

Stress profile as a predictor of anxiety in Mexican medicine students

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Abstract

Background: College students are a group at risk for anxiety and stress due to psychological, social and academic demands occurring in the context of education. The purpose of this study was to construct a multiple regression model that determines dimensions of the stress profile as a predictor of stress in Mexican medicine students.

Methods: An analytical cross-sectional study was made of 873 Mexican medicine students during the 2018 school year. The survey included demographic data, the Nowack's Stress Profile, and the State and Trait Anxiety Inventory STAI. The regression method statistically validated the stress profile dimensions p.

Results: The study variables meeting the prediction criteria with a significant value were for the anxiety trait dimensions; ARC item cluster, positive valuation, type A behavior and stressful situations ($R^2 = 64.80\%$; $F = 7.39$; $p < 0.01$); and for the anxiety state they were: negative valuation, social support network and cognitive strength ($R^2 = 56.50\%$; $F = 67.54$; $p < 0.01$).

Conclusion: The study determined that anxiety and stress are present in medicine students in Mexico; therefore, we would recommend establishing programs aimed at handling and controlling the variables of situations posing a risk of stress that may cause anxiety, for prevention purposes and to prevent the consequences on the health, academic performance and wellbeing of medicine students in Mexico.

Keywords: anxiety; stress profile; medical students; type A behavior; positive valuation

INTRODUCTION

Our current environment (school, family, work and/or personal circumstances) can create an elevated level of stress that in turn may produce concerns and malaise that occasionally lead to serious health problems. According to interactionist theory, stress is considered an adaptive response of the organism to different environmental demands when they are perceived as excessive or threatening for the individual's wellbeing and integrity (Cuellar et al., 2019; Virues, 2005).

The stress profile identifies traits and behavior of people inclined to resist the harmful effects of daily stress and those that can cause vulnerability in the face of related diseases (De La Roca-Chiapas et al., 2019; Nowack, 2002). It is designed with areas considered reliable, positive and significant health protectors (exercise, rest/sleep, eating/nutrition

and preventive behavior), satisfactory support networks (family, social and at work), cognitive strength (internal locus of control), coping style (positive valuation, threat minimization and concentration on the problem), and psychological wellbeing (affirmative self-esteem emotions) as well as areas with risky behavior in stressful situations (health, work, finance, family, social environment and/or surroundings), type A behavior, negative valuation, threat minimization and ARC item cluster (Nowack, 2002; Preciado-Serrano & Vazquez-Goñi, 2010).

The college environment is characterized for maintaining high levels of stress given that a new environment of social interaction is perceived that demands the student's attention. It is present with more intensity during the first levels of education since they involve completely different dynamics and the performance of responsibilities. It also occurs during pre-exam periods when stress appears as a group of common symptoms in students (Silva-Ramos et al., 2020).

Stress in the academic environment can be considered as a normal response to diverse demands that students face at college. This

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response activates and mobilizes them to respond to different demands effectively, such as exams, presentations, final works and so forth, Nevertheless, sometimes we can have too many demands at the same time, which can exacerbate the ability to respond and diminish our performance, thereby affecting different conditions such as our emotional state, physical health the interpersonal relations (Haddad, 2005; Fernandez - Ortega et al., 2016; Robles-Mariños et al., 2021). Stress is also associated with psychological manifestations such as anxiety, frustration, nostalgia, social isolation and depression as well as physical symptoms such as migraines, muscular mobility problems and visceral sensitivity in gastrointestinal functions (Barraza-Lopez et al., 2017; Garcia-Araiza et al., 2019; Martinez-Garcia et al., 2018).

Anxiety is one of the most common psychological disorders recorded at health centers attending the general population, with greater presence in the college environment due to academic and organizational characteristics and demands that occasionally lead students towards adaptive reactions that may cause heightened levels of anxiety (Sarundiansky, 2013). This may result in elevated stress during the academic preparation of medicine students (Cabeza et al., 2018) and it may trigger homeostatic imbalance with adverse effects on academic performance, on health and on medium- and long-term psychological wellbeing with serious consequences such as metabolic alterations: loss or excessively increased appetite followed by period of diarrhea and constipation. There may also be panic crises and sleep problems among others (Torres-Nolasco et al., 2009).

The consequences of high levels of anxiety in students may lower their efficiency to learn since it reduces attention, concentration and retention with a resulting deterioration of academic performance (Gutierrez, 1996).

