

Work stress in students of the Bachelor's degree in management belonging to the Tecnológico de Estudios Superiores de Villa Guerrero

Estrés laboral en los estudiantes de la Licenciatura en Administración, pertenecientes al Tecnológico de Estudios Superiores de Villa Guerrero

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DOI: 10.35429/JPD.2021.14.5.1.7

Received March 25, 2021; Accepted June 30, 2021

Abstract

According to the WHO, work stress is the response that people can have when presented with demands and work pressures that do not correspond to their knowledge and skills, calling into question their ability to cope with it. This study is non-experimental, cross-sectional and quantitative, through the Stata program with which factor analysis was performed with a sample of 99 students of the Bachelor's Degree in Administration belonging to the Tecnológico de Estudios Superiores de Villa Guerrero, State of Mexico, to whom the Adaptation of the SISCO SV Academic Stress Inventory to the context of the COVID-19 crisis was applied (2020), of which the reagents of Symptomatology and Coping Strategies were considered, to determine the factors of greater incidence mainly, considering also only the students who simultaneously study and work and who reported having felt stress.

Work stress, Symptoms, Coping, Students

Resumen

Según la OMS, el estrés laboral es la respuesta que las personas pueden tener cuando se les presentan demandas y presiones laborales que no se corresponden con sus conocimientos y habilidades, poniendo en tela de juicio su capacidad para enfrentarlo. Este estudio es de tipo no experimental, transversal y de corte cuantitativo, a través del programa Stata con el que se realizó análisis factorial con una muestra de 99 estudiantes de la Licenciatura en Administración pertenecientes al Tecnológico de Estudios Superiores de Villa Guerrero, Estado de México, a quienes se les aplicó la Adaptación del Inventario de Estrés Académico SISCO SV al contexto de la crisis por COVID-19 (2020), del que se consideraron los reactivos de Sintomatología y Estrategias de Afrontamiento, para determinar los factores de mayor incidencia principalmente, considerando además solamente a los estudiantes que simultáneamente estudian y trabajan y que manifestaron haber sentido estrés.

Estrés laboral, Síntomas, Afrontamiento, Estudiantes

Citation: VELÁZQUEZ-SERNA, José Ángel & MONTES DE OCA-ESTRADA, Anabel Regina. Work stress in students of the Bachelor's degree in management belonging to the Tecnológico de Estudios Superiores de Villa Guerrero. Journal Practical Didactics. 2021, 5-13: 1-7

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1. Introduction

Work is essential to guarantee obtaining resources aimed at improving people's quality of life. Depending on personal interests and perception of work, it can become a source of stress; as well as academic activity, depending on how it is lived, faced and resolved (Pérez & Cartes-Velázquez, 2015). Furthermore, stress has become a primary subject of study in many and very diverse investigations, as it has been shown that it causes numerous psychological and physiological diseases insofar as it involves all the systems and subsystems of the organism (Cólica, cited by Peralta & Villalba, 2019), thus causing effects on the physical and mental health of those who suffer from it.

According to different references, up to 30% of students carry out some paid activity while they are studying; This is due to various purposes (González & Guerrero, S / f.). In addition to this, the situation of the students of the Bachelor of Administration of the Tecnológico de Estudios Superiores de Villa Guerrero (TESVG), State of Mexico, where they seek an economic income for different reasons, among them, contribution to their house, work experience or independent living, among others. However, the simultaneity of these activities, school and work can generate greater stress in them. Therefore, it is of interest to this research to determine through factor analysis the symptoms they present and the coping strategies they use the most according to these characteristics. Factors that were obtained through the instrument Adaptation of the SISCO SV Academic Stress Inventory to the context of the COVID-19 crisis (2020) in which only the items were considered with respect to symptoms and coping factors, with a sampling previous randomization of students who said they had felt stress, as well as those who did have a job at the same time they study.

2. Literature Review

Stress

The word stress derives from the English stress ("tension"), a term taken from physics, whose meaning comes from the Greek stringere, a term that since the fourteenth century has been used in various texts to refer to those events that cause tension (Peralta & Villalba, 2019).

Stress can be defined as "a complex process in which the individual responds to environmental demands or situations (stressors) with a pattern of responses by the body that can be physiological, behavioral, cognitive, emotional or a combination of them", (Hernández & Romero, 2010) these situations can be perceived as threatening, because they overflow the individual's resources, placing their well-being at risk (Lazarus, 2006). In addition to this, stress is also considered to be a set of physical and mental reactions that the person suffers when subjected to various external factors that exceed her ability to cope (IMSS, S / f).

