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# Family social climate and anxiety, depression and stress in university students in times of covid-19

## Abstract

The objective of this research was to analyze the relationship between the family social climate and the anxiety, depression, and stress experienced by university students in times of COVID-19. In this correlational and cross-sectional study, 199 university students. Were evaluated using a sociodemographic record, the family climate scale, and the depression, anxiety and stress scales. The results indicated that the dimensions of family development and stability are negatively and significantly correlated with depression, anxiety and stress (all $p < .01$ or less). Likewise, it was found that the family composition has different effects regarding the family climate and depression, anxiety and stress. It is concluded that the family social climate is negatively related to depression, anxiety and stress, with the dimensions of development and stability being the significant correlations.

**Keywords:** family social environment, anxiety, depression, stress, COVID-19

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## Introduction

In the current context of the COVID-19 pandemic and post-pandemic, people are experiencing negative emotions that should be considered as natural responses to any threatening or uncertain situation. These discomforts can be multiple, but the ones that are being reported the most are anxiety, stress, fear, fear, sadness, worry, a feeling of loneliness, irritability, fear of getting sick or dying, changes in appetite and sleep, especially if people do not they meet their basic needs and do not have social support networks as is happening in our country.[1,2] Countries, even with great advances in medical and psychological sciences with great resources, have failed not only to advance the pandemic, but have also failed to adequately address the mental health problems of the population, since most of the Efforts have been and are devoted to the biological aspects of the epidemic. One of the most common actions taken by countries to face the pandemic is quarantine or social isolation.[1,3]

The epidemic outbreak causes concern and fear in the subjective well-being of each person. The lives of people who are infected, their family, friends and their entire social group are in danger of spreading all the potential effects of COVID-19.[3] Psychological effects such as confusion, anger, exhaustion, detachment, anxiety and decreased task performance have been described a few days after quarantine, along with stress, post-traumatic stress and depression.[1] The family is considered the basic unit of society, it is accepted that strong families develop strong societies, families are made up of people and the family environment shapes people, he affirmed that the identity of individuals is diffuse at the beginning but that later on the bosom of the family becomes a person with a clear identity, indicating that the origin of the identity is given by the family environment and the child's parents.[4,5] Dombrovskis[6] Moos et al.[7] have studied the environment or family social climate[5] and certain family profiles, identifying their value systems and how these systems interact with family members. Satisfaction with the family environment is linked to the time spent with it. Family life is the environment where the culture with its beliefs, values and customs are transmitted to the new generations, where all its members participate, parents, siblings and relatives who, in our environment, are usually part of it.

The main place where the emotional and social areas of the person are shaped is the family, the interactions of family members are influenced by a series of dimensions within which are relationships, development and stability, where each dimension counts with their respective sub-areas.[8] The intergenerational relationship between family members among whom there is warmth, closeness and emotional support is of the utmost importance in daily coexistence.[9] The people most vulnerable to presenting effects on psychological health and especially anxiety, depression and stress are the elderly, people with chronic diseases, children and adolescents and young people. This last group, which is undergoing a series of changes and adaptations in its development, has suddenly been impelled to make a series of changes in its academic life, in its style of family relationships and style of social and even sentimental relationships, of a different type of social coexistence to which he was not prepared. It will be their family atmosphere that provides the best protection factor for mental health problems, for this reason it is intended to study the possible relationship between the family atmosphere and anxiety, depression and stress problems in university students.[10]

The family is a group of human beings related by affection and blood ties where interactions take place, where the needs of its members are manifested and met, which is why some families are similar and provide positive or satisfactory interactions; Despite this, it is important to recognize that the family has a high value for its members, especially in individual and social commitment as an environment that provides love, a sense of well-being and support; therefore, it can also be a source of dissatisfaction; the family atmosphere can cause an imbalance in the sensation of well-being at any stage of the life of its members and of course in the stage of adolescence and youth, the family atmosphere has a great influence on the development of values, attitudes, affections and ways of being of its members.[11] The family presents subsystems that can be. One of the purposes of families is to influence socialization and promotion of personal identity, therefore, to the extent that the family atmosphere allows this development to take place in a positive way, it will have fulfilled some of the main tasks of the family. It is clear that families are different and therefore offer different climates or atmospheres in the lives of their members.[4]

In family functioning, there are dimensions that can be presented in different ways, but all approaches use the name of dimensions or common areas. Covadonga[4] mentions structure, family social climate,

and educational style as dimensions. Within the family structure are the family typology (nuclear, single-parent, extended and others), the social structure, economic structure and the cultural structure. The family social climate encompasses the types, conflict, cohesion and time. In educational styles, the various types, implications and collaboration are considered. The school of Moos et al.[7] defines family social climate (family climate or family atmosphere) as the perception of the socio-environmental characteristics of the family, which is configured through the process of interpersonal relationships established between family members through their relationships, development and stability. It contains three large dimensions: relationships, development and stability, each with their respective scales. The relationship dimension is linked to communication, free expression, as well as the level of conflicting interaction between family members. On the scale of Moos et al. It is made up of three scales: cohesion, expressiveness and conflict. The development dimension is related to some personal development processes of its members that are nourished or not by the family lifestyle. The dimension is made up of the scales of Autonomy, Performance, Cultural/Intellectual Orientation, Social/Recreational Orientation, and Moral/Religious Emphasis. Stability is a dimension that provides information about the structure and organization of family members, as well as the mutual control that usually occurs among family members. It is made up of two scales, organization and control.

## Anxiety

Anxiety related to feelings of fear and apprehension are emotions that all human beings experience at some point in life. It is accepted that they can be emotions that help when human beings believe they are exposed to danger, it is even believed that it is an inherent condition of modern life, for this reason mild anxiety is usually considered as positive but severe anxiety as harmful since is beyond the control of the person.[12] Anxiety can be defined as a state of mind characterized by marked negative affect and somatic symptoms of tension whereby a person apprehensively anticipates future danger or misfortune. Anxiety can refer to various aspects such as the subjective feeling of feeling insecure or obvious behaviors such as walking crouched, looking worried or physiological responses such as tachycardia. It is accepted that the manifestations usually affect the cognitive area, through pessimistic and even terrifying thoughts that can happen to him or his family and difficulties concentrating; behavioral manifestations such as not going to class for fear of being questioned or hiding if someone comes home and thinks they have to give answers or clarifications to various situations and somatic manifestations such as breathing difficulties, dry mouth, stomach and urinary disorders, and dizziness inside others.[12]

