact of the first month of the lockdown on teachers and students due to the COVID-19 pandemic in Spain, focusing on the variables of generalized anxiety, emotions, and perceived threat. **Method:** A non experimental design was applied, the sample consists of 452 participants (teachers = 188, young adult students = 264. Correlation analyses, a between-group design and effect size were carried out. **Results:** The results indicated that in crises or emergencies such as COVID-19, teachers and students have different emotional reactions. Students showed more generalized anxiety symptoms, more negative emotions, and fewer positive emotions. Teachers showed a higher degree of existential anxiety. **Conclusion:** Specific action plans should be developed for teachers and students. In addition, educational policies and teacher training programs should take the gender perspective into account when studying and planning a resilient educational system.
Keywords: mental health; educational policies; education system; gender differences; COVID-19.

Resumen:
Introducción: Nuestro estudio compara el impacto emocional, entre profesores y estudiantes, durante el primer mes de cuarentena en España debido a la COVID-19, centrándonos en la ansiedad generalizada, emociones y percepción de amenaza. **Método:** Se aplicó un diseño no experimental, donde participaron 452 personas (profesores = 188, estudiantes adultos jóvenes = 264). Se realizaron análisis de correlación, diseños entre-grupos y tamaño del efecto. **Resultados:** Los resultados indican que durante crisis o emergencias como la COVID-19, los profesores y estudiantes tienen diferentes reacciones emocionales. Los estudiantes mostraron mayores síntomas de ansiedad generalizada, más emociones negativas y menos emociones positivas. Los profesores mostraron tener un alto grado de ansiedad existencial. **Conclusión:** Planes de acción específica deberían desarrollarse por separado para profesores y estudiantes. Además, las políticas educativas y los programas de formación de profesorado, deberían tener una perspectiva de género al estudiar y planificar un sistema educativo resiliente.
Palabras clave: salud mental; políticas educativas; sistema educativo; diferencias de género; COVID-19.

Introduction

During the first month of the lockdown in Spain, teaching and learning became virtual and took place over the Internet in a context of social emergency. It was a time when of great uncertainty about how the academic training would be carried out in the second semester of the 2019-2020 school year.

At the beginning of the mandatory lockdown, the work was performed with a high degree of uncertainty, mainly related to how to address the subject matter and, at the same time, develop the competencies the students needed (Pressley & Ha, 2021). The objective was to carry out distance education in the context of a global emergency. This uncertainty was combined with concerns about the possible effects of the pandemic on societies, especially in terms of mental health (Holmes et al., 2020).

Study results indicate that stress, anxiety, and other forms of psychopathology were much higher during the pandemic (Ausín-Benito et al., 2022; Vindegaard & Benros, 2020).

The psychological effects of the pandemic varied across individuals, and several sociodemographic variables have been found to predict more adverse effects, such as higher levels of stress and anxiety and other mental health problems. Being a young adult, being a female, or having previous mental health problems are variables linked to greater emotional stress during the COVID-19 pandemic (Morales et al., 2022; However, the results for the age variable are not consistent, given that older adults have also been found to have more anxiety symptoms (Frias-Navarro et al., 2021; Kan et al., 2021; Ozamiz-Etxebarriaet al., 2021).

Our research is framed in the context of the pandemic, which led to rapid changes in the academic training system, and it aims to compare the emotional state of teachers and young adult students during the first month of the lockdown in Spain. Age is an important characteristic of the two groups because, in general, the teachers will be older than the students. Therefore, in our study, the age variable cannot be analyzed independently. Most of the published research focuses on analyzing the impact of COVID-19 on students or teachers, but it does not directly compare their responses. Our study provides evidence about the state of anxiety and concern of teachers and students in the same social and temporal context (at the beginning of the pandemic), and it analyzes the differences in the impact of COVID-19 on the two groups.

Teachers and students in the context of COVID-19

The results of many studies point out that the COVID-19 pandemic affected the well-being of teachers and students (Alves et al., 2021; MacIntyre et al., 2020; Maluenda-Albornoz et al., 2022; Silva et al., 2021). The UNESCO report (Meinck et al., 2022) on the impact of COVID-19 on education notes that teachers and students reported a decrease in their well-being while their classes were interrupted (Besser et al., 2022). In the same UNESCO report, the students indicated that they felt overwhelmed by all the events linked to the pandemic, highlighting that they were anxious about the changes in their teaching-learning process and about the possibility of family and friends becoming ill. In the same way, the results of the study by Edens and Kiresich (2022) point out that students were comfortable in the virtual environment, but they were anxious and very concerned about their learning and their academic grades, in addition to their concerns about their health and that of others. The findings of the study by Férnandez-Castillo (2021) indicate that Spanish students had high levels of anxiety and burnout related to taking exams during the COVID-19 pandemic.

The research by Aristovnik et al. (2020) on the impact of the COVID-19 pandemic, using a sample of 30,383 university students from 62 countries, showed that students complained about their high workload because it directly affected their performance and personal well-being. Furthermore, Hortigüela-Alcala et al. (2022) found that the safety measures adopted to prevent the spread of COVID-19 (physical distancing and the use of masks) significantly altered the emotions of the students, who expressed fear and insecurities that affected their social relationships with their classmates and teachers. The study by Wang and Zhao (2020) found that university students had higher anxiety than the general population after the COVID-19 outbreak, and female students showed more anxiety than male students.

Regarding the teachers, the UNESCO report (Meinck et al., 2022) reveals that they took on a greater workload during the pandemic to adapt to the new teaching modality where technologies became basic and essential. Studies have also shown that the rapid adaptation to virtual teaching led to an increase in teachers' stress levels (Besser et al, 2022; MacIntyre et al., 2020). In addition, the lack of face-to-face contact with students affected them emotionally (Varea & González-Calvo, 2021). The study by Pressley and Ha (2021) found that, in this virtual education situation, teachers showed lower instructional and engagement efficacy, which supports the results of other studies (Ma et al., 2021). In addition, female teachers

have been found to have a higher level of stress than their male colleagues (Oducado et al., 2021; Qiu et al., 2020).