On the other hand, the General Council of Psychology of Spain defines stress as: "A process that starts when a person perceives a situation or event as threatening or overflowing with his resources" (Colegiados) (Soto, 2020).

Feldman (cited by Espinoza & Kunimoto, 2020), Stress is one of the diseases that people today suffer from due to overwork, economic problems and, in general, different ones. This has been manifested both psychologically and physiologically; in the first, producing anger, intolerance, aggressiveness or great risk of obtaining some disease and in the second, through problems such as respiratory rate, the heartbeat accelerates and blood pressure increases to enable a rapid transport of oxygen and of nutrients (Stress and the use of social networks of the students of the careers for adults who work from a university of metropolitan lima, 2020).

On the other hand, coping strategies are understood as psychological resources that the subject uses to deal with stressful situations. Although the implementation of these does not always guarantee success, they serve to generate, avoid or reduce conflicts in human beings, attributing personal benefits to them and contributing to their strengthening (Peña, Bernal, Pérez, Reyna, & García, 2018). The student modifies the harmful effects of stressors through coping strategies or skills that they develop, which can be direct or avoidant, in order to solve their problems (Ticona, Paucar, & Llerena, 2010).

Regarding the symptoms, it can be indicated that stress has individual physical, behavioral and psychological manifestations, in the case of physical manifestations there is an increase in pulse, heart palpitations, increased perspiration and in the muscular tension of arms and legs, shortness of breath and brushing of teeth, sleep disorders, chronic fatigue, headache and digestion problems. On the other hand, frequent behavioral responses are: impaired performance, tendency to argue, isolation, reluctance, smoking, alcohol or other consumption, absenteeism, propensity to accidents, nervous gestures, increased or decreased appetite, and increased or decreased appetite. dream. Regarding the psychological responses, the following stand out: restlessness, depression, anxiety, disturbance, inability to concentrate, irritability, loss of self-confidence, worry, difficulty in making decisions, recurring thoughts and distractibility (Suárez-Montes & Díaz-Subieta, 2015).

However, the researchers Alfonso, Calcines, Monteagudo, & Nieves (Estrés Académico, 2015), consider that physical discomforts are those that involve a reaction of the body, the psychological ones have to do with the cognitive or emotional functions of the person, while in the behavioral ones there are those that involve the behavior of the person, for example arguing, isolation from others, absenteeism from classes, among others.

Work stress

In addition to the above, work stress is considered as that type of stress where the increasing pressure in the work environment can cause the physical and / or mental saturation of the worker, generating various consequences that not only affect health, but also their environment more next since it generates an imbalance between the work and the personal (IMSS, S / f). It is also defined as the response that people can have when they are presented with demands and work pressures that do not correspond to their knowledge and skills and that call into question their ability to cope by the World Health Organization (I-Who, 2004).

Certain events can generate more stress in some people than in others by virtue of the contextual variables of the individual's field, the personal variables of the same and the consequences of stress itself (Ayuso, cited by Peralta & Villalba, 2019), hence that young people who work and study at the same time can present more symptoms and resort to other aspects of coping.

In the research Relationship between academic stress and academic performance in two groups of university students, one that performs work activities and the other only academic activities, it was concluded that students who work present higher levels of academic stress than those who do not work, without However, in terms of Academic Performance in both groups, it is not affected by this variable (Jaramillo & García, 2019). What supports this research, which investigates the symptoms and coping strategies of university students who perform both activities simultaneously, study and work.

Reyes, Ibarra, Torres and Razo (2012) highlight the dimensions proposed by Maslach (1976) and Maslach and Jackson (1982) that promote this symptomatology: emotional exhaustion, depersonalization and low self-esteem. The first is related to physical and emotional fatigue due to a complicated work day; the second results in feelings of personal hopelessness, helplessness and powerlessness, so that negative attitudes towards work or academic activities are generated in the person, which results in apathetic behavior, and the third, low self-esteem, translates into in a loss of ideals, in a withdrawal from family, social and recreational activities and in an inability of the person to feel productive and self-realized (Peralta & Villalba, 2019).

Therefore, effective stress management should allow workers to manage and cope with stress levels in the workplace, as people work for various reasons, not only because of the need for money, but as mentioned. Previously it may be because it gives them a life purpose, and allows individuals to shape their identity, also work offers challenges, which are associated with stress. Therefore, stress becomes an integral part of our lives (Currid & Martínez, 2019)

Methodology

This research is quantitative because for the processing of the information obtained through the SISCO Inventory survey with its adaptation to the context of the Covid-19 crisis (Alania, Llancari, De la Cruz, & Ortega, 2020) and of which only the symptomatology and coping strategies reagents were used, it was carried out through the Stata program for factorial analysis, with a sample of 99 students from the Bachelor's Degree in Administration of the Tecnológico de Estudios Superiores de Villa Guerrero, State of Mexico, who are currently working and studying simultaneously.