For some researchers, to be classified as an anxiety disorder, this must be so overwhelming that it alters functional, social, and work life by presenting itself in the form of intense anguish, although this does not mean that you cannot perform your activities of daily living.[13,14] It is called fear when the anxiety is intense and is oriented not to the future but to a current, present danger, a real or imaginary imminent threat causing escape actions.[15] In the current DSM-5 & DSM-5 TR1[15,16] classification, anxiety disorders have been ordered according to development: (a) separation anxiety: manifestation of anxiety in the face of separation or possible separation from the people with whom you feel attached or attached to a degree of intensity that is not appropriate for the period of development you are going through; (b) selective mutism: selective mutism is characterized by the inability to speak in the various social situations in which the person is supposed to intervene verbally, for example, in the school classroom, although they are generally capable of speaking in other settings; (c) specific phobias: people with specific phobias are afraid of fixed or specific situations or objects, so they generally tend to avoid those situations or objects; (d) social anxiety disorder (social phobia): previously it was more common to use the term social phobia, it occurs when people feel anxious and even afraid if they have to interact socially with other people, worse if they are unknown, especially if they feel that it will be observed or evaluated thinking that the evaluation will be negative; (e) panic disorder: the person experiences a sudden onset of manifestations of fear and intense discomfort that can peak in minutes, accompanied by physical (eg choking) and cognitive changes (eg fear of going crazy or dying), seizures they are repetitive and are usually expected (typical feared situations) or unexpected (for no apparent reason); (f) Agoraphobia: when the person experiences fear or anxiety in front of open spaces, public transport, standing in line or being in the middle of a crowd, being alone outside the home or being in closed spaces such as in the cinema;[17] (g) generalized anxiety disorder: excessive anxiety and apprehension about life circumstances for at least 6 months, worries are difficult to control, general symptoms of anxiety such as alertness, muscle tension, insomnia, impatience, and difficulty concentrating ; and (h) substance/medication-induced anxiety disorder, anxiety disorder due to another medical condition, other specified and unspecified anxiety disorders. In the recent DSM-5 TR[16] there have been no major changes.

## Anxiety in the Lovibond and Lovibond approach

Anxiety is described around the physical manifestations of excitement, anxious panic reactions, muscle tension, tremors and even fainting, Lovibond[17] highlighting the relationship between a prolonged state of anxiety and an intense fear response, The researchers also point to situational anxiety, understood as the aspect of affectivity that accompanies anxiety or stress rather than other emotions such as anger or fear that usually arise when the person is unable to respond to the uncertainty in which lives.[18]

## Depression

Feelings of depression or joy are universal, there are days when we wake up without energy, sad and wanting to cry for no apparent reason, but they are feelings that last for hours or perhaps one or two days, we already know that they will pass.[19] These reactions are considered normal, but if they are severe and last for several weeks, they may be classified as adjustment disorder with depressed mood.[20] In previous classifications[21] depression was within mood disorders, now it is the other way around the section is called depressive disorders and these include: disruptive state dysregulation disorder (commonly called depression), major depression, persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to a medical condition, and other specified and unspecified depressive disorders. It should be noted that it has been separated from bipolar disorders (mania and depression).

The two classic disorders are major depression and persistent depression (dysthymia), but disruptive mood dysregulation has been included. In disruptive mood dysregulation, the main manifestation is chronic irritability with intermittent tantrums that occur in two or more contexts. The onset of the disorder must be between 6 and 10 years of age. The first diagnosis should not be made before the age of 6 or after the age of 18, there is a risk of suicide. It is not very clear why chronic irritability is included in depressive disorders. Major depression, also called severe depression, is characterized by the fact that the most common symptoms are sadness, discouragement, and prolonged excessive grief. Frequently there are feelings of worthlessness and

loss of joy in life. Sometimes violent crying reactions to frustration and anger that are not necessarily related to a specific situation. There are cognitive difficulties (lack of concentration), behavioral symptoms (careless dress, grooming, isolation, slowness, restlessness), and physiological manifestations (sleep and appetite problems). Persistent depression better known as dysthymia. It is similar to major depression because of the depressed mood most of the time, it can last for years, but its manifestations are milder and sometimes it may not be recognized because the person performs the activities of daily life in a bad way.

## Depression in the Lovibond and Lovibond approach

Researchers conceptualized depression as an abnormality characterized by mood-related manifestations of sadness, hopelessness, low self-esteem, and feelings of worthlessness that prevent one from striving to achieve one's intended goals.[17]

## Stress

In official classifications such as the DSM-IV-TR[16] stress is described as the appearance of fear, hopelessness and horrors of great intensity that can be re-experienced, producing significant discomfort and deterioration in the functions of daily life, showing the person avoidance and activation behaviors. In DSM-5 (2013) post-traumatic stress is mentioned in the section trauma-related disorders and stress factors and in ICD 11 Keeley et al.[22] post-traumatic stress and complex post-traumatic stress are mentioned.

## Stress in the Lovibond and Lovibond Approach

Stress is described as a certain tendency to react to stressful events with symptoms such as tension, irritability and persistent activation, with a low threshold to be disturbed or frustrated, suggesting that there is a natural continuity between the syndromes evaluated by the anxiety and stress scale the dividing point between the two being somewhat arbitrary. Stress is generally characterized by the perception of a threat or danger, the body's alarm reaction, and the set of actions or responses to that threat. The current pandemic, its dangers and the mandatory quarantine are potentially stressful.[17] Anxiety, depression and stress can be considered as adaptive behaviors that have occurred in the human species throughout its evolution, especially when there are situations of uncertainty, isolation, lack of basic needs and lack of social life. It should be taken into account that quarantine, labor difficulties, overcrowding and basic deficiencies are potentially generating anxiety, depression and stress.