In our research the variables measured can be grouped into two blocks: 1) emotional state characterized by high distress and lack of control over intense concern: anxiety symptoms, negative emotions, and positive emotions (generalized anxiety); and 2) concern about a stressful life event such as the onset of the pandemic: general concern about COVID-19, perception of global threat due to COVID-19, and perception of personal threat (existential anxiety). Existential anxiety is a construct that refers to fears that are provoked by threats to human existence, such as death, illness, and loneliness (Ain et al., 2021; Schellinski, 2021; van Bruggen, 2017). In contrast, generalized anxiety (emotional and physiological) is a state of high physical and psychological arousal that hinders decision-making and interferes more in areas of daily life, such as working or learning in the educational environment (Liyanage et al., 2021).

The present study has the following objectives and hypotheses:

1. To compare the emotional impact of COVID-19 on teachers and students aged 18 years and older during the first month of lockdown: generalized anxiety and existential anxiety.

   Our first study hypothesis proposes that there will probably be differences in the impact of COVID-19 on teachers and young adult students because their emotional responses of anxiety and concern will be different when facing uncertainty about how the academic training will progress. Students may have the added stress of thinking about how their academic performance will be evaluated in this novel situation of distance teaching-learning over the Internet.

2. Another objective of our study is to include the gender perspective in the analysis of the psychological impact of the onset of the pandemic, given that results from studies of COVID-19 indicate that women report greater emotional distress (Gomez-Baya et al., 2022). Our second hypothesis is that the emotional impact of COVID-19 will be different in men and women about the psychological variables measured in our research.

3. We will also analyze whether COVID-19 is perceived more as a personal threat or as a global threat. This variable is included in the study because these two threat perspectives are measured as part of exis-

tential anxiety, and the difference between these two types of threat can be analyzed to find out to what degree COVID-19 is a threat and what kind. Our third hypothesis indicates that there will be a difference in the degree of perception of the threat as personal or as global. In the study of Frias-Navarro et al. (2021), carried out in the first month of the lockdown, it was found that the perception of COVID-19 as a global threat was greater than that of the personal threat.

Participants

The study sample was a self-selected convenience sample composed of 452 participants who resided in Spain at the time of the study. They had a mean age of 32.11 years (*SD* = 15.05), and 97.1% (*n* = 439) of the participants had Spanish nationality. Table 1 shows the sociodemographic and contextual variables for the group of teachers (*n* = 188) and students (*n* = 264) and the total sample (*N* = 452). Of the group of teachers, 76.1% (*n* = 143) had a permanent contract, whereas 23.9% had a temporary contract (*n* = 45). To analyze the self-identified gender, the groups utilized were male and female (*n* = 449). The mean age of the group of teachers was 46.91 years (*SD* = 11.78), and 91% were 61 years old or less. The mean age of the group of students was 21.57 years (*SD* = 4.68), and 90.9% were 25 years old or less. In general, both the teachers and students lived with other people during home lockdown, and more than 50% did not perceive that they had health problems that could be a risk for COVID-19 infection.

Table 1. *Sociodemographic and contextual variables for the participants surveyed*

Variables	Teachers *n* = 188 (41.6%)		Students *n* = 264 (58.4%)		Total *N* = 452	
	n	%	*n*	%	*N*	%
Gender						
Male	65	34.6	75	28.4	140	31.0
Female	123	65.4	186	70.5	309	68.4
Non-binary	0	0	2	.8	2	.4
Asexual	0	0	1	.4	1	.2
Perceived social class						
Low/Medium	19	10.1	47	17.8	66	14.6
Medium	105	55.9	156	59.1	261	57.7
Medium/High	64	34.0	61	23.1	125	27.7
Lives alone during lockdown						
Yes	24	12.8	12	4.5	36	8.0
No	164	87.2	252	95.5	416	92.0
Has children						
Yes	116	61.7	5	1.9	121	26.8
No	72	38.3	259	98.1	331	73.2
Knows of a case of COVID-19 in the place of residence						
Yes	165	87.8	224	84.8	389	86.1
No	6	3.2	13	4.9	19	4.2
Not sure	17	9.0	27	10.2	44	9.7
Personally knows someone who tested positive for coronavirus (family, friends, neighbors)						
Yes	42	22.3	127	48.1	169	37.4
No	109	58.0	113	42.8	222	49.1
Not sure	37	19.7	24	9.1	61	13.5
Perception of risk of contagion due to being a person with health problems sensitive to COVID-19						
Yes	42	22.3	29	11.0	71	15.7
No	109	58.0	185	70.1	294	65.0
Not sure	35	18.6	47	17.8	82	18.1
No response	2	1.1	3	1.1	5	1.1
Age						
Mean	46.91		21.57		32.11	
SD	17.78		4.68		15.05	
Median	50		21		24	
Mode	55		19		19	
Minimum	21		18		18	
Maximum	65		58		65	
Age in three groups						
18-20 years old	0	0	132	50.0	132	29.2
21-25 years old	10	5.3	108	40.9	118	26.1
26 years old or more	178	94.7	24	9.1	202	44.7

Materials

Socio-demographic variables. Gender (male, female, and other), age, having children (yes/no), living alone (yes/no), perceived social class (low/medium, medium, medium/high), country of current residence (Spain), work situation or studies

(teacher/student), and teachers' temporary or permanent contract. We also measured whether the participants knew of any cases of COVID-19 in their place of residence (yes/no/not sure), whether they personally knew an infected person (yes/no/not sure), and whether they thought they were at risk of infection due to health problems (yes/no/not sure/prefer not to answer this question).

