

PREVALENCE OF ANXIETY AND RELATED ACADEMIC FACTORS IN STUDENTS OF A MEDICAL FACULTY IN EL SALVADOR, 2021

<https://doi.org/10.5377/creaciencia.v15i1.15712>

Vladimir Cruz ¹

Received: 05/03/22

Accepted: 24/11/22

ABSTRACT

Young university students in the health area are exposed to a series of academic factors during their academic training, which in many cases become anxiety-generating factors. Therefore, the objective of this research is to determine the prevalence of anxiety and its related academic factors in the university population. The analysis approach was quantitative, observational, descriptive, cross-sectional, and inferential. The sample of 250 individuals was probabilistic and stratified. The instruments used were the Beck Anxiety Inventory (BAI) and the academic factors questionnaire; the Spearman's Rho test was used for hypothesis testing, which was approved by the Ethics Committee on June 11, 2021. Results: the findings reveal a prevalence of anxiety of 24.72%; women have a higher prevalence of anxiety compared to men. No statistically significant relationship was found between the factors: academic load, professor's methodology, professor's personality, evaluation system, and the variable of anxiety. Finally, there is a weak positive relationship between these factors: weekly study hours, partial exams, virtual classes modality, and the variable of anxiety. A prevalence of anxiety of 24.72% was found, with women showing a higher prevalence of this condition; factors such as academic load, professor's methodology, professor's personality, and evaluation system are not related to anxiety, while factors such as weekly study hours, partial exams, and virtual classes modality showed a weak positive relationship with anxiety.

Key words: prevalence of anxiety, academic factors, health students, El Salvador.

¹ Psychologist, professor at the Evangelical University of El Salvador, vlass.web@gmail.com ORCID: <https://orcid.org/0000-0002-3814-7898>



PREVALENCIA DE ANSIEDAD Y FACTORES ACADÉMICOS RELACIONADOS EN ESTUDIANTES DE UNA FACULTAD DE MEDICINA DE EL SALVADOR, AÑO 2021

RESUMEN

Los jóvenes universitarios del área de la salud durante su formación académica se ven expuestos a una serie de factores académicos, los cuales en muchos casos se convierten en factores generadores de ansiedad. Por lo tanto, el objetivo de la presente investigación es determinar la prevalencia de ansiedad y los factores académicos relacionados en la población universitaria. El enfoque de análisis fue cuantitativo, de tipo observacional, descriptivo, transversal e inferencial. La muestra de 250 personas fue probabilística y estratificada. Los instrumentos utilizados fueron: el Test de Ansiedad de Beck, BAI, y el cuestionario de factores académicos; para la prueba de hipótesis se utilizó la prueba Rho de Spearman, aprobado por el Comité de Ética en fecha 11 junio 2021. Resultados: los hallazgos revelan una prevalencia de ansiedad del 24.72 %; las mujeres presentan una mayor prevalencia de ansiedad en comparación con los hombres. No se encontró relación estadísticamente significativa entre los factores: carga académica, metodología empleada por el docente, personalidad del docente y sistema de evaluación y la variable ansiedad. Finalmente existe una relación positiva y débil entre los factores: horas semanales de estudio, exámenes parciales y modalidad virtual de estudio y la variable ansiedad. Se encontró una prevalencia de ansiedad del 24.72 %, las mujeres presentaron una mayor prevalencia de ansiedad; los factores: carga académica, metodología empleada por el docente, personalidad del docente y el sistema de evaluación no se relacionan con la ansiedad, mientras que los factores: horas semanales de estudio, exámenes parciales y modalidad virtual de estudio, poseen una relación positiva débil.

Palabras clave: prevalencia de ansiedad, factores académicos, estudiantes de la salud, El Salvador.

INTRODUCTION

Physical and mental health play a crucial role in the quality of life of individuals, therefore, it is essential for individuals to strive for an optimal state of overall health, or at least possess the minimum conditions that enable them to thrive in their personal, family, work, and social environments.

The purpose of the research was to investigate the academic factors and their relationship with anxiety in the university population of the Doctorate in Medicine degree. This population of students was in the clinical area in their 6th and 7th academic year, which transitioned from in-person to virtual mode due to the COVID-19



pandemic. The young individuals studying in the field of healthcare are exposed to significant academic and professional demands during their 7-year academic training and in the last two academic years, they are subjected to stress derived from their surroundings when they are immersed in hospital work environments while simultaneously facing the academic demands required for a doctorate degree in medicine. As for the academic factors, this study refers to quantifiable or numerical phenomena that occur in human clusters and encompass cultural aspects, beliefs, attitudes, religion, and politics, given that university students during the academic training stage are exposed to conditions of the teaching and learning process, among which stand out: a) the number of study hours, b) the stress of exams, c) professor's methodology and modality, d) professor's personality, etc. Moreover, as a result of such exposure, health disorders with motor, cognitive, and emotional symptoms of anxiety arise in many cases.