There are two types of anxiety: trait anxiety (Trait-A) and state anxiety (State-A), the difference being conceptual as well as operational. Trait-A is recognized as a personal proneness to react anxiously when responding to situations interpreted as threatening. On the other hand, State-A is a transitory emotional state that may vary in intensity and duration and is defined as an immediate body activation as well as a subjective perception of stress (Spielberger et al., 1970).

One of the major problems faced by higher education in Mexico is the lack of sufficient investment in education, so we drift farther and farther away from progress in science and

technology. One may consider higher education in Mexico as oscillatory in most cases in terms of interpretation by government administrations (Labra, 2006).

During their college years, most students have to meet and attain academic goals involving planning and complying with evaluated activities such as tests, reading, text analysis, oral presentations, participation in academic events and others, where they must be responsible and able to perform such activities (Gil-Tapia & Botello-Principe, 2018). In addition, during their college education, this population must go through certain periods where they will be challenged, such as consolidating life projects, assuming new social responsibilities as well as psychosocial pressure, all of which may make them vulnerable to the anxiety syndrome disorder (Castillo et al., 2016).

This study relies on the “cognitive transactional model” of stress, considered to be a dynamic process between the individual and his or her surroundings. Psychological signs of stress involve cognitive, emotional and behavioral factors that appear to be connected in the individual and his or her surroundings (Lazarus & Folkman, 1986) and will vary according to the stimulus causing it. It usually comes accompanied by feelings of fear, distrust, nervousness and concerns (Cuellar et al., 2019; Friman et al., 1998; Galaria-Lopez et al., 2021; Samaniego & Buenahora, 2016; Sarundiansky, 2013). Major theoretical positions in psychology describe anxiety as a central aspect of behavioral disorder (Samaniego & Buenahora, 2016; Sarundiansky, 2013; Virues, 2005).

The hypothesis. Risk dimensions in the stress profile are predictors of trait and state anxiety in Mexican medicine students.

The aim: To construct a multiple regression model to determine the risk dimensions within the stress profile as predictors of trait and state anxiety in Mexican medicine students.

LITERATURE REVIEW

Greater interest has been observed lately in the study of problems dealing with medicine education due to Mexico's need to have better doctors and to improve it with medical advances in neighboring countries (Fernandez-Ortega et al., 2016), The importance of universities guaranteeing students' psychological wellbeing as well as their academic success has been pointed out (Galaria-Lopez et al., 2021; Silva-Ramos et al., 2020).

The causes of stress may be a situation conducive to a strong emotional state and may manifest as emotional, physical and/or mental sensations when

facing stimuli, worries, fears, anxiety, psychological pressure and physical or mental fatigue demanding adaptation and produce tension (Glaría-Lopez et al., 2021).

The causes of stress are innumerable. The stressor may be any situation triggering a strong emotional state. Physical stressors are stimuli altering the physiological state such as cold, fasting, pain or cardiovascular stimuli. Psychological stressors are stimuli threatening the individual's current state or triggering a state of anticipation, including a stimulus that does not imply a real threat, and depends to a large extent on previous experiences (Sierra et al., 2015).

Therefore, stress is considered one of the main causes of health problems in today's society, a multivariate phenomenon resulting from the relation between an individual and his or her surroundings (Silva-Ramos et al., 2020).

A person's health is jeopardized when high stress levels are present, caused by his or her debilitated body due to increased cortisol levels. All kinds of problems may ensue as a result: psychological (anxiety and depression), behavioral (violent abuse, conflicts with colleagues, toxic substance addition, boredom or academic failure); and physical health (heart disease, peptic ulcer, diabetes, high blood pressure, allergies and infections among others) (Guerra et al., 2017).

Anxiety is a state of tension warning us about the presence of imminent danger, one of the most frequent sensations experienced by human beings. It is considered an emotional response triggered by an internal or external stress factor, accompanied by a feeling of malaise or somatic tension symptoms. One can say that anxiety is a defense produced to cope with stimuli that upend psychological and physiological equilibrium (Montes-Valer, 2020).

The symptoms of an anxiety disorder do not depend on the stressors; in fact, people who suffer from it are more susceptible to stressful situations, so one may say that stress produces anxiety, but people with anxiety do not necessarily suffer from stress (Barraza-Lopez et al., 2017).