## Family social climate and anxiety, depression and stress

Pandemic-type disease outbreaks are types of disasters that cause great stress and distress due to the uncertainty they bring about. With typical disasters such as earthquakes, landslides, tsunamis, it is known for sure whether or not you have been personally affected, although physical and psychological recovery will be long and difficult once the event is over. On the other hand, epidemic outbreaks do not have a more or less determined time limit, the perception or sensation is of continuous risk, so the fight and flight system is not activated effectively, the fact of being in a state of preparation for a overwhelming threat for a long period is uncertain and triggers stress, even more so if a person contracts the disease and is not seriously affected but their ability to infect other people and within them to close or loved ones increases the uncertainty and stress experience.[23] The effects within the survivors of other pandemics such as Ebola and SARS point to manifestations of depression, post-traumatic stress (PTS) and even an increase in suicides in older adults who had witnessed the death of relatives, in relation to this point Tuesca-Molina et al.[24] when studying the elderly population, found that one of the main causes of depression in this group is the lack of social interaction and even consider it as a protection factor. Survivors of those who experienced significant trauma reported low quality of life. Among health workers, depression, EPT, anxiety and Burnout syndrome are observed.[25]

The psychological health of children and young people is markedly influenced by the atmosphere and family interactions, these have been deeply affected by the pandemic due to prolonged home confinements. The family environment can become a risk factor for the mental health of children and young people. Many parents had to deal with the new stresses caused by supervising their children's distance education and activities with little outside support, while simultaneously having to deal with their own financial, emotional, and social constraints. Parents must buffer their children's stress, but this ability to buffer their children's difficulties requires parents to have good emotional and physical resources, but since they themselves have their own difficulties, over time their ability to buffer others decreases markedly, so the possibility of domestic violence must also be considered.[26] In Taiwan, Goh et al.[27] have found that lockdown, social distancing, and stay-at-home policies have increased vulnerability related to mental health. A series of psychological repercussions have been presented such as fear, frustration and boredom that are associated with anxiety, post-traumatic symptoms and depression during the period of social isolation, but in a risky way, these manifestations are associated with domestic violence and the increase in alcohol consumption.

Research on the family and the presence of psychological or mental health problems have occurred over time, as follows: Pelechano[28] reports that the movement on family therapy and its influence on the presence of psychological problems is important. In Peru, Gonzáles et al.[29] found that the majority of families were extended and that most of them functioned in a dysfunctional manner, either to a mild or moderate degree, and that this type of family was related to the depressive symptoms of the adolescents studied; although depressive symptoms were also present in adolescents in single-parent families, these were not statistically significant. Vargas[30] found that before the type of family, it is family functioning that would be significantly related to psychological problems, so when any of its members is altered, it is necessary for the entire family system to be assisted. Gonzáles[31] found that the majority of students are at the low level in family social climate and the level of slightly depressed in depression, found a significant relationship between all dimensions of family social climate and depression, highlighting that the family can be a protective factor or a risk factor when problems arise within the family. It has been found that stress and anxiety in young Mexican university students was related to family functioning, and it is important to feel that the family blames them for the problems.

Rodríguez and Jhonela[32] affirm that the adolescent population, in times of pandemic and confinement with anxiety, depression and withdrawal affect socialization, this being a positive factor to face depression above all. Lacomba et al.[33] state that the emergence of the global pandemic of COVID-19 has caused a series of changes in society and therefore in family functioning. In their research they found that the negative family climate and deficient emotional regulation strategies in children children are the variables that most affect the emotional functioning of children. In addition, they suggest that the family system and its dynamics should be considered as a whole in order to better understand the emotional maladjustments of adolescents and their family members. Guevara and Ocharan[34]

recently investigated the family climate and depression in this group in a sample of adolescents. The researchers found that while there is some inverse relationship between family climate and depression, it is weak. Huari and Rivera[35] in times of pandemic, found a relationship between social skills and depression in adolescents, recommending further study of the subject.

The so-called model of the occurrence of events has been raised as very important in emerging adulthood and university life, which states that the development of human beings, especially in emerging adulthood, the vast majority of university students are influenced by the When important events take place in this period of their lives Papalia & Martorell[36] for example, in the current time of COVID-19[37,38] young university students must develop Appropriate responses to the specific experiences they are experiencing, to the extent that they do it well, they will successfully emerge from this pandemic that they have had to live. The pandemic has impacted on lifestyle, producing uncertainty, alteration of daily living routines, labor difficulties and therefore economic difficulties, including excessive misinformation and rumors that can cause the person to experience a lack of control over their lives, without knowing exactly what to do the effects are more serious if health services are of low quality.[39–41]

Huarcaya-Victoria[42] refer that, although children and young people experience mild symptoms, few hospitalizations and a low percentage of deaths, they are highly vulnerable to the impact of continuous stressors due to the sensitive period of development, the For people who have experienced the death of someone close to them, the inability to say goodbye can lead to inappropriate mourning, with anger, sadness, and resentment. In Peru, the quarantine was extremely long, causing university students to interrupt their face-to-face academic life, increasing social distancing and almost permanent coexistence with their family, sometimes in small environments,[43] for which it is desired to find if there is a negative correlation between the family climate with depression, anxiety and stress in university students in times of COVID-19.

## Methods

### Participants

The research was carried out in the Social Sciences Area of the Catholic University of Santa María (Arequipa-Peru), an area that has an average of 2,200 students. 199 students from psychology schools participated (43, 21.6%); advertising and multimedia (32, 16.1%); social communication (61, 30.6%); tourism and hospitality (24, 12.1%); education (26, 13.1%); social work (13, 6.5%). Only those who participated voluntarily and satisfactorily completed the application of the instruments were considered. 120 (60.3%) women and 79 men (39.7%) participated; 47 (23.6%) between 17 to 18 years of age, 67 (33.7%) between 19 to 21 years, and 85 (42.7%) over 21 years. Most of the participants (27.6%) were in the fourth semester.

### Instruments

A sociodemographic survey and two instruments were used.

### Sociodemographic survey

It was built by the researchers with the objective of knowing the basic characteristics of the participants and their families that support the interpretation of the results.

### Family social climate scale

The Family Environmental Scale FES (Family Environmental Scale) was initially developed by Rudolf H. Moos in 1974 as part of nine social climate scales, later in 1981 Moos published the first independent version: Family Social Climate Scale , the following versions of 1984, 1994 and recently that of 2009 were with the participation of Bernice and Moos.[44] The scale used and standardized in Peru is the Spanish version published by TEA with the participation of Moos, Moos and Tricked, published in 1987 and known as the Family Social Climate Scale, although using the original English abbreviation FES.[45] The scale has been adapted in Peru by Ruiz and Guerra.[8] It is a self-applied scale that allows evaluating the socio-environmental characteristics of families through 90 items grouped into 3 dimensions and 10 subscales.[46] The standardization carried out used the internal consistency method, with reliability coefficients from .88 to .91, with a mean of .89 for the individual evaluation. The highest indices were for the scales or areas of cohesion, intellectual/cultural, expression and autonomy. The test-retest was after a 2-month interval, obtaining coefficients of .86, with variations of 3 to 6 points. To find validity, it was correlated with the Home Adjustment area of the Bell Scale. Cohesion: 0.57 in adolescents and 0.60 in adults; conflict: 0.60 in adolescents and 0.59 in adults; organization: 0.51 in adolescents and 0.57 in adults; and expressiveness: 0.53 in adolescents and adults. For family area with TAMAI test. Cohesion: 0.62; Conflict: 0.59; and expressiveness: 0.53. The maximum score is 9 points in each of the 10 scales or areas. The 90 items have a dichotomous answer: true or false.