The general research objective of the study was to determine the prevalence of anxiety and its relationship with academic factors in the university population of the clinical area of the Doctorate in Medicine degree. The specific objectives were as follows: to identify academic factors related to anxiety in the university population of the clinical area of the Doctorate in Medicine degree, to estimate the prevalence of anxiety in the university population of the clinical area of the Doctorate in Medicine degree, and to analyze the relationship between academic factors and anxiety in the university population of the clinical area of the Doctorate in Medicine degree.

The execution of this study allowed for an understanding of how anxiety is related to academic factors. In various studies conducted over time, it has not been made sufficiently clear whether there is a direct and unequivocal relationship between the two variables. Understanding the dynamics of the behavior of the variables under study: anxiety and academic factors, will allow the identification of the aspects that generate or trigger anxiety in the university population, which could possibly act as catalysts for its manifestation.

This was a descriptive and inferential research in which correlations were established between the variables under study; regarding the study's limitations, reference is made to the difficulties encountered in conducting the sampling due to the pandemic.

There are numerous theories and approaches that attempt to explain the phenomenon of anxiety; they are presented from the cognitive-behavioral perspective.

Cognitive-Behavioral Therapy: Currently, cognitive-behavioral therapy is the psychological model with the most applications. Numerous disorders are currently being treated with this therapy, and its field of application has been expanding progressively. Specific treatments exist for anxiety disorders, depression, schizophrenia, and sexual dysfunctions (1).

Cognitive-Behavioral Therapy is a generic term that refers to therapies that incorporate both



behavioral interventions (direct attempts to decrease dysfunctional behaviors and emotions by modifying behavior) and cognitive interventions. The purpose of the therapy is to reduce distress or unwanted behavior by unlearning or providing new, more adaptive experiences (2).

Cognitive Techniques: the goal of cognitive techniques is to help the patient identify the thoughts that cause them problems and explore alternative viewpoints of a situation they may not have considered before, thus modifying possible cognitive errors. Below is a detailed description of the main cognitive techniques by Beck (3):

Direct Psychoeducation: patients receive information about what they may not know to build confidence. For example, providing information about the safety of elevators for a patient with a phobia.

Vertical Descent: showing the patient worst-case scenarios that allow them to objectively assess their problems, using questions such as "What would happen if...".

Detection of Automatic Thoughts: patients are trained to observe the sequence of external events and their reactions to them. Past and present situations where the individual has experienced a change in mood are used, and they are taught to generate their interpretations (automatic thoughts) and behaviors in response to that situation or event. The usual way to collect this data is through the use of self-records as a task.

Reattribution: the patient may believe they are responsible for events without sufficient evidence, leading to feelings of guilt. By reviewing possible factors that could have influenced the situation, they explore other causes that may have contributed to the event.

Use of images: images can be used to help the patient modify their cognitions or develop new skills. For example, images can be used where the patient sees themselves facing specific situations, and they are instructed to have more realistic cognitions.

Denial of problems: the patient makes a list of problems and categorizes them according to their importance.

Behavioral techniques: just like cognitive techniques, behavioral techniques also work with the main symptoms of the patient. Some of the main behavioral techniques used in standard cognitive therapy are: alternative activity scheduling, mastery/pleasure scale, graded task assignment, assertiveness training, relaxation training, behavioral rehearsal and role-playing, in vivo exposure, and visualization.

Rational Emotive Behavior Therapy (REBT): ellis summarized his theory synthetically and graphically with what he called the "ABC." This concept can be represented by the acronyms: $A \rightarrow B \rightarrow C$

"A" represents the "Activating event". It can be a situation, an external event, or an internal occurrence (thought, image, fantasy, behavior, sensation, emotion, etc.).



"B" initially represents the "Belief system", but it can be considered to include all the content of the cognitive system: thoughts, memories, images, assumptions, inferences, attitudes, attributions, norms, values, schemas, philosophy of life, etc.

"C" represents the "Consequence" or reaction to "A". The "Cs" can be emotional (emotions), cognitive (thoughts), or behavioral (actions). Rational Emotive Behavior Therapy is managed by six fundamental principles (4).