Many people experience anxiety during some period of their life. It is defined as a sensation of diffused, unpleasant and vague apprehension, manifest in the impossibility to stand or sit for a time, often accompanied with vegetative symptoms such as headaches, excessive sweating, tachycardia, chest tightness, epigastric problems and restlessness that, as abnormal clinical symptoms, sound an alarm of imminent danger, allowing the individual to take measures to cope

with the threat (Cardona-Arias et al., 2015; Mendiburu et al., 2019).

One may say that anxiety is a normal adaptive response when faced with a threat (stress) in which students should have the ability to adapt when faced with the academic demands they will be submitted to during their stay at college. According to the literature, the groups most vulnerable to anxiety and stress are students of health-related majors due to the characteristics of this kind of education. The curriculum imposes a greater academic burden than that of other groups of college students (Castillo et al., 2016; Trunce et al., 2020)

Some investigations of stress in medicine students have found the presence of high levels ranging from 73.3 to 78 percent of the affected population in countries such as Mexico, Chile and Peru (Barraza-Lopez, et al, 2017; Garcia-Araiza et al., 2019; Robles-Mariños et al., 2021). Other studies carried out with similar populations such as health science students in Mexico report moderate levels of stress with a prevalence up to 86% (Silva-Ramos et al., 2020; Tijerina et al., 2018). Other studies in Chile were made of the same population and found pathological stress levels with a prevalence between 37% to 47% affected. It is important to mention that these studies have related stress with other variables such as emotional intelligence, academic aspects and depression (Glaría-Lopez et al., 2021; Trunce et al., 2020).

Other stress investigations have reported high levels in medicine students with a prevalence of 36.9% affected in Mexico and in Chile as well as moderate levels in Peruvian students (Barraza-Lopez et al., 2017; Robles-Mariños et al., 2021; Tijerina et al., 2018). Other studies of anxiety in health science students report moderate levels of affected population at 86.3% in Mexican universities and 47% of students in Chile. We should point out that these studies associated anxiety with the variable of depression as well as with the curriculum (Silva-Ramos et al., 2020; Trunce et al., 2020).

METHODOLOGY

Study type and design

A qualitative analytical cross-sectional study carried out in 2018.

Participants

Out of a total population of 3,570, 873 students were selected with a simple random sample study and an expected statistical prevalence of 65%, a minimum acceptable incidence of 70% and an

accuracy level of 99%. 52% (454) were female and 48% (419) were male. Ages ranged between 17-21 years with an average of 19 (± 1.19) years participated.

Instruments

State and Trait Anxiety Inventory (STAI) by Spielberg & Díaz-Guerrero (1987), consisting of two scales: Trait-A and State-A, with 20 items each, and Liebert-type scaled answers with four choices (0 = almost never/nothing; 3 = a lot/almost always). The inventory reports Cronbach's alpha reliability for State-A of 0.908, and 0.874 for Trait-A. Participants were graded according to the manual: total points were added for each subscale, inverse items subtracted, the appropriate constant added (50 for State-A and 35 for Trait-A), and with the respective score scales for college students, they were interpreted as follows: low level (< 30 points), medium level (30-44 points) and high level (> 44 points) (Spielberger et al., 1970).

Nowack Stress Profile (2002) identifies individual traits and behavior associated with stress risk or protection. It consists of seven independent dimensions: stressful situations, health habits, social support network, type A behavior, cognitive strength, coping style and psychological wellbeing. The health habits dimension in turn has five scales: exercise, rest/sleep, eating/nutrition and prevention and the cluster items (ARC).

Coping style has four scales: positive valuation, negative valuation, threat minimization and concentration on the problem. The Stress Profile has 118 items that are graded as set forth in the manual. The psychometric properties of the instrument show reliability of half, 0.89 and 0.91, in populations of different races and educational levels. The homogeneity of the test-retest reliability scales shows a range of 0.51 to 0.92 Cronbach's alpha, and factorial analyses report a low to moderate association (0.41 to 0.75 eigen), thus confirming that the constructs represented by these dimensions are sufficiently independent of each other to justify their separate interpretation. Altogether, the dimensions explain 57% of the variance (Nowack, 2002).

Afterwards, 15 scores of the scales were analyzed: health habits, exercise, rest/sleep, eating/nutrition, prevention, social support network, cognitive strength, positive valuation, threat minimization, concentration on the problem and psychological wellbeing. Scores of $T > 60$ were considered stress protectors, and $T < 40$ as vulnerability to a health risk. As for the scales: stress, Type-A behavior, negative valuation and ARC item cluster (alcohol,

recreational drugs and cigarettes), $T < 40$ was considered a risk and $T > 60$ as invulnerability to sickness or with protective resources for health.