### Depression, anxiety and stress scale (DASS - 21)

DASS-21 is the abbreviated version of the original scale with 42 items, it was developed shortly after selecting 7 from each group of 14 items since they had the highest content of the three dimensions: depression, anxiety and stress. Consisting of 21 items, Lovibond obtained an internal consistency with Cronbach's alpha of .81 for depression; .73 for anxiety and .81 for stress. The abbreviated scale qualification is with four alternatives from 0 to 3, Likert type. The assessment is made by adding the scores of each subscale, making a maximum of 21 points for each one of them. On the DASS 21 the person is asked to mark each item from 0 (did not apply to me in the entire past week) to 3 (applied to me a lot or most of the time in the last week). Membership in the respective subscale of each stimulus or item is indicated by the letters The scale to which each item belongs is indicated by the letters D (Depression), A (Anxiety), and S (Stress). is the short version of the original 42-item scale. Once multiplied by 2, each score can now be transferred to the DASS profile sheet. This latest version has been translated and validated in the Peruvian population with university students. In the dimension of depression found a reliability of .467 to .662, in anxiety .447 to .665 and in stress .524 to .656, also found an acceptable factorial structure between the 3 dimensions.It should be noted that the DASS 21 can contribute to the assessment of depression, anxiety and stress, is not up to date with the DSM-5, nor is it designed to replace a clinical assessment. The DASS 21 is not intended to replace an interview and clinical assessment.[47]

## Procedure

The directors of the aforementioned UCSM schools were coordinated, requesting their support to contact professors who can help send the proposed instruments online. The Google Forms platform was used to recreate the questionnaires in an online version. The questionnaires were sent in a single form through a link. Data collection lasted two months, the return rate was 75% much higher than in other countries. Once the sample was completed, the database was downloaded in the format that the application has by default (.csv), to proceed with the statistical analysis.

## Analysis of data

After the qualification of the instruments, with the support of a statistician, the necessary statistical calculations were made with the R v. 4.0.0 R Core Team,[48] the tidyverse[49] and data. Dowle and Srinivasan[50] packages were used for data manipulation and cleaning. Finally, the jmv package Selker et al.[51] was used to perform the descriptive (frequency analysis, mean, standard deviation) and inferential (independent t-test, analysis of variance, and Pearson correlation) analyzes.

## Results

The results are presented by tables. Table 1 presents the characteristics of the family of the participants. The following tables correspond to the main findings.

Table 1 shows that 76.9% of the sample does have siblings and 40.7% have two siblings. Likewise, 61.8% of the participants live with their parents. In the same way, it can be seen that 62.3% of the participants do not live with both parents and other relatives. It is also observed that 29.1% of the participants live with only one parent, while 24.1% live with only one parent and other family members. On the other hand, it is observed that 79.4% of the sample do have their own room, while 20.6% share a room. Finally, it is noted that 74.9% of the sample considers that they have sufficient social interaction and 52.3% consider that the interaction is less virtual than face-to-face.

**Table 1** Family characteristics

| | n | % |
|---|---|---|
| Has siblings (n = 199) | | |
| No | 46 | 23.1 |
| Yes | 153 | 76.9 |
| How many siblings (n = 199) | | |
| 0 | 26 | 13.1 |
| 1 | 13 | 6.5 |
| 2 | 81 | 40.7 |
| 3 | 54 | 27.1 |
| 4 | 25 | 12.6 |
| I live with parents (and siblings) (n = 199) | | |
| No | 76 | 38.2 |
| Yes | 123 | 61.8 |
| I live with both parents and other relatives (n = 199) | | |
| No | 124 | 62.3 |
| Yes | 75 | 37.7 |
| I live with only one parent (n = 199) | | |
| No | 141 | 70.9 |
| Yes | 58 | 29.1 |
| I live with only one parent and other relatives (n=199) | | |
| No | 151 | 75.9 |
| Yes | 48 | 24.1 |
| I have my own room (n = 199) | | |
| No, lo comparto | 41 | 20.6 |
| Yes | 158 | 79.4 |
| I think I have enough social interaction (n = 199) | | |
| No | 50 | 25.1 |
| Yes | 149 | 74.9 |
| This interaction is more virtual than face-to-face (n = 199) | | |
| No | 106 | 52.3 |
| Yes | 93 | 46.7 |

Table 2 shows the Pearson correlations between the Family Social Climate (FES) and anxiety, depression and stress (DASS-21). It can be seen that stress is negatively, slightly and significantly related to development (r = -.26, p < .001) and stability (r = -.26, p < .01). Likewise, anxiety is negatively, slightly and significantly related to development (r = -.25, p < .01) and stability (r = -.23, p < .01).

**Table 2** Family social climate (FES) and anxiety, depression and stress

| | | | | | | |
|---|---|---|---|---|---|---|
| **Family social climate** | | | | | | |
| 1. | Relations | -.10 | -.08 | -.03 | - | |
| 2. | Development | -.26 *** | -.25 ** | -.24 ** | .62 *** | - |
| 3. | Stability | -.23 ** | -.23 ** | -.20 ** | .44 *** | .71 *** |
| **Anxiety, depression stress** | | | | | | |
| 4. | Anxiety | .89 *** | - | | | |
| 5. | Depression | .91 *** | .89 *** | - | | |
| 6. | Stress | - | | | | |

Note. * p < .05, ** p < .01, *** p < .001

Table 3 describes the means and standard deviations of the dimensions of the variables evaluated. It is observed that the mean of stress, of the total sample, is 8.19 (DE = 4.44), while the mean of anxiety is 7.24 (DE = 4.63) and depression has a mean of 7.33 (DE = 4.86). . On the other hand, the mean of the relationship dimension is 17.2 (DE = 3.78), while the development dimension is 28.4 (DE = 6.95) and the stability dimension is 10.6 (DE = 3.17).