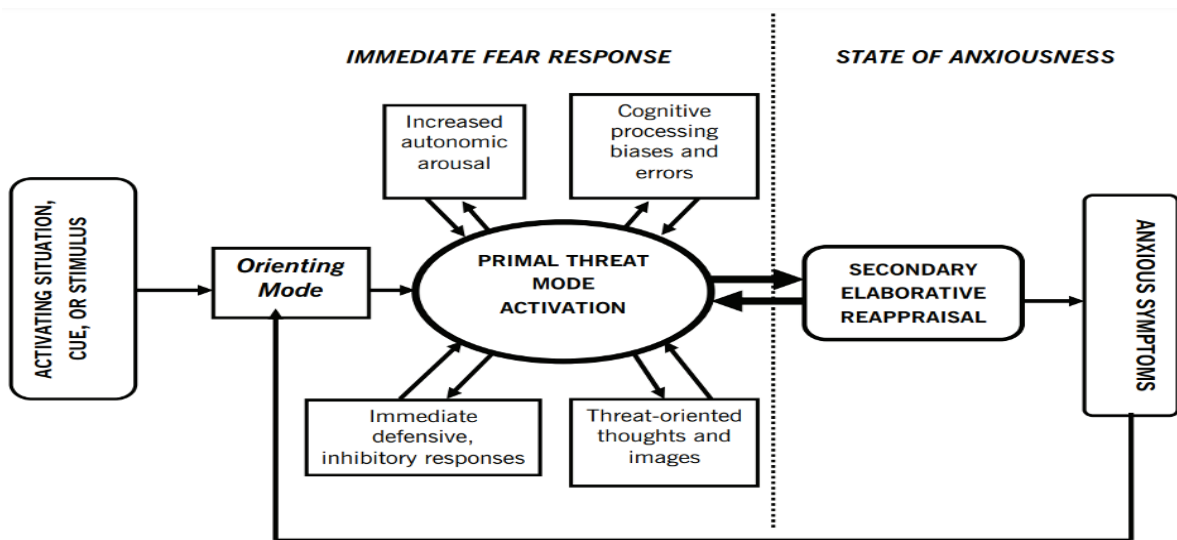


Figure 1. Cognitive Model of Anxiety. Source: information from Cognitivas SP. David A. Clark Aaron T. Beck [Web]. Srmcursos.com. 2012.

Basic principles of the cognitive model of anxiety

Overestimation of threat: anxiety is characterized by an increased and highly selective attention to personal risk, threat, or danger that is perceived as a potential severe negative impact on vital interests or well-being (5).

Increased helplessness: anxiety involves an inaccurate assessment of one's own coping resources, leading to an underestimation of one's ability to cope with the perceived threat (5).

Inhibited processing of safety information: anxiety states are characterized by inhibited or highly restrictive processing of safety signals and information that conveys a reduction in the probability or severity of the perceived threat or harm (5).

Deterioration of constructive or reflective thinking: in states of anxiety, access to the most constructive, logical, and elaborative thought and reasoning is difficult, and therefore it is used ineffectively to reduce anxiety (5).

Automatic and Strategic Processing: anxiety involves a mixture of automatic and strategic cognitive processes that are responsible for the uncontrollable and involuntary nature of anxiety (5).

Self-perpetuating processes: anxiety involves a vicious cycle in which increased self-focused attention on anxiety signals and symptoms contributes to the intensification of subjective distress (5).

Cognitive Primacy: the primary cognitive appraisal of threat and the secondary appraisal of personal vulnerability can be generalized in such a way that a wide range of additional situations or stimuli are misinterpreted as threatening, leading to various physiological and behavioral defensive responses being inappropriately mobilized to cope with the perceived threat (5).

Cognitive vulnerability to anxiety: increased susceptibility to anxiety is the result of sustained core beliefs (schemas) about personal vulnerability or helplessness and the salience of threat (5).

METHODOLOGY

A descriptive and inferential study was conducted, in which correlations between the variables under study were established.

Study subjects: students from the clinical area of the Doctorate in Medicine degree at the Evangelical University of El Salvador who were active during the months of September and October 2021. **Object of study:** The presence of academic factors and their relationship with anxiety in the university population of the clinical area of the Doctorate in Medicine degree.

Study location: the study was conducted at the clinical campus of the "Dr. Juan José Fernández" National Hospital in Zacamil and the clinical campus of the "San Juan de Dios" National Hospital in Santa Ana, both of which are affiliated with the Faculty of Medicine of the Evangelical University of El Salvador.



Sample calculation: the sample size calculation was performed using OpenEpi version 3.1. The total population of students belonging to the clinical areas of both Zacamil and Santa Ana campuses was considered for the calculation. A total of 250 participants were selected from a probabilistic and stratified sampling.

Inclusion and exclusion criteria

To ensure proper selection of participants in the study, the following inclusion and exclusion criteria were established:

Inclusion criteria

1. Active students during the months of September and October 2021 at the Evangelical University of El Salvador.
2. Belonging to the clinical area of the Zacamil Hospital branch or the Santa Ana Hospital branch.
3. Willing to voluntarily complete the assessment instrument.