Emotional state at the beginning of the lockdown in Spain

Generalized Anxiety Disorder (GAD-7, Spitzer et al., 2006). The GAD-7 is a brief self-report scale that is widely used in the literature. It consists of seven items that assess the presence of anxiety symptoms, and it has a unidimensional structure. The items refer to nervousness, lack of control over worry, excessive concern, difficulty relaxing, restlessness, irritatability, and fear of something horrible. Participants are asked to rate how they have felt in the past two weeks and how often they have felt each symptom. The GAD-7 score is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of "not at all," "several days," "more than half the days," and "nearly every day," respectively. The total score is obtained by adding up the responses to each of the items, with the score ranging from 0 to 21. Scores from 5 to 9, 10 to14, and 15 to 21 are taken as the cut-off points for mild, moderate and severe anxiety, respectively. The results of the internal consistency of the items indicate very good levels, with .93 [95% *CI* .92, .95] for the group of teachers, and .90 [95% *CI* .88, .92] for the group of students. The correlations between the item scores and the total score ranged from.69 to .84 in the group of teachers, and from .57 to .79 in the group of students. In the case of construct validity, we carried out a confirmatory factor analysis to verify its unidimensionality. The results obtained allow us to assume that the instrument measures a single dimension (*CFI* = .988, *TLI* = .982, *SRMR* = .033, and all factor loadings were statistically significant, $p < .001$).

Scale of Positive and Negative Emotions in Crisis or Social Threat Situations (Frias-Navarro et al., 2020c). The emotions scale was developed during the present research and consists of 12 items. Participants are asked to rate the degree to which they have felt certain emotions in the past two weeks. It consists of two subscales containing six items each: positive emotions (comfortable, satisfied, happy, joyful, confident, good, and optimistic) and negative emotions (nervous, worried, tense, upset, distressed, and anxious). It has a *Likert*-type response scale with seven options ranging from not at all (1) to very much (7). The total score is obtained by adding up the responses to each of the items, with the score for each subscale ranging from 6 to 36. Regarding the positive emotions subscale, the results for the internal consistency of the items indicate optimal levels, with Cronbach's alpha =

.88 [95% *CI* .85, .90] for the group of teachers, and .86 [95% *CI* .83, .88] for the group of students. The correlations between the items and the total score ranged from .54 to .80 in the group of teachers, and from .57 to .73 in the group of students. For the negative emotions subscale, the results for the internal consistency of the items indicate very good levels, with Cronbach's alpha =.93 [95% *CI* .92, .95] for the group of teachers, and .91 [95% *CI* .89, .92] for the group of students. The correlations between the items and the total score ranged from .56 to .88 in the group of teachers, and from .65 to .80 in the group of students. The confirmatory factor analysis carried out, in this case to verify the bifactorial structure of the scale, provides evidence of its construct validity (*CFI* = .987, *TLI* = .984, *SRMR* = .042). To complement the assessment of the model fit, each latent factor was analyzed separately, and all the factor loadings were statistically significant ($p < .001$), thus verifying the proposed relationships between the observed variables (emotions) and the two subscales (positive emotions and negative emotions).

Level of anxiety before beginning the survey (Frias-Navarro et al., 2020b). To provide evidence of the quality and accuracy of the measurement of anxiety, using the Generalized Anxiety Disorder (GAD-7), as well as positive and negative emotions, an item asked participants about their level of anxiety right before starting the survey. The response scale ranged from not at all anxious (0) to very anxious (10). Direct and statistically significant correlations with the variables of generalized anxiety and negative emotions are predicted, whereas the correlation with the positive emotions variable will be negative.

Concern about COVID-19 and its perception as a personal or global threat

Index of Concern about the Coronavirus (Frias-Navarro et al., 2020a). The degree of concern about the coronavirus problem was measured with a single item ranging from not concerned at all (1) to quite concerned (10).

Perception of personal and global threat. The survey contains two questions related to the perceived threat of the coronavirus: the perception of the degree of threat to the world population and the degree of perceived personal threat. The response scale ranges from no threat (1) to a high threat (7). This question is the same one used in the study by Everett et al. (2020).

Procedure

We conducted a cross-sectional survey during the first month of the lockdown in Spain (first wave of the pandemic). The samples in our study completed

an online survey voluntarily. The participants were assured that their responses would be confidential and anonymous. The data analyzed in this research were collected between March 25th and April 21st 2020. The sampling was non-probabilistic. Before the survey began, participants agreed to collaborate in the study by confirming that they had read the information and had had the chance to ask questions in the emails provided in the welcome message. Thus, the ethical requirements suggested for research in the context of COVID-19 were met (Inchausti et al., 2020). The research was approved by the Ethics Committee of Universidad de Tarapacá. Document: N°13/2020. The survey was distributed through WhatsApp and other social networks (Twitter, Facebook, Instagram, and LinkedIn), as well as on the ResearchGate profiles of the team members. Furthermore, the University of Valencia (Spain) and the University Pompeu Fabra (Spain) collaborated by putting the link in the news section of their institutional websites, and the Association of Retired People of the University of Valencia (APRJUV) and the Spanish Association of Methodology of the Behavioral Sciences (AEMCCO) distributed the link to all their members.

The minimum sample size required for type I (α = .05) and type II (β = .10) statistical errors was calculated with an a priori power analysis (Faul et al., 2009; Monterde-i-Bort et al., 2010; Garcia et al., 2008). The effect size of the difference between the means of the group (teachers / students) and gender (male / female) variables was set at medium (f = 0.25). A priori statistical power analysis (two conditions, α = .05, 1 - β = .90, and f = 0.25) showed a minimum sample size of 172 participants in all. The criterion for finalizing the data collection was that each group had to have at least 86 participants. A sensitivity analysis with the entire study sample (N = 452, α = .05, β = .10) showed that the main effect of the F-ratio of the two groups would have a high probability of detecting a small effect size (f = 0.15).

Data Analysis

Correlation analyses and a between-group unifactorial design were carried out. The effect sizes are interpreted according to the values proposed by Cohen (1988): small effect size: d = 0.2, η^2 = .01, r = .10; medium effect size: d = 0.5, η^2 = .06, r = .30; and large effect size: d = 0.8, η^2 = .14, r = .50. Cohen's d was estimated with the Comprehensive Meta Analysis program, version 2.2.064. Cronbach's alpha was used to estimate the internal reliability. The statistical analyses were performed with the SPSS v.26, JASP v.0.16.1 and GPower v.3.1.9.7 programs.