**Table 3** Means and standard deviations of the depression, anxiety and stress scale (dass - 21) and the family social climate scale (FES)

| | M | SD |
|---|---|---|
| DASS – 21 | 8.19 | 4.44 |
| Stress | | |
| Anxiety | 7.24 | 4.63 |
| Depresion | 7.33 | 4.86 |
| FES | | |
| Relations | 17.2 | 3.78 |
| Development | 28.4 | 6.95 |
| Stability | 10.6 | 3.17 |

Table 4 shows that the dimension of anxiety is negatively, slightly, but significantly related to the components of the family social climate of development (r = -.25, p < .01) and stability (r = -.23, p < .01).

**Table 4** Family social climate and anxiety in UCSM students

| | **Family social climate** | | | | |
|---|---|---|---|---|---|
| 1. | Relations | -0.1 | -0.08 | -0.03 | - |
| 2. | Development | -.26 *** | -.25 ** | -.24 ** | .62 *** |
| 3. | Stability | -.23 ** | -.23 ** | -.20 ** | -.20 ** |
| 4. | Anxiety | .91 *** | .89 *** | - | - |

Table 5 shows that the dimension of depression is negatively, slightly and significantly related to the developing family social climate (r = -.24, p < .01) and stability (r = -.20, p < .01).

**Table 5** Family social climate and depression in UCSM students

| | **Family social climate** | | | | |
|---|---|---|---|---|---|
| 1. | Relations | -0.1 | -0.08 | -0.03 | - |
| 2. | Development | -.26 *** | -.25 ** | -.24 ** | .62 *** |
| 3. | Stability | -.23 ** | -.23 ** | -.20 ** | .44 *** |
| 4. | Anxiety | .91 *** | .89 *** | - | - |

Note. * p < .05, ** p < .01, *** p < .001

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Table 6 specifically shows that stress is related, albeit slightly negatively but significantly, with development (r = -.26, p < .001) and with stability (r = -.26, p < .01), important components of the family social climate.

**Table 6** Family social climate and stress in UCSM students

| | Family social climate | | | | |
|---|---|---|---|---|---|
| 1. | Relations | -0.1 | -0.08 | -0.03 | - |
| 2. | Development | -.26 *** | -.25 ** | -.24 ** | .62 *** |
| 3. | Stability | -.23 ** | -.23 ** | -.20 ** | .44 *** |
| 4. | Stress | - | - | - | - |

Note. * p < .05, ** p < .01, *** p < .001

Table 7 shows the comparisons between men and women with respect to the dimensions evaluated. The results indicate that there are no statistically significant differences between both sexes. This would indicate that these dimensions are independent of sex in this sample.

**Table 7** Emotional states and family climate between according to gender

| | Female | | Male | | | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | T | P |
| Stress | 8.47 | 4.4 | 7.77 | 4.51 | 1.08 | 0.281 |
| Anxiety | 7.29 | 4.73 | 7.17 | 4.51 | 0.19 | 0.849 |
| Depression | 7.56 | 4.97 | 6.97 | 4.71 | 0.83 | 0.408 |
| Relations | 17.28 | 4.03 | 17.05 | 3.42 | 0.43 | 0.669 |
| Development | 28.12 | 7.2 | 28.75 | 6.59 | -0.6 | 0.552 |
| Stability | 10.81 | 3.3 | 10.31 | 2.97 | 1.08 | 0.282 |

Table 8 shows the comparison between the participants who have siblings and those who do not have siblings. It can be seen that the participants who have siblings present greater stress (M = 8.79, DE = 4.56), anxiety (M = 7.93, DE = 4.79) and depression (M = 7.84, DE = 5.11), these differences being statistically significant. On the other hand, there are no significant differences regarding the dimensions of the FES scale, which would indicate that the family climate is independent of the presence or absence of siblings.

**Table 8** Emotional states, family social climate and presence of siblings

| | Yes | | No | | T | P |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | | |
| Stress | 8.79 | 4.56 | 6.27 | 3.56 | -3.84 | <.001 |
| Anxiety | 7.93 | 4.79 | 5.11 | 3.43 | -4.36 | <.001 |
| Depression | 7.84 | 5.11 | 5.66 | 3.75 | -3.1 | 0.003 |
| Relations | 17.14 | 3.88 | 17.2 | 3.58 | 0.1 | 0.918 |
| Development | 27.82 | 7.03 | 29.77 | 6.48 | 1.63 | 0.107 |
| Stability | 10.34 | 3.23 | 11.32 | 2.91 | 1.9 | 0.061 |

Table 9 shows that the participants who do live in nuclear families present greater stress (M = 8.74, DE = 4.57), than those who do not live with their nuclear families, this difference being significant (p = .028). Likewise, the participants who live with their parents also present greater anxiety (M = 7.77, SD = 4.83) than those who do not live with their parents, the difference being significant (p = .035).

**Table 9** Emotional states and family social climate among those who live or not with nuclear families

| | Yes | | No | | T | P |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | | |
| Stress | 8.74 | 4.57 | 7.32 | 4.15 | -2.22 | 0.028 |
| Anxiety | 7 .77 | 4.83 | 6.38 | 4.19 | -2.13 | 0.035 |
| Depression | 7.74 | 5.16 | 6.68 | 4.33 | -1.54 | 0.125 |
| Relations | 17.17 | 3.51 | 7.23 | 4.23 | 0.1 | 0.922 |
| Development | 27.97 | 6.59 | 29 | 7.5 | 0.93 | 0.356 |

Table 10 shows the comparison of the participants who live with their parents and other family members. It can be seen that there are no significant differences between those who live in extended families and those who live in other situations. This indicates that there is no effect of living in an extended family in this sample.

**Table 10** Emotional states and family social climate among students who live or do not live in extended families

| | Yes | | No | | T | P |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | | |
| Stress | 8.2 | 4.63 | 8.21 | 4.38 | 0.01 | 0.991 |
| Anxiety | 7.22 | 4.54 | 7.28 | 4.73 | 0.09 | 0.931 |
| Depression | 7.19 | 5.07 | 7.43 | 4.79 | 0.31 | 0.754 |
| Relations | 17.08 | 3.89 | 17.24 | 3.74 | 0.27 | 0.784 |
| Development | 28.4 | 7.17 | 28.39 | 6.88 | -0.01 | 0.993 |
| Stability | 10.97 | 3.38 | 10.34 | 2.98 | -1.28 | 0.202 |

Table 11 shows the comparison between the participants who live with only one parent. It is observed that there are no statistically significant differences between both groups of participants. This indicates that living with only one parent or not does not affect depression, anxiety, stress or the family climate.