Exclusion criteria

1. Individuals undergoing pharmacological treatment that would hinder their participation.
2. Individuals with psychiatric pathologies.

Techniques and procedures for data collection

The technique used for data collection was the survey, and two instruments were used: a) academic factors questionnaire, and b) Beck Anxiety Inventory. The instruments were administered both in-person and virtually, and collectively according to the level of study, i.e., externship and internship.

a. Academic factors questionnaire

The Academic Factors Questionnaire (AFQ) consists of 35 questions, which are distributed with five items per each academic factor, as shown below:



Table 1. Academic factors

Academic factors	Items
Weekly study hours	1, 2, 3, 4 & 5
Partial exams	6, 7, 8, 9 & 10
Virtual classes modality	11, 12, 13, 14 & 15
Academic load	16, 17, 18, 19 & 20
Professor's methodology	21, 22, 23, 24 & 25
Professor's personality	26, 27, 28, 29 & 30
Evaluation system	31, 32, 33, 34 & 35

Source: Own elaboration.

The Academic Factors Questionnaire (AFQ), was designed with 5 questions per factor, which are scored based on a Likert-type scale, where: 1 = never, 2 = almost never, 3 = sometimes, 4 = very frequently, and 5 = almost always. In order to determine the intensity of each factor, the minimum score per factor is 5 points, and the maximum score is 25 points.

Questionnaire administration:

The AFQ can be administered individually or collectively, and participants can also self-administer it.

Scoring: the sum of the total points for each item is made, with a minimum score of 1 point and a maximum score of 5 points, then, the total points for all items are added up to obtain the score for each factor, however, not all items are scored directly; some of the scores need to be inversely recoded.

b. Beck Anxiety Inventory

Internal consistency of the test: The analysis of internal consistency of the BAI yielded a Cronbach's alpha coefficient of 0.90, indicating very good internal consistency (6).

The Beck Anxiety Inventory is a useful tool for assessing somatic symptoms of anxiety, both in anxiety disorders and in depressive conditions. The questionnaire consists of 21 questions, providing a score range between 0 and 63. The suggested cutoff points to interpret the results are as follows:

- 00–21 - Very low anxiety
- 22–35 - Moderate anxiety
- 36 or more - Severe anxiety

Each item is scored from 0 to 3, with a score of 0 corresponding to "not at all," 1 to "mildly, it does not bother me much," 2 to "moderately, it was very unpleasant, but I could bear it," and a score of 3 to "severely, I could hardly bear it."



Processing and Analysis of the information

Each of the administered questionnaires was coded and organized; the data was then tabulated using Microsoft Excel 2020 and SPSS version 22, and then a descriptive analysis was conducted, obtaining frequencies and percentages. The re-

sults were presented using tables and graphs. For inferential analysis, the hypotheses were tested using the non-parametric Spearman's Rho test.

The following are the sociodemographic data of the studied population:

Table 2. Sociodemographic data of health students belonging to the Doctorate in Medicine degree, clinical area.

Sociodemographic variables of the studied population			
Variable	Type	Absolute frequency	Percentages
Sex	Female	143	64%
	Male	81	36%
	Total	224	100%
Age range	20 to 25 years	183	82%
	26 to 30 years	39	17%
	31 years or older	2	1%
	Total	224	100%
Marital status	Single	218	97%
	Married	1	1%
	Domestic partnership	5	2%
	Total	224	100%
Place of residence	Western zone	37	16%
	Central zone	172	77%
	Eastern zone	15	7%
	Total	224	100%
Clinical campus to which they belong	Zacamil Hospital clinical campus	152	68%
	Santa Ana Hospital clinical campus	72	32%
	Total	224	100%

Current career level	Externship I	119	53%
	Externship II	64	29%
	Rotating internship	41	18%
	Total	224	100%

Source: Own elaboration using data from the survey.

The previous data allows us to approach a socioeconomic contextualization and description of the study population, where the largest population is represented by "Female" in the age range of 20 to 25 years, "Single" marital status, belonging to the "Central Zone," from the "Zacamil Hospital clinical campus" and the academic level "Externship I".

This previous description determines a representation that reflects the high population levels in the departments of El Salvador (Santa Ana, San Miguel, and San Salvador).