Procedure

The university was asked to provide the enrollment list of students in 2018. The selected students were contacted, and the purpose of the investigation was explained to them. Those who agreed to participate voluntarily were given the test and those who did not agree to participate were replaced by the participant under the following number. The test was ministered by the responsible investigator and lasted an average of 20 minutes.

Analysis Plan

We used Excel software, IBM-SPSS Statistics 22 for windows to analyze data under the university's license. A descriptive analysis was made of the variables of this study. Later, a multiple linear regression analysis was made to determine the predictive model for Trait A and State A with the "stepwise regression" method, and the value $p \leq 0.05$ was considered to be the level of significance. Data were tabulated and processed with the Statistical Package for Social Studies (SPSS) version 15 for Windows XP with the university's license.

Ethical considerations

Participants were asked to answer the survey voluntarily with their informed consent. They were guaranteed confidentiality of the gathered data and their anonymity, and the participants had the choice of answering or dropping out whenever they wanted. The study was made according to the guidelines of the Regulations of the General Health Law in Research Matters for the Health of Mexico, and the Helsinki Declaration. Participants' mental and physical health was not affected, and we had the permission of university authorities.

RESULTS

Figure 1 shows the levels of Trait-A and State-A y of medicine students at a public university in Mexico, where high levels have a greater percentage in Trait A with 45% as well as in State Anxiety with 50% of the affected students. Medium and lower levels were seen at a percentage below 29%.

The stress profile evaluation reported the highest frequencies in the negative valuation scale with 62% (544) of the participants at risk, and the type A behavior scale at 57% (451) (Figure 2).

Two multiple linear regression analyses were made for Trait-A and for State-A with stress profile scales as predictors.

In the first analysis, Pearson's r determined a relationship between the presence of a stressful situation, some addiction (alcohol, recreational drugs or cigarettes), having a type A behavior and lacking a positive valuation, with Trait-A. The determination coefficient (R^2 adjusted) showed that the model explained 64% of the variance ($F = 7.39$ y $p \leq 0.01$).

In the second analysis, the Pearson coefficients showed a positive and significant correlation; the social support network and cognitive strength scales showed an inverse relationship for State-A. The determination coefficient (R^2 adjusted) showed that the model explained 56% of the variance ($F = 67.54$ y $p \leq 0.001$) (Table 1).

The regression equation for Trait-A was $Y = 18.09 + 0.232$ (ARC item cluster) $- 0.499$ (positive valuation) $+ 0.252$ (type A behavior) $+ 0.448$ (stress situations) with a strength of 64.8% ($F = 7.397$; $p \leq 0.01$). As for State-A, $Y = 36.17 + 0.380$ (negative valuation) $- 0.289$ (social support network) $- 0.242$ (cognitive strength).

An analysis was made of the different contrasts involving suppositions of independence, normality and homoscedasticity. We should point out that the data do not show colinearity among the predictor variables. The average statistical value of <Tolerance> for the stress profile variables of stressful situations, health habits, social support network, type A behavior, cognitive strength, coping style (positive valuation, negative valuation, threat minimization and concentration on the problem), ARC item cluster and psychological wellbeing is 0.91, with no value below 0.89. The proximity of these values to the maximum value (0-1 range) indicates the independence of contributions of the predictive variables vis-à-vis the trait-state anxiety values, thus indicating that the variance of the residuals is constant and establishes that residuals are distributed normally. The average value (VIF = 1.07) with no value below 1.05 showed that there are no colinearity problems. The scores of the students participating in the study are shown in Table 2 and underscore that stress profile scales turned out to be significant for the presence of Trait-A in medicine students, indicating that 49.5% (432) found themselves in stressful situations, 45.7% (399) with the presence of an addiction (ARC item cluster), 47.5% (415) with type A personality and that 47.9% (418) had a low positive valuation. With regards to State-A, it showed that 58.8% (513) of the participants had negative valuations, 64.5% (363) had low cognitive strength, and 54.8% (478) had no support network (Table 2).