**Table 11** Emotional states and family social climate among students who live or do not live in single-parent families

| | Yes | | No | | T | P |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | | |
| Stress | 7.3 | 3.74 | 8.54 | 4.69 | 1.933 | 0.055 |
| Anxiety | 6.34 | 4 | 7.59 | 4.85 | 1.857 | 0.066 |
| Depression | 6.52 | 3.75 | 7.64 | 5.26 | 1.661 | 0.099 |
| Relations | 17.33 | 4.42 | 17.1 | 3.53 | -0.352 | 0.726 |
| Development | 29.17 | 6.55 | 28.07 | 7.13 | -0.994 | 0.323 |
| Stability | 10.84 | 2.77 | 10.48 | 3.29 | -0.743 | 0.459 |

Table 12 shows the comparison between the participants who consider that the interaction they have is more virtual than face-to-face. The results indicate that the participants consider that they do have more virtual than face-to-face interaction, have higher levels of anxiety (M = 8.12, DE = 4.97) and depression (M = 8.27, DE = 5.46), these differences being statistically significant (ps < .01).

**Table 12** Emotional states and family social climate among those who have more virtual interaction than face-to-face

| | Yes | | No | | T | P |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | | |
| Stress | 8.63 | 5.16 | 7.76 | 3.68 | -1.32 | 0.188 |
| Anxiety | 8.12 | 4.97 | 6.39 | 4.16 | -2.62 | 0.01 |
| Depression | 8.27 | 5.46 | 6.42 | 4.1 | -2.65 | 0.009 |
| Relations | 17.18 | 3.68 | 17.17 | 3.9 | -0.01 | 0.989 |
| Develoment | 28.32 | 6.41 | 28.48 | 7.48 | 0.16 | 0.876 |
| Stability | 10.61 | 3.05 | 10.64 | 3.29 | 0.05 | 0.963 |

Table 13 shows the comparison between the schools evaluated, with respect to the dimensions evaluated. When performing post hoc tests, it can be observed that the levels of stress (p = 006), anxiety (p = 014), depression (p = .005), family relationship (p = .008), development (p = 007) and stability (p < 05). With regard to stress, it is observed that the only majors where there are differences are those of psychology and social communication where the difference is significant (t = 3.70, p = 004). Likewise, with regard to anxiety, the post hoc results indicate that there is a significant difference between the psychology and social communication majors (t = 3.07, p = .029). In the same way, the results indicate that there is a significant difference (t = 3.48, p = .008) between the psychology and social communication majors regarding depression.

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**Table 13** Emotional states and family social climate in the different schools

| | Soc com | | Educ | | Psy | | Adv med | | Soc work | | Tou hosp | | F | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | SE | M | SD | M | SD | M | SE | M | SD | M | SD | | |
| Stress | 9.59 | 5.25 | 7.23 | 2.72 | 6.4 | 3.63 | 8.84 | 4.69 | 9.54 | 3.82 | 7.43 | 3.88 | 3.63 | 0.006 |
| Anxiety | 8.58 | 5.46 | 5.73 | 2.68 | 5.79 | 3.88 | 7.84 | 4.44 | 8.23 | 4.95 | 6.88 | 4.5 | 3.09 | 0.014 |
| Depression | 8.72 | 5.97 | 5.77 | 2.82 | 5.43 | 3.96 | 8.17 | 4.76 | 8.46 | 4.45 | 7.17 | 3.99 | 3.71 | 0.005 |
| Relations | 16.35 | 3.76 | 18.21 | 3.62 | 16.72 | 3.06 | 19.44 | 4.13 | 15.5 | 3.4 | 16.83 | 3.71 | 3.48 | 0.008 |
| Development | 27.38 | 6.05 | 29.4 | 5.42 | 29.17 | 7.39 | 31.7 | 7.72 | 21.33 | 7.32 | 28.15 | 5.4 | 3.59 | 0.007 |
| Stability | 10.24 | 3.1 | 11.78 | 3.01 | 10.45 | 3.05 | 11.93 | 3.24 | 8.42 | 3.26 | 10.09 | 2.78 | 2.96 | 0.019 |

On the other hand, the post hoc results show that the advertising and multimedia career differs significantly with social communication (t = -3.84, p = .002), with psychology (t = -2.72, p = .02) and with social work. (t = 3.94, p = .02) in relation to family relationships. Regarding the dimension of development, the social work major differed significantly from the education major (t = 3.34, p = .013), psychology (t = 3.61, p = .005) and advertising and multimedia (t = 4.51, p < .001). Finally, regarding the dimension of stability, the post hoc results indicate that the social work career differs significantly with the education career (t = 3.07, p = .029) and with advertising and multimedia (t = 3.33, p = .013).

## Discussion

It was found that there is a correlation between the family social climate and the anxiety, depression and stress experienced by UCSM university students in times of COVID-19. According to what is shown in Tables 2 and 3, the hypothesis was verified, stress is negatively, slightly and significantly related to development (r = -.26, p < .001) and stability (r = - .26, p < .01). Similarly, anxiety is negatively, slightly and significantly related to development (r = -.25, p < .01) and stability (r = -.23, p < .01). Finally, it is appreciated that depression is negatively, slightly and significantly related to development (r = -.24, p < .01) and stability (r = -.20, p < .01). The same results can be seen in a disaggregated manner in Tables 4 to 6. UCSM university students in times of the COVID-19 pandemic who have a positive family atmosphere in the dimensions of development and stability will experience less anxiety, depression and stress, despite the fact that it is known that in these times of pandemic there is an impact on mental health in all human beings (Ojeda-Cáceres & Ojeda, 2020), especially when there are no social support networks how is the family. It is necessary to point out that in the relationship dimension of the family atmosphere, no relationship was found.

It should be taken into account that the population investigated is mainly made up of university students (adolescents and young people) aged 21 or less (57.3%) who are still in a period of socio-emotional and professional growth, undergoing a series of changes and adaptations in their development. , but that with the pandemic it is likely that the changes and adaptations have been altered in all aspects of their family life, style of social relationships and sentimental lifestyle, in general they are experiencing different types of coexistence for which they are not necessarily prepared. The negative relationship found should not be considered as a great surprise, remember that the development dimension in the family atmosphere of each of the family members and in this case the participants are still in the process of development and are nourished by the style of family life, likewise the dimension of stability provides its members with the organization and control of their lives, so it is likely that adolescents and university students who are experiencing the problems that living in times of pandemic bring are supported by their atmosphere family in which they almost necessarily have to experience different experiences.