Results

The KMO test

The KMO test is a measure that establishes how adequate the data are for factor analysis. The test measures the adequacy of the sampling for each variable in the model and for the complete model. Statistics is a measure of the proportion of variance between the variables in the model and for the entire model. The statistic is a measure of the proportion of variance between the variables that could be.

In this study the questions were taken: p2 p4 p6 p7 p8 p9 p10 p11 p12 p15 p17 p19 p21 p25 p29 p30; because they presented the highest KMO value. The complete sample has an average KMO of 0.88 (See table 1).

Variable / KMO	Variable / KMO	Variable / KMO	Variable / KMO
p1 0.8795	p9 0.9206	p17 0.8890	p25 0.9189
p2 0.9050	p10 0.9073	p18 0.8617	p26 0.8464
p3 0.8562	p11 0.9185	p19 0.8942	p27 0.8740
p4 0.9346	p12 0.8908	p20 0.8507	p28 0.7626
p5 0.8837	p13 0.8786	p21 0.8907	p29 0.9070
p6 0.9014	p14 0.8192	p22 0.8456	p30 0.8890
p7 0.9256	p15 0.9040	p23 0.8141	p31 0.8349
p8 0.9001	p16 0.8506	p24 0.8799	p32 0.3931
			Overall 0.8809

Table 1 Kaiser-Meyer-Olkin measure of sampling adequacy

Source: Obtained from Stata

Cronbach's Alpha

Average interitem covariance:	0.8867847
Number of items in the scale:	16
Scale reliability coefficient:	0.9101

Table 2 Cronbach's Alpha

Source: Obtained from Stata

Correlation in factor analysis

Factor analysis / correlation Method: principal-component factors Rotation: (unrotated)	Number of obs =	136
	Retained factors =	2
	Number of params =	31

Table 3 Correlation in Factor Analysis

Source: Obtained from Stata

KMO test

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	6.92494	3.79341	0.4328	0.4328
Factor2	3.13153	2.24172	0.1957	0.6285
Factor3	0.88982	0.10020	0.0556	0.6841
Factor4	0.78961	0.19539	0.0494	0.7335
Factor5	0.59422	0.04262	0.0371	0.7706
Factor6	0.55160	0.01852	0.0345	0.8051
Factor7	0.53308	0.06870	0.0333	0.8384
Factor8	0.46437	0.03638	0.0290	0.8674
Factor9	0.42800	0.04657	0.0267	0.8942
Factor10	0.38143	0.05483	0.0238	0.9180
Factor11	0.32660	0.02954	0.0204	0.9385
Factor12	0.29706	0.06079	0.0186	0.9570
Factor13	0.23627	0.05711	0.0148	0.9718
Factor14	0.17916	0.04028	0.0112	0.9830
Factor15	0.13887	0.00544	0.0087	0.9917
Factor16	0.13344		0.0083	1.0000
LR test: independent vs. saturated: chi2(120) = 1439.05 Prob>chi2 = 0.0000				

Table 4 KMO test

Source: Obtained from Stata

In the correlation test for factor analysis, the Kaiser-Meyer-Olkin criterion suggests retaining only those factors with Eigen values (main values) greater than or equal to one, in this study we will retain two factors (factor 1 and factor 2 main values 6.9 and 3.1, respectively). (See Table 4).

The factor loadings are part of the result of the factor analysis, which serves as a data reduction method designed to explain the correlations between the observed variables using a smaller number of factors. Before running the factor analysis, the factor loads should be rotated to obtain a clearer pattern.

Rotation

Factorial rotation aims to select the simplest and most interpretable solution. In short, it consists of rotating the coordinate axes, which represent the factors, until it is as close as possible to the variables in which they are saturated. Each variable should not be saturated by more than one factor.

In Table 5, the three factors explain 62.85% of the total variance observed.