DISCUSSION

Results of this study indicate that negative variables of the stress profile: ARC item cluster, type A behavior and stressful situations as well as the positive and inverse variable and of the positive valuation were Trait-A predictors; and that the at-risk behavior variables: negative valuation as well as positive and inverse variables of the social support network and cognitive strength, were predictive of State-A.

In other words, the greater the presence of ARC item cluster, type A behavior, stressful situations and having negative valuation, the greater the presence of Trait-A and State-A, and on the contrary, when there is a good social support network, greater cognitive strength and positive evaluations, there is less presence of Trait-A and State-A in medicine students at a public university in Mexico. This work agrees with the cognitive-transactional model of stress, which emphasizes the interaction of stress variables, based on evaluative processes in the face of stressful stimuli from the environment, this is evident in the significance obtained by some of the variables of the stress profile with the Trait-A and State-A.

The results also showed a greater presence of high levels both in the A-Trait (relatively stable anxiety propensity) and in the A-State (transitory emotional condition), meaning that students presenting high levels of anxiety may have difficulty in expressing and communicating their emotions because they may tend to avoid conflicts or because conflicts easily trigger tears or anger, as well as difficulties in making decisions when wanting to control situations (Nowack, 2002).

Although other studies have already established that anxiety and stress are present during the education process of medicine students (Friman at al., 1998; Robles-Mariños et al., 2021; Torres-Nolasco et al., 2009), our findings confirm that only the stress factors of a an ARC item cluster, type A personality, negative valuation and stressful situations as well as the social support network and cognitive strength were predictors of the presence of Trait-A and State-A. Finding an association of negative variables of the stress profile with Trait-A and State-A enabled us to validate the second hypothesis, and by not finding an association between the stress profile variables of health habits, concentration on the problem, threat minimization and psychological wellbeing, the first hypothesis was partially proven.

Understanding anxiety as an emotional reaction of alert when faced with a threat that may originate without stressors in students can be seen as a

disproportionate response to a stimulus, resulting in an inability to respond to situations, causing long-term negative effects such as academic failure, deficient academic performance, suicidal thoughts, desertion, alcohol and tobacco consumption as well as other ARC item cluster and delinquency (Gloria-Lopez et al., 2021; Gutierrez, 1996; Silva-Ramos et al., 2020; Trunce et al., 2020).

These results coincide with those reported by Rivera et al. in 2017 who determined that type A behavior and cognitive strength are significant factors intervening in the presence of stress. Also, Martinez-Garcia et al., 2018, associated alcohol consumption as part of the ARC item cluster with the presence of psychopathological disorders due to extreme anxiety in college students. Other studies (De La Roca-Chiapas et al., 2019; Garcia-Araiza et al., 2019; Mendoza & Vargas, 2017; Tijerina et al., 2018) underscore stress as one of the factors responsible for lowering the efficacy of the immune system, thus increasing the possibility of becoming sick as well as harmful emotional effects with physical and mental manifestations that may not be attributable to real danger, exteriorized as a crisis that could lead to panic and may show traits of anxiety created in defense against stimuli disrupting the physiological and psychological balance.

We should mention that the differences between the above-mentioned studies and this one may lie in the fact that the variables in this study are associated with other factors such as stress caused by academic demands, burnout, emotional intelligence, academic performance, depression and lifestyle as well as social, economic, cultural and age traits and the female gender, besides studying different populations and the use of other measurement instruments (Gloria-Lopez et al., 2021; Guerra et al., 2017; Mendiburu et al., 2019; Montes-Valer, 2020). Despite the foregoing, the results reported in this study confirm the presence of anxiety and stress in medicine students.

The results also showed that the positive variable in stressful situations with greater frequency in the presence of Trait-A was positive valuation, which indicates that medicine students are not concentrating on the positive aspects of situations and, therefore, do not tend to reduce the impact of problems and/or frustrations. The variable with negative behavior and a risky situation most frequent was a stressful situation indicating uncomfortable experiences, discomfort and more or less frustration with everyday life that could be assumed as very stressful and mean that the level of health may be susceptible to being affected

(Mendiburu et al., 2019; Montes-Valer, 2020; Tijerina et al., 2018).

The most frequent positive variable in risky situations for State-A was cognitive strength, a variable that has to do with attributions, attitude and beliefs that students have about life and work. It is likely that those in a risky situation see changes and risks as a threat and feel they have no control over important events, meaning they are susceptible to becoming sick. The most frequent negative variable in a risky situation was negative valuation, characterized by self-blame, criticism and/or catastrophic thoughts, thus indicating that these students concentrate on the worst aspects or consequences of a situation. They concentrate on things they should have done or not done regarding a certain event or situation (Montes Valer, 2020; Nowack, 2002).