The epidemic and quarantine have caused fears and alterations in the subjective well-being of university students. Without the support of an adequate family atmosphere, confusion, anger, anxiety, depression and stress can seriously alter the functioning of the population. Outbreaks of pandemic-type diseases are types of disaster that cause great stress and anguish due to the uncertainty they cause, the possibility of infecting family members, especially older adults, potentiates the uncertainty that is experienced. The results agree with what was mentioned who affirm that the psychological health of children and young people is significantly influenced by the family atmosphere, the family environment can be a negative factor or reverse the risks for mental health; parents should serve as buffers against their children's difficulties.

Regarding gender differences (Table 7), no statistically significant differences were found, neither in the negative emotional states studied (stress, anxiety and depression) nor in the dimensions of the family atmosphere. These results can be explained by the great advance that There is in current times about equality between men and women, an advance that is clearer in the current generations that are studying university, women increasingly aspire to have higher education. These findings differ from those of who reports that the anxiety rate was lower in men than in women, both in health personnel and in the general population, perhaps It is clear that when there are more siblings in a family there are more possibilities of triggering conflicts, as shown in Table 8, the participants who have siblings and live with them and their parents have higher levels of stress and anxiety than the participants without siblings the difference being statistically significant. The presence of siblings increases the general number of the family and causes a lack of space, little independence, frequent interruptions that facilitate confusion, anger, exhaustion, anxiety and stress over tim. It is easy to understand that being an only child can make life easier in times of pandemic and confinement.

The results shown in Table 9 & 10 are important. Table 9 shows that the participants who live in nuclear families present greater stress (M = 8.74, DE = 4.57), than those who do not live with their nuclear families, this difference being significant (p = .028). Likewise, the participants who live with their parents also present greater anxiety (M = 7.77, SD = 4.83) than those who do not live with their parents, the difference being significant (p = .035). Participants living with extended families (Table 10) in the current times of COVID-19 do not show significant differences in any of the negative emotional states or family atmosphere dimensions than participants who do not live in extended families. These results they need further exploration because despite the fact that the context where they live is numerous, they do not manifest the problems that could be expected by the greater number of relatives, perhaps as the number of relatives is greater, the students are more likely to establish positive relationships or have more support in the various members of the extended family; differently, the studies by Gonzáles et al. [29] when studying family factors and depression in adolescents, show that extended families

were mostly dysfunctional and that they were related to depression in adolescents. Further research on this topic is recommended.

In relation to living with only one parent or single parent (Table 11), it seems that there is no greater effect in the university students who participated in the research, both groups, those who live with only one parent or those who live with both They do not present major differences in stress, anxiety and depression or in any of the dimensions of the family atmosphere. It seems that when there is only one parent, this person is adequately supporting his or her student children, in a similar way to state that adolescents with depression also occur in single-parent families, but not significantly. It is clear that in times of pandemic, social isolation was intense, people tried to overcome this situation by having more virtual relationships, but as can be seen in Table 12, the participants who report having more virtual than face-to-face interaction have significantly higher levels of anxiety and depression. It is clear that face-to-face socialization favors psychological well-being. Confirming the present results, when studying depression risk factors, report that one of the greatest risk factors for depression is the lack of social interaction, concluding that positive social interaction is a protective factor. In the adolescent population, affirm that adolescents with anxiety and depression and withdrawal affect socialization that usually helps to overcome anxiety and depression problems. Recently, in our country, found a relationship between social skills and depression in adolescents, recommending further study of the subject.the difference is due to the type of population studied.

Finally, an attempt was made to make comparisons of the negative psychological manifestations studied and the dimensions of family atmosphere among the students of the different careers (Table 13), the results are varied, but the highest means of stress, anxiety and depression are presented in the students from the Professional Schools of Social Communication and Social Work; Regarding significant differences, it could only be established between the students of the Professional Schools of Social Communication and Psychology, the students of the Professional School of Social Communication present higher levels of the negative emotional states studied than the students of the Professional School of Psychology. In relation to Dimensions of the family atmosphere, the dimension of relationships is higher in Advertising and Multimedia and lower in Social Communication and Social Work. In the dimension of development, it is higher in Education and Advertising and Multimedia and lower in Social Communication and Social Work; there are significant differences between the students of Education, Psychology, Advertising and Multimedia and Social Work, the development of Social Work students being lower. Finally, in the stability dimension, the highest means are for the Advertising and Multimedia and Education students and the lower means are for the Social Communication and Social Work students; Statistically significant differences were found between the students of Education, Advertising and Multimedia and Social Work, with the lowest average being that of the Social Work students. Although it seems that the students of the Social Communication and Social Work careers are at a disadvantage, it is necessary to study in more depth the reason for these results. In general, the results of this research reaffirm the importance of the family atmosphere as one of the most important institutions in the prevention of psychological disorders, even in a young population in times of pandemic.

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## Conflicts of interest

The authors declares that there are no conflicts of interest.