The data that support the findings of this study are openly available in OSF (Center for Open Science) (https://doi.org/10.17605/OSF.IO/3QXHM).

Results

Table 2 shows the descriptive statistics for the variables related to the emotional state (anxiety and emotions), concern about COVID-19, COVID-19 threat perception, and anxiety expressed at the beginning of the survey, along with the results of the between-group (teachers/students) unifactorial analysis of variance and the effect size (Cohen's *d*). Table 3 describes the analyses of the same variables according to the gender of the participants (male/female).

Emotional state at the beginning of the lockdown in Spain

The results of the analysis of the generalized anxiety (GAD-7) expressed by the participants show that students obtain higher scores than teachers ($F(1, 450) = 22.74$, $p < .001$, $d = -0.46$, [95% *CI* -0.64, -0.27]). In addition, 33% of the students obtain scores from 5 to 9 (mild anxiety) on the generalized anxiety, 28% score between 10 and 14 (moderate anxiety), and 17.4% score 15 or more on this instrument (severe anxiety). In the case of the teachers, the results show that 33% obtain scores that indicate mild anxiety, 16.5% have scores showing moderate anxiety, and only 11.2% obtain scores on the generalized anxiety that indicate severe anxiety. Students show more negative emotions ($F(1, 450) = 26.79$, $p < .001$, $d = -0.49$, [95% *CI* -0.68, -0.30]) and fewer positive emotions ($F(1, 450) = 20.34$, $p < .001$, $d = 0.43$, [95% *CI* 0.24, 0.62]) than teachers. All these differences between the mean scores are statistically significant, and the effect size of the standardized difference in means is medium. Moreover, the degree of anxiety directly expressed by the students at the beginning of the survey is higher than that of the teachers, and the difference between the mean scores is statistically significant, ($F(1, 450) = 9.88$, $p = .002$, $d = -0.30$, [95% *CI* -0.49, -0.12]). (Table 2). The item on anxiety before starting the survey maintains a high and direct correlation with the scores on the generalized anxiety variable ($r = .63$, $p < .001$) and with the scores for negative emotions ($r = .63$, $p < .001$), although they are slightly lower and inverse in the case of positive emotions ($r = -.36$, $p < .001$). This provides evidence of the accuracy of the measures taken with the COVID-19 emotional impact instruments (Table 4).

Degree of concern and perception of threat (personal and global)

The teachers obtain the highest scores on concern about COVID-19 ($F(1, 450) = 18.41$, $p < .001$, $d = 0.41$, [95% *CI* 0.22, 0.60]) and the perceived threat to the person ($F(1, 450) = 26.12$, $p < .001$, $d = 0.49$, [95% *CI* 0.30, 0.68]) and to the world (existential anxiety variables) ($F(1, 450) = 6.34$, $p = .011$, $d = 0.24$, [95% *CI* 0.05, 0.43]). All the differences between the mean scores of the two groups are statisti-

cally significant. Regarding the effect sizes, the variables of concern and personal threat obtain values close to medium effects, but the effect sizes are small in the case of the perception of global threat (Table 2). That is, on perceived threat due to COVID-19, the standardized difference in means (Cohen's *d* effect size) between teachers and students is smaller when COVID-19 is rated as a global threat (*d* = 0.24) than when it is perceived as a personal threat (*d* = 0.49).

Table 2. *Descriptive statistics and results of the comparisons of teachers (n = 188) and students (n = 264) on the variables of emotional state, concern, and COVID-19 threat.*

Variables	*M*	*SD*	*F*	*p*	*d*	*95% CI*
GAD7			22.74	< .001	-0.46	-0.64, -0.27
Teachers	6.74	4.99				
Students	9.04	5.10				
Negative emotions			26.79	< .001	-0.49	-0.68, -0.30
Teachers	21.39	9.28				
Students	25.80	8.67				
Positive emotions			20.34	< .001	0.43	0.24, 0.62
Teachers	28.26	6.31				
Students	25.48	6.55				
Anxiety at the beginning of the survey			9.88	.002	-0.30	-0.49, -0.12
Teachers	3.55	2.55				
Students	4.33	2.59				
Concern			18.41	< .001	0.41	0.22, 0.60
Teachers	8.05	1.72				
Students	7.34	1.74				
Personal threat			26.12	< .001	0.49	0.30, 0.68
Teachers	4.98	1.41				
Students	4.25	1.56				
Global threat			6.34	.011	0.24	0.05, 0.43
Teachers	6.20	1.03				
Students	5.94	1.13				

Note: *F* (degrees of freedom) = 1, 450. M: mean, SD: standard deviation, *p*: *p* value, *d*: *d* of Cohen, 95% *CI*: confidence interval of *d*.

Gender differences

The analysis of the scores by gender reveals a profile that consistently differentiates between the opinions of men and women at the time of the onset of the pandemic. Women score higher on generalized anxiety ($F(1, 447) = 22.23$, $p < .001$, $d = 0.48$, [95% *CI* 0.28, 0.68]), negative emotions ($F(1, 447) = 25.58$, $p < .001$, $d = 0.52$, [95% *CI* 0.31, 0.72]), and anxiety at baseline ($F(1, 447) = 5.04$, $p = .025$, $d = 0.23$, [95% *CI* 0.03, 0.43]), whereas their scores on expressing positive emotions are lower ($F(1, 447) = 5.66$, $p = .02$, $d = -0.24$, [95% *CI* -0.44, -0.04]). In addition, 35.7% of the male obtain scores from 5 to 9 (mild anxiety) on the GAD-7, 17.1% score between 10 and 14 (moderate anxiety), and only 7.1% score 15 or more on this in-

strument (severe anxiety). In the case of the female, the results show that 31.7% obtain scores that indicate mild anxiety, 25.9% have scores showing moderate anxiety, and 18.4% obtain scores on the generalized anxiety that indicate severe anxiety. The effect sizes of the standardized differences in means are medium in the case of anxiety and negative emotions and small in the case of positive emotions and anxiety expressed at baseline (Table 3).