It is important to mention that anxiety as well as stress maintain a tendency of greater prevalence among students in the area of health than when compared to the general population although it is also present among students in other disciplines (Martinez-Garcia et al., 2018; Mendoza & Vargas, 2017; Monter-Valer, 2020; Tijerina et al., 2018), thus the importance of evaluating the impact of anxiety and stress on college students.

This investigation also showed greater frequency at the higher levels of Trait-A as well as State-A, and considers it is an alarming situation, where students may lose their ability to adapt to their surroundings. Along with the high level of stress, they may enter into a phase known as resistance where they try to cope with situations, and if they lose the ability to respond, the consequences may be frustration, suffering, sickness and a general deterioration of the student's life (Garcia-Araiza et al., 2019)

Therefore, if there is no intervention strategy aimed at reducing stress levels and A-Trait as well as the A-State levels as well as an adequate development of coping strategies as a tool that would help in the management of those ailments, those affected could at any time climb to higher levels of risk and compromise their health and educational achievements, which can lead to poor academic performance and/or school dropout.

There is strong evidence to support the hypothesis that the use of protective strategies to cope with stress and anxiety is usually quite effective when academic and life situations are too uncontrollable. However, the failure to use adequate coping strategies to reduce high levels of anxiety and stress could result in the exacerbation of disease processes or in the long term, death.

In conclusion, our study determined that variables

of the stress profile in risky situations: negative valuation, ARC item cluster, stressful situations, type A personality as well as a social support network and cognitive strength were predictive of the presence of Trait-A and State-A in medicine students at a public university in Mexico.

The presence of anxiety and stress may alter health, reduce the quality of life and wellbeing as well as increase morbimortality (Mendoza & Vargas, 2017). This study contributes knowledge about intervening stress factors in the presence of anxiety in medicine students at a public university in Mexico. Therefore, we recommend establishing workable actions with a view towards identifying said factors for proper control and management, with educational programs aiming at fostering healthy habits by means of selfcare of their health to prevent stress and anxiety before they have negative repercussions on health and academic performance by and desertion of medicine students in Mexico.

The limitations of the study are mainly that it does not take into account other factors that could possibly influence Trait-A as well as State-A and stress. We recommend that future studies consider other measurable variables such as nourishment and social, economic and family-related characteristics among others. Despite the foregoing, this investigation contributes by linking academic demands with the presence of stress in students, pursuant to what the cognitive interactional theory has established.

We suggest that future investigations include an analysis of other individual or organizational measurable variables, the purpose being to verify conditions affecting the emotional state of students and to not offer studies that only detect stressors, but that show the effects of structural changes that can preserve health and prevent risks in this population,

Acknowledgments

The authors thank all those who participated in the study.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Figures and Tables