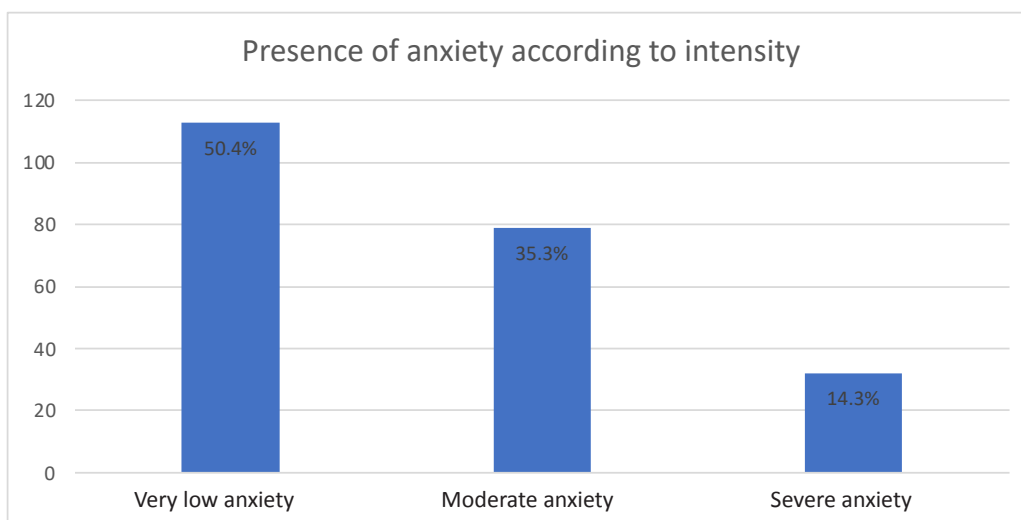


Figure 2. Presence of anxiety according to intensity. Source: Own elaboration using data from the survey.

Figure 2 shows the level of anxiety found in the student population according to intensity. The results show that 50.4% of the population has very low

anxiety, while 35.3% reported moderate anxiety and 14.3% suffer from severe anxiety.

Table 3. Point prevalence of anxiety in the university population.

Prevalence of anxiety in the university population			
PREVALENCE	111	X100	=24.72%
	(population with presence of anxiety)		
	449		
	(total student population)		

Source: Own elaboration using data from the survey.

Table 3 shows the proportion of students who reported anxiety, which corresponds to 24.72%

of the surveyed individuals. This means that for every 100 people, at least 24 suffer from anxiety.

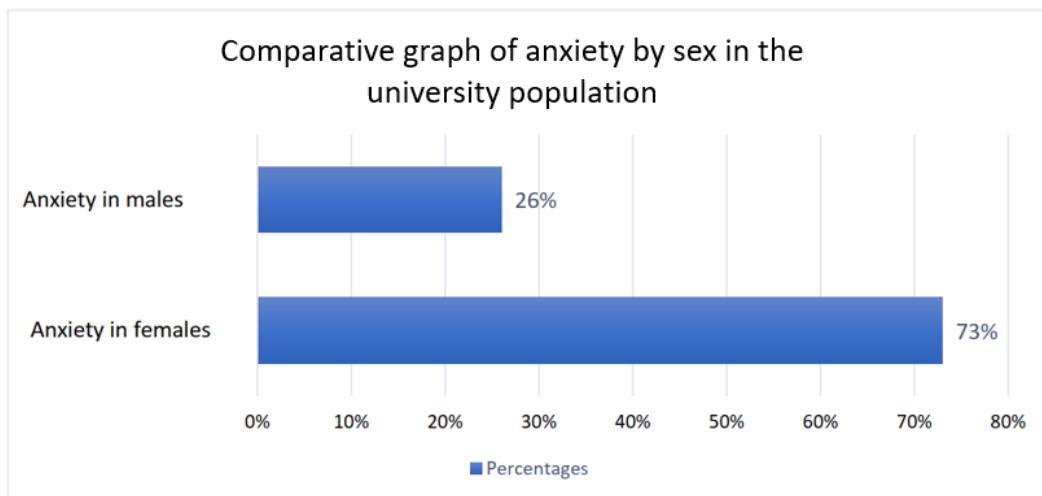


Figure 3. Prevalence of anxiety by sex in the university population. Source: Own elaboration using data from the survey.

Figure 2 shows the prevalence of anxiety by sex in the surveyed population. In this regard, there is a higher prevalence of anxiety in female university students, with 73% compared to 26% in males. These results follow the trend previously mentioned in the sociodemographic profile (7) and reflect trends regarding the preference of female students for medical specialties in Latin America (8), similarly to the results obtained in the study called "Feminization in Medicine" (9). These results also follow the same trend as the research on "Differences between men and women in anxiety disorders: a psychobiological approach," where it is evident that women of reproductive age develop approximately 2 to 3 times more anxiety disorders than men (10). The presence of anxiety in students can significantly affect their family, social, and work relations-

hips, and be a generator of poor academic performance—as individuals suffering from anxiety may experience difficulties in concentration, nervousness, insomnia, tension, excessive worry, among other symptoms—and this condition deteriorates the physical and mental quality of life of individuals.

Academic factors related to anxiety

The academic factors analyzed were: a) weekly study hours, b) partial exams, c) virtual classes modality, d) academic load, e) teacher's methodology, f) teacher's personality, and g) evaluation system. The results obtained from the application of the academic factors questionnaire are presented below through a series of tables.