In addition, at the onset of the pandemic, women have a higher degree of concern about COVID-19 ($F(1, 447) = 9.61$, $p < .001$, $d = 0.32$, [95% *CI* 0.11, 0.52]), and they feel that COVID-19 poses a personal ($F(1, 447) = 14.32$, $p < .001$, $d = 0.39$, [95% *CI* 0.19, 0.59]) and global threat (existential anxiety) ($F(1, 447) = 40.08$, $p < .001$, $d = 0.65$, [95% *CI* 0.45, 0.86]) to a greater extent than men do. The high effect size in the case of the perceived global threat due to COVID-19 ($d = -0.65$) stands out.

Table 3. *Descriptive data and results of comparisons of the male (n = 140) and female (n = 309) genders on the variables of emotional state, concern and threat due to COVID-19, and prevention of infection.*

	M	*SD*	*F*	*p*	*d*	*95% CI*
GAD7			22.23	< .001	0.48	0.28, 0.68
Female	8.85	5.22				
Male	6.42	4.67				
Negative emotions			25.58	< .001	0.52	0.31, 0.72
Female	25.43	8.93				
Male	20.83	8.90				
Positive emotions			5.66	0.02	-0.24	-0.44, -0.04
Female	26.19	6.67				
Male	27.76	6.12				
Anxiety at the beginning of the survey			5.04	.025	0.23	0.03, 0.43
Female	4.18	2.54				
Male	3.59	2.70				
Concern			9.61	< .001	0.32	0.11, 0.52
Female	7.83	1.69				
Male	7.29	1.76				
Personal threat			14.32	< .001	0.39	0.19, 0.59
Female	4.75	1.45				
Male	4.16	1.65				
Global threat			40.08	< .001	0.65	0.45, 0.86
Female	6.27	0.91				
Male	5.59	1.29				

Note: *F* (degrees of freedom) = 1, 447. *M*: mean, *SD*: standard deviation, *p*: *p* value, *d*: Cohen's *d*, 95% *CI*: confidence interval of *d*.

Personal threat and global threat

Finally, the analyses included a study of whether COVID-19 was perceived as a greater personal threat or a greater global threat at the beginning of the pandemic (first month of lockdown). The results of the repeated-measures design with the total sample indicate that the effects of the pandemic were considered more of a global threat (mean = 6.04, *SD* = 1.09) than a personal threat (mean = 4.55, *SD* = 1.54), with the difference between the means being statistically significant and the effect size of the standardized difference in means being very large ($F(1, 451) = 667.59$, $p < .001$, $d = 1.22$, [95% *CI* 1.09, 1.34]).

Correlations between the variables

The analysis of the correlations between the variables measured in the study allows us to provide evidence about the accuracy of the measurement of the constructs analyzed (validity of the results) and assess the magnitude of their relationships. The results indicate direct and very high correlations between the scores on the instruments measuring generalized anxiety, negative emotions, and anxiety at the beginning of the survey, with the correlation being high and inverse in the case of positive emotions. Regarding the variables of concern and personal ($r = .51$, $p < .001$) and global threat ($r = .50$, $p < .001$), the results show that the correlations between these constructs are high and positive. The correlations between the variables that measure physical and emotional anxiety and those that measure concern (existential anxiety) are statistically significant, but of a lower magnitude. In sum, there is consistency between the scores obtained on the measurement instruments, which supports the accuracy of the measurement of the constructs from the point of view of the validity of the results (Table 4).

Table 4. *Correlations between the scores on the variables measured in the study.*

Variables	GAD-7	Negative	Positive	Concern	Personal	Global
Negative emotions	.85 (***)	-				
Positive emotions	-.49 (***)	-.46 (***)	-			
Concern	.29 (***)	.31 (***)	-.11 (p = .022)	-		
Personal threat	.22 ***)	.22 (***)	-.14 (p = .003)	.51 (***)	-	
Global threat	.21 (***)	.23 ***)	-.04 (p = .419)	.50 (***)	.61 (***)	-
Initial anxiety	.63 (***)	.63 (***)	-.36 (***)	.21 (***)	.19 (***)	.15 (p = .001)

Note. *** $p < .001$

Discussion

Our study was carried out during the first wave of the pandemic (specifically, during the first month of the lockdown in Spain), and its two main objectives were to compare the emotional impact of COVID-19 on teachers and students aged 18 years and older and detect any gender differences. The results of our research indicate that the emotional impact of the pandemic was greater in students in terms of generalized anxiety and negative emotions, and they also expressed fewer positive emotions. In contrast, in the teachers, there was a greater impact on existential anxiety related to concern and the perception of personal and global threats. Regarding gender, at the time of the onset of the pandemic, women showed a greater emotional impact than men in terms of generalized anxiety, negative emotions, and existential anxiety. In addition, they expressed fewer positive emotions than men. Incorporating the gender perspective into the study of mental disorders during the COVID-19 pandemic is essential (Fenollar-Cortés et al., 2021). Regarding the third objective of our study, the results showed that the perceived threat of the COVID-19 pandemic was higher when it was considered a more global threat than a personal threat.

The results of our study add new evidence to the analysis of the emotional state of teachers and students at the onset of the pandemic, and, as a novelty, they highlight the differential emotional impact of COVID-19 on teachers and students. Research conducted in European countries indicates that the prevalence of anxiety, depression, and other mental health problems is higher in university students compared to the general population (Husky et al., 2020; Kaparounaki et al., 2020; Savage et al., 2020; Villani et al., 2021). Similar results have also been obtained in studies conducted in non-European countries (Cao et al., 2020). As Ozamiz-Etxebarria et al. (2020) point out, young adult students are particularly vulnerable to mental health problems because they are in an unstable life and work situation, which is typical of the transition stage to adulthood. Concern about the possible delay in completing their studies (Cao et al., 2020) or the feeling of loneliness and isolation from their peers due to being confined could explain this higher rate of mental disorders (Odriozola-Gonzalez, 2020; Smith et al., 2020). Our findings highlight that, at the beginning of the pandemic, students experienced more anxious symptomatology and negative emotions (generalized anxiety), whereas their teachers felt greater existential anxiety and concern, at a time of great uncertainty about how to continue with academic training.