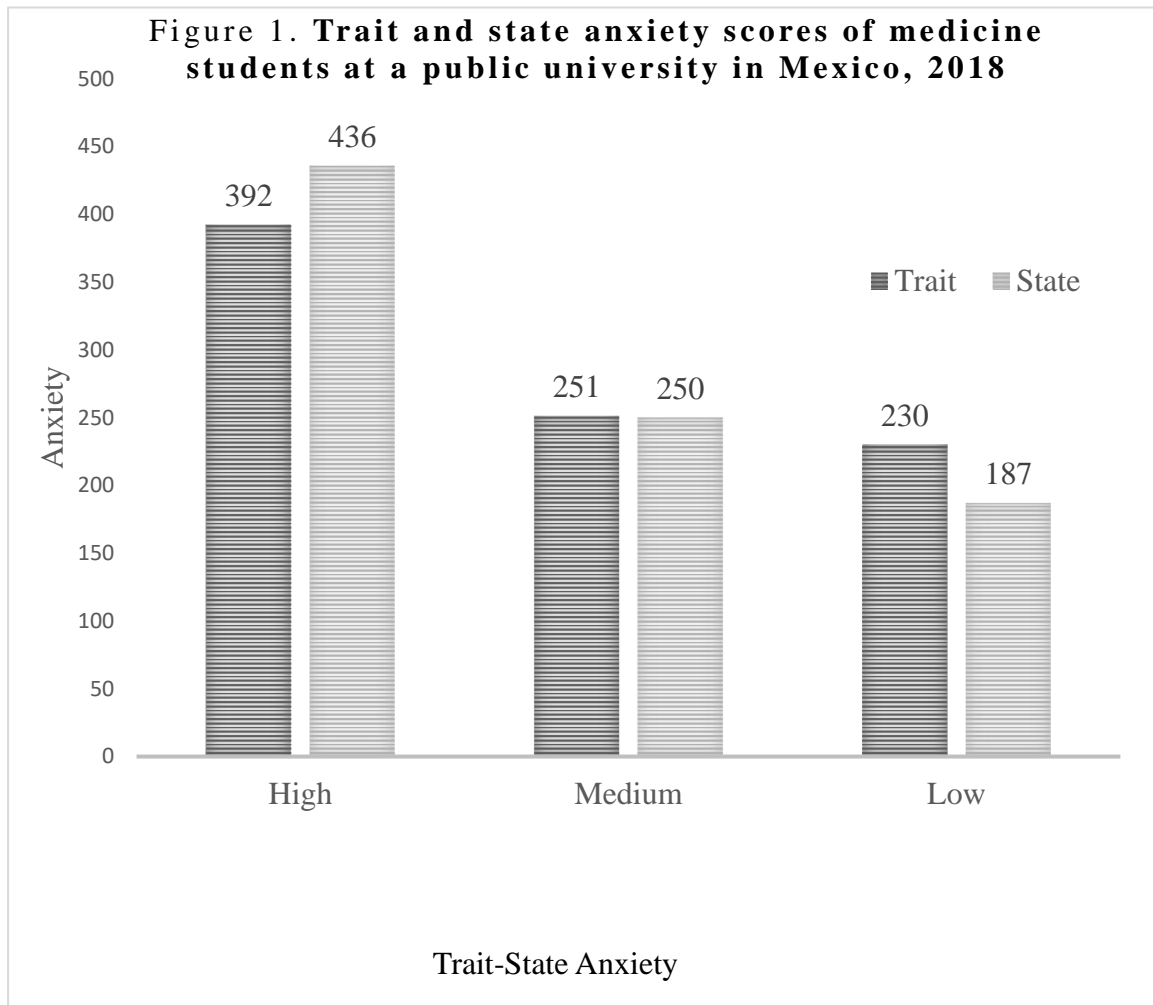


Figure 1. Trait and state anxiety scores of medicine students at a public university in Mexico, 2018