Table 4. Total percentages for each of the academic factors.

Factors	Never	Almost never	Sometimes	Very frequently	Almost always	Total
Weekly study hours	22%	16%	14%	24%	24%	
Partial exams	19%	21%	15%	21%	24%	100%
Virtual classes modality	17%	20%	17%	24%	22%	100%
Academic load	25%	17%	21%	19%	18%	100%
Professor's methodology	21%	22%	22%	20%	15%	100%
Professor's personality	20%	23%	20%	20%	16%	100%
Evaluation system	20%	19%	19%	22%	20%	100%

Source: Own elaboration using data from the survey.



Table 4 shows the percentages obtained for each of the academic factors, where the factor "Weekly study hours" stands out, and 48% expressed that it is present "Very frequently" and "Almost always", while for the factor "Partial exams" 24% indicated that it is "Almost always" present. Regarding the "Virtual classes modality" factor, 24% stated that this factor is present "Very frequently". Concerning the "Academic load" factor, 25% expressed that they "Never" consider it a stress or anxiety factor. Finally, for the "Professor's methodology" factor, 44% stated that it is "Almost never" and "Sometimes" present. Regarding the "Professor's personality" factor, it was present in 23% with «Almost never» and finally, concerning the «Evaluation system» factor, 22% stated that it was present «Very frequently».

Inferential Analysis

To analyze the relationship between anxiety and academic factors, the verification of the proposed hypotheses was carried out using the statistical test of Spearman's rank correlation coefficient (Spearman's Rho), which is recommended for use when the data contain extreme values, as these values can significantly impact the Pearson correlation coefficient, or in cases of non-normal distributions. In addition, it is not affected by changes in the measurement units (11). The presented correlations comply with accumulated scores for each factor, as follows:

Table 5. Correlations between anxiety and academic factors

Anxiety	Correlations						
	Weekly study hours	Partial exams	Virtual classes modality	Academic load	Professor's methodology	Professor's personality	Evaluation system
Spearman's Rho	0.20**	0.18**	0.22**	0.01	0.02	0.07	0.02
Signif.	0.007	0.009	0.003	0.86	0.803	0.30	0.763
N	224	224	224	224	224	224	224

** The correlation is significant at the 0.01 level (two-tailed). Source: Own elaboration using data from the survey

In Table 5, the results of the statistical inference are shown from left to right, according to the variable of anxiety and its relationship with academic factors in university students from the clinical area of the Doctorate in Medicine degree. First, the correlation coefficient between the variables "Anxiety" and "Weekly study hours" is shown ($\rho = 0.20$, $p < 0.01$). In second place, the correlation coefficient between the varia-

bles "Anxiety" and "Partial exams" ($\rho = 0.18$, $p < 0.01$). In third place, the correlation coefficient between the variables "Anxiety" and "Virtual classes modality" is ($\rho = 0.22$, $p < 0.01$). In fourth place, the correlation coefficient between the variables "Anxiety" and "Academic workload" is ($\rho = 0.01$, $p > 0.01$). In fifth place, the correlation coefficient between the variables "Anxiety"



and "Professor's methodology" is ($\rho = 0.02$, $p > 0.01$). In sixth place, the correlation coefficient between the variables "Anxiety" and "Professor's personality" is ($\rho = 0.07$, $p > 0.01$). In seventh place, the correlation coefficient between the variables "Anxiety" and "Evaluation system" is ($\rho = 0.02$, $p > 0.01$).

There is not enough statistical evidence to reject the null hypothesis for the factors "Academic load", "Professor's methodology", "Professor's personality" and "Evaluation system". Therefore, the aforementioned variables have no relationship with "Anxiety".

Regarding the factors "Weekly study hours", "Partial exams", and "Virtual classes modality", the results show that there is enough statistical evidence to reject the null hypothesis and affirm a relationship with the variable "Anxiety".

Ethical aspects of the research

Based on bioethical principles and good practices, four fundamental principles of similar moral strength were established: the principle of beneficence, the principle of non-maleficence, the principle of justice, and the principle of autonomy.

The study was conducted in accordance with the "Código de Ética para el Ejercicio de la Profesión de Psicología en El Salvador" (Code of Ethics for the Practice of Psychology in El Salvador) which is the fundamental normative instrument that regulates the behavior and proper professional practice of psychologists in the country. With its application, the Junta de Vigilancia de la Profe-

sión en Psicología (Professional Board of Psychology) fulfills its duties of controlling and overseeing professional practice more effectively, as stipulated by the Código de Salud (Health Code), taking into account not only legal regulations but also ethical considerations for professionals and psychology students (12).