Results obtained with samples from European countries on the emotional impact of the COVID-19 pandemic indicate that female students report more men-

tal health problems, such as anxiety or depression, than their male peers (González-Sanguino et al., 2020; Villani et al., 2020). However, in other studies, such as the one conducted in China by Wang et al. (2020), this difference was not found. Perhaps these disparate results could be explained by differences in cultural contexts. The results of our research consistently indicate that, at the onset of the pandemic, women expressed greater anxiety. Planning the study from a gender perspective is critical to understanding the differential impact of the COVID-19 pandemic crisis. Specifically, assistance and intervention in the mental health of women are especially important, given that they manifest a greater emotional impact, in terms of both psychological and emotional anxiety (generalized anxiety) and worry and existential anxiety.

The main limitations of our study are related to the non-probabilistic sampling and the cross-sectional design, which keep us from making causal interpretations. The generalization of our findings should be interpreted with caution because we use a convenience sample. There could be a certain selection bias because participation was voluntary, and it is possible that only people who were especially affected emotionally participated. Further studies are needed to assess these relationships and confirm the stability of the results. Furthermore, the cross-sectional design does not allow us to compare pre-pandemic and post-pandemic results.

Conclusions

We believe that it is important to take care of the mental health of teachers and students and foster an emotional climate in the classroom that supports teaching and learning. The teacher is not only the person responsible for providing instruction in the classroom and in learning environments; his/her emotions and personal well-being also influence his/her teaching performance, thus affecting the quality of instruction in the teaching-learning process. In the classroom, there is a feedback effect between teachers' emotions and students' emotions in a process with bidirectional or reciprocal effects (Frenzel et al., 2021). That is, teachers' emotions are part of a system that influences and is influenced by students' results (emotions, beliefs, motivation, classroom behaviour, performance), producing a link between them. For example, the study by Frenzel et al. (2009) showed that when students perceive mental health problems in teachers, they rate their teaching as less effective. Therefore, the model of emotions in the classroom has to include students and teachers as the two key pieces that create an emotional climate in the classroom.

Of course, schools have to be provided with information and communication technologies, along with training to foster the development of teachers' and students' teaching and learning capacities using a virtual platform. Teachers and students must have the necessary technological skills and competencies to deal with unexpected changes that may occur in teaching due to crises or disasters such as COVID-19. However, this preparation is not sufficient to prevent the adverse effects of situations such as those that occurred during COVID-19. This type of global emergency and the sudden change in people's lives should lead to reflection on the need to build a resilient educational system. It is time to assess the effects of the pandemic and work to mitigate the consequences of possible future crises. It is a question of planning and providing the educational system with tools that can be adapted to adverse events, to enable teachers and students to cope with these changes in the best way possible and reduce the impact on their mental health. Our study provides evidence about the differential emotional impact on teachers and students.

In sum, learning to control one's emotions and being able to cope with crisis situations are two skills that should be part of the toolbox of the educational system. It is time for educational policies to value and develop a resilient educational system as a key element, so that teachers and students can carry out their academic functions properly and acquire fundamental competences that allow them to adapt to adversity and maintain their personal wellbeing as much as possible. The academic training of future teachers must also incorporate contents related to the resilience of the educational system and the pedagogy of virtual teaching, along with contents about the effective management and supervision of students and their learning. Moreover, it is important to take into account that, in crisis or emergency situations such as COVID-19, teachers and students have different emotional reactions. Therefore, it is essential to know how each group reacts to adversity in order to develop specific action plans to protect them from mental disorders and possible sequelae. In addition, educational policies and teacher training programs should take the gender perspective into account when studying and planning a resilient educational system.

Acknowledgments

Our gratitude to all individuals who contributed to the research during those moments of the COVID-19 pandemic, including participants and those who assisted in the survey distribution. And also, to the following institutions or associations that collaborated in the distribution of the survey: University of Valencia (Spain), University Pompeu Fabra (Spain), Asociación de Profesores Jubilados de la Universidad de Valencia (APRJUV),

and Asociación Española de Metodología de las Ciencias del Comportamiento (AEMCCO).

La investigación no tuvo financiación. El proyecto cuenta con la aprobación del Comité Ético Científico de la Universidad de Tarapacá. Documento: "Constancia de aprobación N°13/2020".

Referencias

Ain, S. N., & Gilani, S. N. A. (2021). Existential anxiety amid COVID-19 pandemic in Kashmir: A cross-sectional study. *Journal of Education and Health Promotion*, *10*(1), 184. https://doi.org/10.4103/jehp.jehp_1102_20

Alves, R., Lopes, T., & Precioso, J. (2021). Teachers' well-being in times of Covid-19 pandemic: Factors that explain professional well-being. *International Journal of Educational Research and Innovation*, *15*, 203-217. https://doi.org/10.46661/ijeri.5120

Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Sustainability*, *12*(20), 8438. https://doi.org/10.3390/su12208438

Ausín-Benito, B., González-Sanguino, C., Castellanos-López, M. Á., Sáiz-Galdós, J., Zamorano-Castellanos, S., Vaquero-Crespo, C., & Muñoz-López, M. (2022). The psychological impact of the COVID-19 pandemic in Spain: a longitudinal study. *Psicothema*, *34*, 66-73. https://doi.org/10.7334/psicothema2021.290

Besser, A., Lotem, S., & Zeigler-Hill, V. (2022). Psychological stress & vocal symptoms among university teachers in Israel: Implications of the shift to online synchronous teaching during the COVID-19 pandemic. *Journal of Voice*, *36*(2), 291.e9-291.e16. https://doi.org/10.1016/j.jvoice.2020.05.028

Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, *287*:112934 https://doi.org/10.1016/j.psychres.2020.112934.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Routledge Academic.