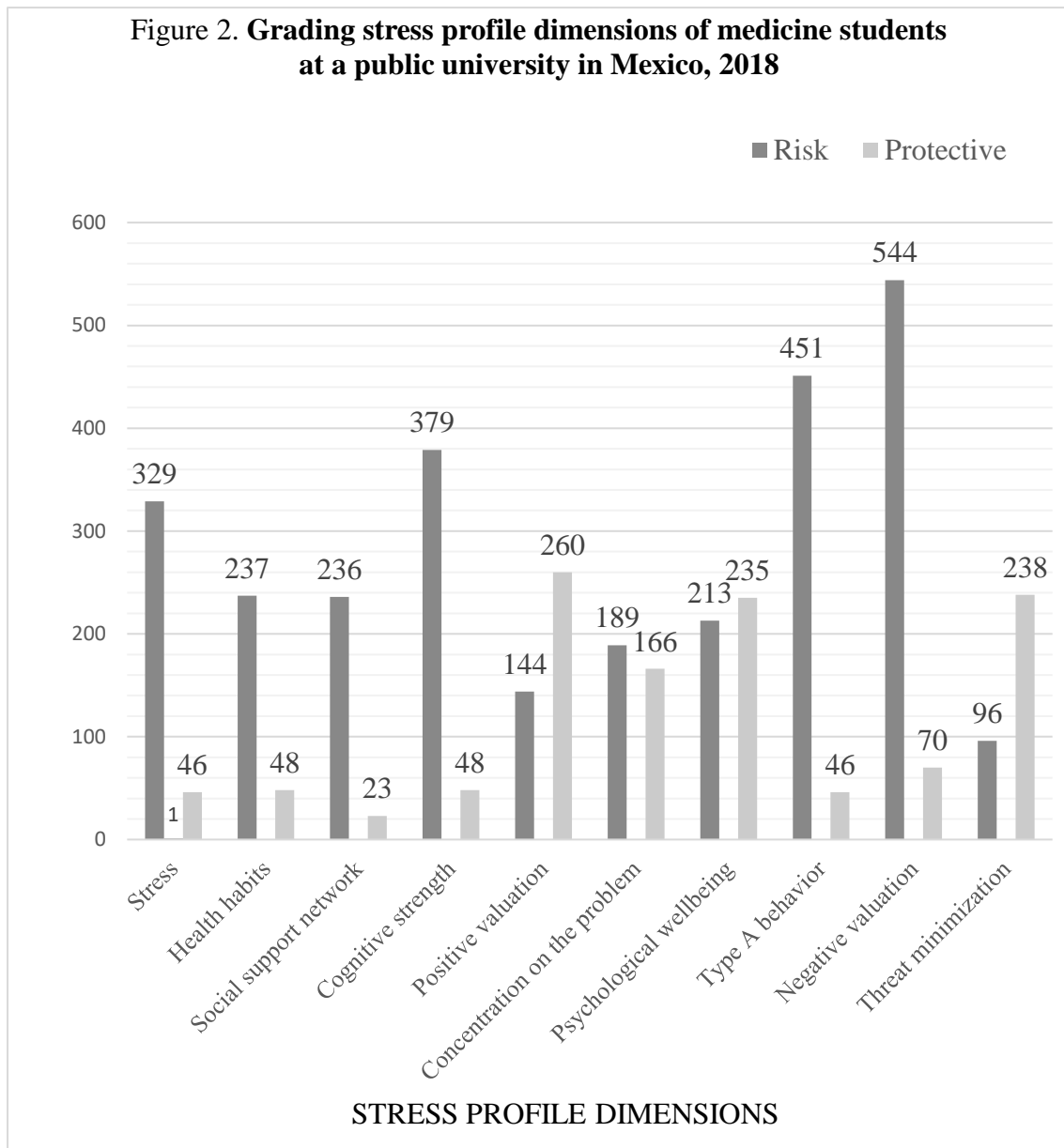


Figure 2. Grading stress profile dimensions of medicine students at a public university in Mexico, 2018

Table 1. Multiple regression statistics of the stress profile as predictor of Trait-State Anxiety in Mexican medicine students at a public university in Mexico.

Stress Profile	Pearson correlation with T – S Anxiety	Beta	EE	F	p	R ² Adjusted	Model
Anxiety - Trait							
Constant		18.09	2.674	7.397	0.00	0.648	$t = 6.765 (p = 0.00)$
ARC item cluster	0.400 ($p = 0.00$)	0.232	0.019				
Positive Valuation	-0.395 ($p = 0.00$)	-0.499	0.022				
Type A Behavior	0.329 ($p = 0.00$)	0.252	0.017				
Stressful Situation	0.257 ($p = 0.00$)	0.448	0.024				
Anxiety - State							
Constant		36.17	1.686	67.543	0.00	0.565	$t = 21.46 (p = 0.00)$
Negative Valuation	0.367 ($p = 0.00$)	0.380	0.015				
Social Support Network	-0.218 ($p = 0.00$)	-0.289	0.014				
Cognitive Strength	-0.218 ($p = 0.00$)	-0.242	0.026				

N = 873

Table 2. Distribution of trait anxiety levels and stress profile variables of medicine students at a public university in Mexico.

STRESS PROFILE SCALES	TRAIT ANXIETY LEVELS						
ARC item cluster							
At risk	202	23.1	106	12.1	91	10.4	
No risk	82	9.4	72	8.2	69	7.9	
Positive Valuation							
At risk	217	24.9	106	12.1	95	10.9	
No risk	83	9.5	68	7.8	66	7.6	
Type A Behavior							
At risk	214	24.5	108	12.4	93	10.7	
No risk	79	9.0	69	7.9	65	7.4	
Stressful Situation							
At risk	238	27.3	106	12.1	88	10.1	
No risk	72	8.2	70	8.0	72	8.2	
STATE ANXIETY LEVELS							
Negative Valuation							
At risk	265	30.4	159	18.2	89	10.2	
No risk	85	9.7	49	5.6	42	4.8	
Social Support Network							
At risk	254	29.1	135	15.5	89	10.2	
No risk	84	9.6	51	5.8	49	5.6	
Cognitive Strength							
At risk	331	37.9	134	15.3	98	11.2	
No risk	51	5.8	58	6.6	44	5.0	