Discussion of results

Regarding the point prevalence of anxiety, the findings suggest a prevalence of 24.72% in the university population of health students surveyed at the Faculty of Medicine of the Evangelical University of El Salvador; this data is very similar to a cross-sectional study conducted at the University of Antioquia, Colombia, with a sample of 325 students, where a prevalence of 26.5% of anxiety was found (13).

The findings revealed that there is a higher prevalence of anxiety in women, with 73% compared to 26% in men. These results follow the trend of the study conducted by authors Arenas MC, Puigcerver A. "Differences between men and women in anxiety disorders: a psychobiological approach," where the results show that women of reproductive age develop 2 to 3 times more anxiety disorders than men (14). Another study with a Salvadoran population revealed that women are more affected than men, and the age group of 18 to 23 years is the one that exhibited the most symptoms of anxiety compared to other older age groups. When dividing the results by sex, it was found that 779 (61.7%) are women and 484 (38.3%) are men (15).



The differences found in the prevalence of anxiety in women can be explained as follows: some authors suggest that it may be due to hormonal differences, but the definitive causes are not known; there is speculation about the influence of biochemical, hormonal and social factors. In their social role as "women", young university students must take on the roles of daughters, sisters, and in some cases, mothers, in addition to their hospital work. As a result, when they return home, they are expected to assume household responsibilities, for which they do not receive economic compensation and for which they do not receive proper recognition by family members. In the role of "men", male students are expected to help their parents in the "family business", which may require sacrificing time to rest or time to study content in advance.

According to cognitive-behavioral theory, not all individuals respond in the same way to the same stressor; it all depends on the cognitive interpretation (i.e., their thoughts) that the individual makes of the environmental stimuli. Some people will respond with adaptive thoughts, emotions, and behaviors to the stressor, while others will respond in a non-adaptive manner.

The predominant age range of the students was 20 to 25 years, which is a stage of physical and emotional development in which young people lack extensive life experience and therefore lack a higher level of emotional maturity, this enables some conditions for young people to develop unhealthy lifestyles. The students' places of origin were mainly the central and then the western zones. This could partially explain the behavioral change of women and men. For instance, those who decide to go to the clinical campuses in the

western zone must break the maternal and paternal bond and suddenly begin to live alone or with other students, without the possibility of having the support of their immediate family.

For the factors "Academic load", "Professor's methodology", "Professor's personality" and "Evaluation system", no relationship was found between the variables and anxiety. This result contrasts with the findings of the study conducted by López, D. C. M., Zambrano, K. P. M., Arias, S. L. V., Duque, P. A., & Valderrama, S. M. C. titled "Ansiedad y fuentes de estrés académico en estudiantes de carreras de la salud" (Anxiety and sources of academic stress in health sciences students), which revealed three anxiety-inducing aspects: academic overload, lack of time to fulfill academic activities, and taking exams (16).

The results show that there is a relationship between the factors "Weekly study hours", "Partial exams" and anxiety. Similarly, in the study titled "Anxiety about exams and study habits in higher education", conducted by Ruiz-Segarra MI, a correlation was obtained between the variables "anxiety due to exams" and "study habits" (interpreted as weekly study hours), with a value of $r = -0.371$ ($p = 0.00$). The correlation was a moderate negative one, statistically significant between study habits and anxiety due to exams.

Conclusions

After the development of the research, the following conclusions were drawn: the identified academic factors were weekly study hours, partial exams, virtual classes modality, academic load, professor's methodology, professor's personality, and evaluation system.



The prevalence of anxiety in the population of university students of the Doctorate in Medicine degree was 24.72%, showing a higher prevalence of anxiety in women, with 73%, compared to 26% in men. These findings make it evident that there are necessities to create public policies aimed at addressing mental health issues and the allocation of a robust national budget to strengthen mental health services throughout the country.

The academic factors that showed a statistically significant positive and weak relationship with anxiety were: weekly study hours, partial exams, and virtual classes modality, while academic load, professor's methodology, professor's personality, and evaluation system did not show a statistically significant relationship.

Recommendations

The establishment of a permanent self-care program is recommended to allow students to receive mental health care. Hospital entities are advised to conduct psychological assessments prior to students' admission to clinical training areas, without neglecting the creation of a system for monitoring and tracking students' mental health throughout their university careers, and finally, it is recommended to the Ministry of Public Health to develop public policies that facilitate the creation of mental health care centers accessible to both urban and rural areas, ensuring that the young population has easy access to them.