Edens, D., & Kiresich, E. (2022). Student attitudes and experiences with COVID-19: A case of one research university in California. In J. S. McKeown, K. Bista, & R. Y. Chan (Eds.), *Global higher education during COVID-19: Policy, society, and technology* (pp. 123-138). STAR Scholars Book Series. https://starscholars.org/product/global-education

Everett, J. A. C., Colombatto, C., Chituc, V., Brady, W. J., & Crockett, M. (2020). The effectiveness of moral messages on public health behavioral intentions during the COVID-19 pandemic. *PsyArXiv*. https://doi.org/10.31234/osf.io/9yqs8

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1. *Behavior Research Methods, 41*, 1149-1160. http://doi.org/10.3758/BRM.41.4.1149

Fenollar-Cortés, J., Jiménez, Ó., Ruiz-García, A., & Resurrección, D. M. (2021). Gender differences in psychological impact of the confinement during the COVID-19 outbreak in Spain: A longitudinal study. *Frontiers in Psychology, 12:* 2279. https://doi.org/10.3389/fpsyg.2021.682860

Fernández-Castillo, A. (2021). State-anxiety and academic burnout regarding university access selective examinations in Spain during and after the COVID-19 lockdown. *Frontiers in Psychology, 12*: 17. https://doi.org/10.3389/fpsyg.2021.621863

Frenzel, A. C., Daniels, L., & Burić, I. (2021). Teacher emotions in the classroom and their implications for students. *Educational Psychologist, 56*(4), 250-264, https://doi.org/10.1080/00461520.2021.1985501

Frenzel, A. C., Goetz, T., Stephens, E. J., & Jacob, B. (2009). Antecedents and effects of teachers' emotional experiences: An integrated perspective and empirical test. In P. A. Schutz and M. Zembylas (Eds.), *Advances in teacher emotion research* (pp. 129-151). Springer. https://doi.org/10.1007/978-1-4419-0564-2_7

Frias-Navarro, D., Berrios-Riquelme, J., Pascual-Soler, M. & Gomez-Frias, R. (2020a). *Index of Concern about the Coronavirus.* http://doi.org/10.17605/OSF.IO/C6U7Z

Frias-Navarro, D., Berrios-Riquelme, J., Pascual-Soler, M. & Gomez-Frias, R. (2020b). *Level of anxiety before beginning the survey.* http://doi.org/10.17605/OSF.IO/QS9JK

Frias-Navarro, D., Pascual-Soler, M., & Berrios-Riquelme, J. (2020c). *Scale of Positive and Negative Emotions in Crisis or Social Threat Situations*. https://doi.org/10.17605/OSF.IO/2XMDT

Frias-Navarro, D., Pascual-Soler, M., Berrios-Riquelme, J., Gomez-Frias, R., & Caamaño-Rocha, L. (2021). COVID-19. Effect of Moral Messages to Persuade the Population to Stay at Home in Spain, Chile, and Colombia. *The Spanish Journal of Psychology, 24:* E42. https://doi.org/10.1017/SJP.2021.39

Garcia, J. F., Pascual, J., Frias, M. D., van Krunckelsven, D., & Murgui, S. (2008). Diseño y análisis de la potencia: *N* y los intervalos de confianza de las medias. *Psicothema, 20*(4), 933-938. https://tinyurl.com/2scm86e9

Gomez-Baya, D., Salinas-Perez, J. A., Sanchez-Lopez, A., Paino-Quesada, S, & Mendoza-Berjano, R. (2022). The role of developmental assets in gender differences in anxiety in Spanish youth. *Frontiers in Psychiatry, 13*: 810326. https://doi.org/10.3389/fpsyt.2022.810326

González-Sanguino, C., Ausín-Benito, B., Castellanos-López, M. Á., Saiz-Galdós, J., López-Gómez, A., Ugidos, C., & Muñoz-Galdós, M. (2020). Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain, Behavior, and Immunity*, *87*, 172-176. https://doi.org/10.1016/j.bbi.2020.05.040

Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, H., Cohen Silver, R., Everall, I., Ford, T., John, A., Kabir, T., King, K., Madan, I., Michie, S., Przybylski, A. K., Shafran, R., Sweeney, A., ... Bullmore, E. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *The Lancet Psychiatry, 7*(6), 547–560. https://doi.org/10.1016/s2215-0366(20)30168-1

Hortigüela-Alcala, D., Chiva-Bartoll, O., & Hernando-Garijo, A. (2022). "I feel lonely, I don't understand you when you talk, and I find it hard to breathe". Analysis of the emotional tensions of physical education students in the Spanish setting of COVID-19. *Teaching and Teacher Education*, *112*: 103657. https://doi.org/10.1016/j.tate.2022.103657

Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry, 102:* 152191. https://doi.org/10.1016/j.comppsych.202 0.152191

Inchausti, F., García-Poveda, N. V., Prado-Abril, J., & Sánchez-Reales, S. (2020). La psicología clínica ante la pandemia COVID-19 en España. *Clínica y Salud*, *31*, 105-107. https://doi.org/10.5093/clysa2020a11

Kan, F. P., Raoofi, S., Rafiei, S., Khani, S., Hosseinifard, H., Tajik, F., Raoofi, N., Ahmadi, S., Aghalou, S., Torabi, F., Dehnad, A., Rezaei, S., Hosseinipalangi, Z., & Ghashghaee, A. (2021). A systematic review of the prevalence of anxiety among the general population during the COVID-19 pandemic. *Journal of Affective Disorders, 293,* 391–398. https://doi.org/10.1016/j.jad.2021.06.073

Kaparounaki, C. K., Patsali, M. E., Mousa, D. P. V., Papadopoulou, E. V., Papadopoulou, K. K., & Fountoulakis, K. N. (2020). University students' mental health amidst the COVID-19 quarantine in Greece. *Psychiatry Research*, *290*: 113111. https://doi.org/10.1016/j.psychres.2020.113111

Liyanage, S., Saqib, K., Khan, A. F., Thobani, T. R., Tang, W.-C., Chiarot, C. B., AlShurman, B. A., & Butt, Z. A. (2021). Prevalence of anxiety in university students during the COVID-19 pandemic: A systematic review. *International Journal of Environmental Research and Public Health, 19*(1), 62. https://doi.org/10.3390/ijerph19010062