## References

1. Ojeda Casares, Cosio FG. COVID-19 and mental health: key messages. *Panamerican Health Organization*. 2020.
2. Technical guide for mental health care Affected population, families and community, in the context of COVID-19. Mine. Peru: Directorate general for strategic interventions in public health DGIESP. direction of mental health - DSAME. *Ministry of Health of Peru.* 2020.
3. Shah K, Kamrai D, Mekala H, et al. Focus on mental health during the coronavirus (covid-19) pandemic: applying learnings from the past outbreaks. *Cureus.* 2020;12(3):e7405.
4. Covadonga R M. The family and its implication in child development. *Complutense Education Magazine*. 1999;10(1):289–304.
5. Cruz M. Family social climate and its relationship with social maturity of child 6 to 9 years. *Revista de Investigación en Psicología*. 2013;16(2):157–179.
6. Dombrovskis A. The family environment, satisfaction with family life and identity crises of female university students. *Atiner Conference Paper Series* No: PSY2013–0540.
7. Moos RH, Moos BS, Trickett EJ. Spanish adaptation. TEA editions. *Social Climate Scales*. 1987.
8. Ruiz Guerra. Family social climate scale (FES). Baremos for the scale. Lima Peru.1993.
9. Choi AWK. The relationship between family cohesion and intimacy in dating relationships: a study based on attachment and exchange theories. *Discovery- Student E-Journal.* 2012;1:91–109.
10. Ahumada O, Robles N, Coronado JL. Analysis of indicators that can be causes of stress or anxiety in university students. 2018.
11. Camargo DA. The family and motor development in early childhood, a look from the model of social determination. *Scientific Movement*. 2010;4(1):22–38.
12. Barlow D, Durand VM. *Abnormal psychology. An integrative approach*. USA. 2015.
13. Kaplan HI, Sadocks BJ. Synopsis of psychiatry. *Behavioral sciences clinical psychiatry.* USA: Williams & Wilkins. *Indian J Psychiatry*. 1998;5(4):1.
14. Sue D, Sue DW, y Sue, et al. Understanding abnormal behavior. 2022
15. Diagnostic and statistical manual of mental disorders. 5th edn. *American Psychiatric Association* 2013.
16. Diagnostic and statistical manual of mental disorders. 5th edn. *American Psychiatric Association*. 2022.
17. Lovibond PF, Lovibond SH. The structure of negative emotional states: comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behav Res Ther*. 1995;33(3):335–343.
18. Chaves EC, Cade N. Anxiety effects on blood pressure of women with hypertension. *Rev Lat Am Enfermagen*. 2004;12(2):162–167.
19. Sarason IGY, Sarason BR. The problem of maladaptive behavior. *Abnormal psychology*. 2005.
20. Sue D, Sue DW, Sue DM. *Understanding abnormal behavior* 9 edn. USA: Cengage Learning. 2010.
21. Sameual B. *Diagnostic and statistical manual of mental disorders.* 4th. edn -Washington DC. *DSM-IV*. 2000.
22. Keeley JW, Reed GM, Roberts MC, et al. Disorders specifically related to stress: a case-controlled field study for CIE−11. *Int J Clin Health Psychol.* 2016;*16*(2):109–127.

23. Institute for Disaster Mental Health. Tips for community members: COVID-19: managing stress during anxious times. 2020.

24. Tuesca-Molina R, Fierro N, Molinares A, et al. Los grupos de socializacion as a protector factor against depresion in older people. Baranquilla, colombia. *Revista Española de Salud Pública.* 2003;77(5):1–8.

25. Lozano A. Impact of the Coronavirus epidemic (COVID-19) on the mental health of health workers and general population in China. *Revista de Neuropsiquiatría. 2020;83*(1):51–56.

26. Courtney D, Watson P, Battaglia M, et al. COVID-19 impacts on child and youth anxiety and depression: challenges and opportunities. *Can J Psychiatry.* 2020;65(10):688–691.

27. Goh KK, Lu ML, Jou S. Impact of COVID-19 pandemic: social distancing and the vulnerability to domestic violence. *Psychiatry and Clinical Neurosciences.* 2020.

28. Pelechano V. Familia, stress y enfermedad. *Análisis y Modificación de Conducta*. 1991;17(55):729–724.

29. Gonzáles J, Macuyama T, Silva Z. Family factors that influence depressive manifestations in adolescents from 1st to 5th grade of secondary school in a mixed national school. *Revista de Enfermería Herediana*. 2013;6(2):66–77.

30. Vargas H. Family types and anxiety and depression. *Rev Méd Hered.* 2014;25(2):57–59.

31. Gonzáles AY. Relationship between the family social climate and depression in students of 2nd, 3rd, 4th and 5th year of the secondary level of the educational institution Nº 011 "Cèsar Vallejo" - Tumbes, in the year 2014. [Thesis]. Peru University. 2015.

32. Rodríguez N, Jhonela M. Anxiety, depression and socialization capacity in children and adolescents with neurofibromatosis type 1. [Thesis]. Venezuela: Pontifical Bolivarian University. 2019.

33. Lacomba L, Valero S, Postigo S, et al. Ajuste familiar durante la pandemia de la COVID-19: un estudio de díadas. *Revista de Psicología Clínica con Niños y Adolescentes.* 2020;7(3):66–72.

34. Guevara O, Ocharan A. Family social climate and depression in students from second to fifth grade of secondary school of an Educational Institution in the city of Calca, 2019. Perú. 2020.

35. Huari HE, Rivera JX. Social skills and depression in adolescents from the fifth year of high school of the emblematic educational institution Mariscal Castilla, El Tambo 2020. Perú: Universidad Peruana Los Andes. 2020

36. Papalia DE, Martorell G. Human development. México. 2017.

37. Rajkumar RP. COVID-19 and mental health: a review of the existing Literature. *Asian J Psychiatr.* 2020;52:102066.

38. World Health Organization. Mental health and psychosocial considerations during COVID-19 outbreak, 18 March 2020. World Health Organization. 2020.

39. Mayo Clinic. COVID-19 and your mental health. USA: Mayo Foundation for Medical Education and Research. 2020.

40. Zhang J, Lu H, Zeng H, et al. The differential psychological distress of populations affected by the COVID-19 pandemic. *Brain Behav Immun.* 2020;87:49–50.

41. Paz C, Mascialino G, Adana Díaz, et al. Anxiety and depression in patients with confirmed and suspected COVID-19 in Ecuador. *Psychiatry Clin Neurosci*. 2020;74(10):554–555.

42. Huarcaya VJ. Consideraciones sobre la salud mental en la pandemia de COVID-19. *Rev Peru Med Exp Salud Publica.* 2020;37(2):327–332.

43. Barraza A. Pandemic stress (COVID 19) in the Mexican population. *Clin Stud Psycho Res*. 2020.

44. Rivers AS, Sanford K. *Family Environmental Scale*. *Encycl Couple Fam Ther*. 2018;27:396–401.

45. Jiménez A, Ferro J, Gómez R. Evaluation of the family climate in a sample of adolescents. *Journal of General and Applied Psychology.* 1999;52(4):453–462.

46. Vostanis PNJ. The Family Environment Scale: comparison with the construct of expreseed emotion. *Journal of Family Therapy.* 1995;17(3):299–315.

47. Polo R. Psychometric properties of the depression, anxiety and stress scale (DASS-21) in university students from Chimbote. Peru: University Cesar Vallejo. 2017.

48. R Core Team. R project for statistical computing, Vienna, Austria. 2021.

49. Wickham H, Averick M, Bryan J. Welcome to the tidyverse. *Journal of Open Source Software.* 2019;4(43):1686.

50. Dowle Srinivasan. Data table: extension of `data.frame`. R package version 1.14.2. 2021.

51. Selker R, Love J, Dropmann D, et al. The 'jamovi' analyses. R package version 2.0. 2021.