Bibliographic references

1. Caro, Y.; Trujillo, S.; Trujillo, N. Prevalencia y factores asociados a sintomatología depresiva y ansiedad rasgo en estudiantes universitarios del área de la salud. *Psychol. [Web]*. 2019; 13 (1): 41–52. Available at: <https://revistas.usb.edu.co/index.php/Psychologia/article/view/3726>
2. Intervención Cognitiva Conductual [Web]. Scribd.com [cited April 02, 2021]. Available at: <https://es.scribd.com/document/428617519/intervencion-cognitivaconductual>
3. El Modelo Cognitivo de la Depresión [Web]. Com.ar [cited April 07, 2021]. Available at: <http://cetecic.com.ar/revista/el-modelo-cognitivo-de-la-depresion/>
4. Obst J. La Terapia Cognitiva, Integrada y Actualizada [Web]. Scribd.com 2008 [cited April 15, 2021]. Available at: <https://es.scribd.com/document/169651768/LATERAPIA-COGNITIVA-INTEGRADA-YACTUALIZADA-docx>
5. Cognitivas SP. David A. Clark Aaron T. Beck [Internet]. Srmcursos.com 2012 [cited April 20, 2021]. Available at: https://www.srmcursos.com/archivos/arch_5847348cec977.pdf
6. Researchgate.net [cited April 23, 2021]. Disponible en: https://www.researchgate.net/publication/286536823_THE_BECK_ANXIETY_INVENTORY_BAI_psychometric_properties_of_the_Spanish_version_in_patients_with_psychological_disorders
7. Marquina de Reyes, A. M.; García de González, M. M. Matrícula y titulación de educación superior en El Salvador, con perspectiva de género. *Realidad y Reflexión [Web]*. Dec. 23, 2017 [cited Dec. 21, 2021]; (46): 54. Available at: <https://www.lamjol.info/index.php/RyR/article/view/5507/5194>
8. Román Collazo, C. A.; Ortiz Rodríguez, F.; Hernández Rodríguez, Y. El estrés académico en estudiantes latinoamericanos de la carrera de Medicina. *Rev. Psiquiatr. Clín. [Web]* 2008 [cited Nov. 10, 2021]. Available at: <https://rieoei.org/historico/deloslectores/2371Collazo.pdf>
9. Petrone, P. La feminización en la Medicina. *Rev. Colomb. Cir.* 2018; 33: 132-34. <https://doi.org/10.30944/20117582.54>
10. Arenas, M. Carmen; Puigcerver, Araceli. Diferencias entre hombres y mujeres en los trastornos de ansiedad: una aproximación psicobiológica. *Escritos de Psicología [Web]*. Dec. 2009 1; 3 (1): 20–9. Available at: https://scielo.isciii.es/scielo.php?script=sci_arttext&pid=s1989-38092009000300003
11. Martínez Ortega, R.; Tuya Pendás, L.; Martínez Ortega, M.; Pérez Abreu, A.; Cánovas, A. El coeficiente de correlación de los rangos de Spearman: Caracterización. *Revista Habanera de Ciencias Médicas [Internet]*. Jun. 2009 1; 8 (2). Available from: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1729-519X2009000200017



12. De la profesión en psicología Periodo 2009- J de V. Código de ética para el ejercicio de la profesión de psicología en El Salvador [Web]. Gob. sv [cited April 24, 2021]. Available at: <http://cssp.gob.sv/wp-content/uploads/2016/06/codigo-de-etica-bisnieto-2009-2011.pdf>
13. Caro, Y.; Trujillo, S.; Trujillo, N. Prevalencia y factores asociados a sintomatología depresiva y ansiedad rasgo en estudiantes universitarios del área de la salud. Psychol. [Web]. 2019; 13 (1): 41–52. Available at: <https://revistas.usb.edu.co/index.php/Psychologia/article/view/3726>
14. Arenas, M. Carmen; Puigcerver, Araceli. Diferencias entre hombres y mujeres en los trastornos de ansiedad: una aproximación psicobiológica. Escritos de Psicología [Web]. Dec. 2009 1; 3 (1): 20–9. Available at: https://scielo.isciii.es/scielo.php?script=sci_arttext&pid=s1989-38092009000300003
15. Ruiz-Segarra, M. I. Ansiedad ante exámenes y hábitos de estudio en educación superior. Horizontes Revista de Investigación en Ciencias de la Educación [Web]. Dec. 26, 2020 [cited Dec. 21, 2021]; 4 (16): 461–8. Available at: http://www.scielo.org.bo/pdf/hrce/v4n16/v4n16_a09.pdf
16. Marsiglia Lopez, D.; Madero Zambrano, K.; Vallejo Arias, S.; Duque, P.; Campillo Valderama, S. Factores generadores de estrés percibidos por estudiantes de enfermería en su primera práctica clínica. Ciencia y Salud Virtual. [Web] 2018 [Cited Dec. 12, 2021] (2018). 10 (2), 33-50 Available at: <https://revistas.curn.edu.co/index.php/cienciaysalud/article/view/1155/962>