Ma, K., Chutiyami, M., Zhang, Y., & Nicoll, S. (2021). Online teaching self-efficacy during COVID-19: Changes, its associated factors and moderators. Education and infor-

mation technologies, 26(6), 6675-6697. https://doi.org/10.1007/s10639-021-10486-3

MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, *94*: 102352. https://doi.org/10.1016/j.system.2020.102352

Maluenda-Albornoz, J., Infante-Villagrán, V., Galve-González, C., Flores-Oyarzo, G., & Berríos-Riquelme, J. (2022). Early and dynamic socio-academic variables related to dropout intention: A predictive model made during the pandemic. *Sustainability, 14*: 831. https://doi.org/10.3390/su14020831

Meinck, S., Fraillon, J., & Strietholt, R. (Eds.) (2022). *The impact of the COVID-19 pandemic on education. International evidence from the Responses to Educational Disruption Survey (REDS)*. UNESCO.

Monterde-i-Bort, H., Frias-Navarro, D., & Pascual-Llobell, J. (2010). Uses and abuses of statistical significance tests and other statistical resources: A comparative study. *European Journal of Psychology of Education*, *25*, 429-447. https://doi.org/10.1007/s10212-010-0021-x

Morales, S., Zeytinoglu, S., Lorenzo, N. E., Chronis-Tuscano, A., Degnan, K. A., Almas, A. N., Pine, D. S., & Fox, N. A. (2022). Which anxious adolescents were most affected by the COVID-19 pandemic? *Clinical Psychological Science, 10*(6), 1044–1059. https://doi.org/10.1177/21677026211059524

Odriozola-González, P., Planchuelo-Gómez, Á., Irurtia, M. J., & de Luis-García, R. (2020). Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. *Psychiatry Research*, *290*, 113108. https://doi.org/10.1016/j.psychres.2020.113108

Oducado, R. M., Rabacal, J., & Tamdang, K. (2021). Perceived stress due to COVID-19 pandemic among employed professional teachers. *International Journal of Educational Research and Innovation*, *15*, 305-316. https://doi.org/10.46661/ijeri.5284

Ozamiz-Etxebarria, N., Berasategi Santxo, N., Idoiaga Mondragon, N., & Dosil Santamaría, M. (2021). The psychological state of teachers during the COVID-19 crisis: The challenge of returning to face-to-face teaching. *Frontiers in Psychology*, *11*, 3861. https://doi.org/10.3389/fpsyg.2020.620718

Ozamiz-Etxebarria, N., Dosil-Santamaria, M., Picaza-Gorrochategui, M., & Idoiaga-Mondragon, N. (2020). Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. *Cadernos de Saude Publica, 36*(4): e00054020. https://doi.org/10.1590/0102-311X00054020

Pressley, T., & Ha, C. (2021). Teaching during a pandemic: United States teachers' self-efficacy during COVID-19. *Teaching and Teacher Education, 106:* 103465. https://doi.org/10.1016/j.tate.2021.103465

Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General Psychiatry, 33*(2): e100213. https://doi.org/10.1136/gpsych-2020-100213

Savage, M. J., James, R., Magistro, D., Donaldson, J., Healy, L. C., Nevill, M., & Hennis, P. J. (2020). Mental health and movement behaviour during the COVID-19 pandemic in UK university students: Prospective cohort study. *Mental Health and Physical Activity, 19*, 100357. https://doi.org/10.1016/j. mhpa.2020.100357

Schellinski, K. (2021). Essential anxiety: COVID-19 in analytic practice. *Journal of Analytical Psychology, 66*(3), 534-545. https://doi.org/10.1111/1468-5922.12690

Silva, D., Cobucci, R. N., Lima, S., & de Andrade, F. B. (2021). Prevalence of anxiety, depression, and stress among teachers during the COVID-19 pandemic: A PRISMA-compliant systematic review. *Medicine, 100*(44): e27684. https://doi.org/10.1097/MD.0000000000027684

Smith, B. J., & Lim, M. H. (2020). How the COVID-19 pandemic is focusing attention on loneliness and social isolation. *Public Health Research & Practice, 30*(2), 3022008. https://doi.org/10.17061/phrp3022008

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine, 166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

van Bruggen, V., Ten Klooster, P., Westerhof, G., Vos, J., de Kleine, E., Bohlmeijer, E., & Glas, G. (2017). The Existential Concerns Questionnaire (ECQ)–development and initial validation of a new existential anxiety scale in a nonclinical and clinical sample. *Journal of Clinical Psychology, 73*(12), 1692-1703. https://doi.org/10.1002/jclp.22474

Varea, V., & González-Calvo, G. (2021). Touchless classes and absent bodies: teaching physical education in times of Covid-19. *Sport, Education and Society, 26*(8), 831-845. https://doi.org/10.1080/13573322.2020.1791814

Villani, L., Pastorino, R., Molinari, E., Anelli, F., Ricciardi, W., Graffigna, G., & Boccia, S. (2021). Impact of the COVID-19 pandemic on psychological well-being of students in an Italian university: a web-based cross-sectional survey. *Globalization and Health, 17*(39), 1-14. https://doi.org/10.1186/s12992-021-00680-w

Vindegaard, N., & Benros, M. E. (2020). COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. *Brain, Behavior, and Immunity, 89*, 531-542. https://doi.org/10.1016/j.bbi.2020.05.048

Wang, C., & Zhao, H. (2020). The impact of COVID-19 on anxiety in Chinese university students. *Frontiers in Psychology, 11*, 1168. https://doi.org/10.3389/fpsyg.2020.01168

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health, 17*(5), 1729. https://doi.org/10.3390/ijerph17051729

Para citar en APA

Pascual-Soler, M., Berríos-Riquelme, J., Gómez-Frías, I., & Frías Navarro, D. (2023). Anxiety, emotions and threat perception in COVID-19 context: differences between Spanish teachers and students social. *Terapia Psicológica (En línea), 41*(2), 253-274. https://doi.org/10.4067/S0718-48082023000200253