Number of obs = 136				
Method:	principal-component factors		Retained factors =	2
Rotation:	orthogonal	varimax (Horst off)	Number of params =	31
Factor	Variance	Difference	Proportion	Cumulative
Factor1	6.01121	1.96595	0.3757	0.3757
Factor2	4.04526		0.2528	0.6285
LR test: independent vs. saturated: chi2(120) = 1439.05 Prob>chi2 = 0.0000				

Table 5 Factor analysis / correlation

Source: Obtained from Stata

Variable	Factor1	Factor2	Uniqueness	Comunalidades(1-Uniqueness)
p2	0.7234	0.0522	0.4739	0.53
p4	0.7183	0.0889	0.4762	0.52
p6	0.7227	0.1834	0.4441	0.56
p7	0.8606	0.0574	0.2561	0.74
p8	0.7638	0.0510	0.4139	0.59
p9	0.8163	0.1925	0.2967	0.70
p10	0.7253	0.1284	0.4574	0.54
p11	0.8058	0.2040	0.3091	0.69
p12	0.8123	0.2041	0.2985	0.70
p15	0.6979	0.1343	0.4948	0.51
p17	0.1197	0.6130	0.6099	0.39
p19	0.2388	0.6953	0.4596	0.54
p21	0.1837	0.8174	0.2981	0.70
p25	0.1610	0.8650	0.2258	0.77
p29	0.0496	0.8470	0.2802	0.72
p30	0.0593	0.9205	0.1492	0.85

Table 6. Rotated factors and communalities. Rotated factor loadings (pattern matrix) and unique variances

Source: Obtained from Stata

Table 6 shows the values that the simple variables have in common in relation to all the factors, as well as the percentage of variation of the questions, explained by the factors. A relatively high value in the communalities indicates that the variable has much more in common in reference to the other variables taken in the groups. Likewise, in Table 5, it is observed that question 7 has the highest commonality and question 17 the lowest.

Factor 1 is defined by questions 7, 9, 11 and 12. Factor 2 is defined by questions 21, 25, 29 and 30; because they present the highest values: (0.86, 0.82, 0.81, 0.81, 0.82, 0.87, 0.85 and 0.92); respectively.

Rotation matrix factor

	Factor1	Factor2
Factor1	0.8713	0.4908
Factor2	-0.4908	0.8713

Table 7 Factor rotation matrix

Source: Obtained from Stata

Variable	Factor1	Factor2	Variable	Factor1	Factor2
p2	0.7234	0.0522	p12	0.8123	0.2041
p4	0.7183	0.0889	p15	0.6979	0.1343
p6	0.7227	0.1834	p17	0.1197	0.6130
p7	0.8606	0.0574	p19	0.2388	0.6953
p8	0.7638	0.0510	p21	0.1837	0.8174
p9	0.8163	0.1925	p25	0.1610	0.8650
p10	0.7253	0.1284	p29	0.0496	0.8470
p11	0.8058	0.2040	p30	0.0593	0.9205

Table 8. Structural matrix. Structure matrix: correlations between variables and varimax rotated common factors
Source: Obtained from Stata

Prediction

Variable	Factor1	Factor2	Variable	Factor1	Factor2
p2	0.13105	-0.03965	p12	0.13625	-0.00417
p4	0.12733	-0.02908	p15	0.12015	-0.01497
p6	0.12110	-0.00322	p17	-0.02353	0.16097
p7	0.15624	-0.04847	p19	-0.00746	0.17486
p8	0.13867	-0.04299	p21	-0.02687	0.21284
p9	0.13787	-0.00771	p25	-0.03467	0.22774
p10	0.12571	-0.01868	p29	-0.05410	0.23107
p11	0.13505	-0.00371	p30	-0.05780	0.25072

Table 9 Scoring coefficients (method = regression; based on varimax rotated factors)

Source: Obtained from Stata

Factor 1 = 0.86P7 + 0.13P9 + 0.14P11 + 0.14P12

Factor 2 = 0.21P21 + 0.23 P25 + 0.23P29 + 0.25P30

Acknowledgments

This research could not have been carried out without the support received from the Superior Studies Technological Institute of Villa Guerrero, who have promoted the development of research in the academic area of the Bachelor of Administration. Thank you!

Conclusions

As a result of the factor analysis through the STATA program, from the information obtained from 99 working students belonging to the Bachelor of Administration of the TESVG, the following could be determined with respect to stress and symptomatology factors and coping strategies. In Factor 1, symptoms suffered by students from work stress, the main ones that resulted are: 0.86P7 (Restlessness (inability to relax and be calm)), 0.13P9 (Anxiety (nervousness), anguish or despair), 0.14P11 (Feelings of aggressiveness or increased irritability) and 0.14P12 (Conflicts or tendency to argue, contradict, argue or fight).

Regarding Factor 2, coping strategies, the ones with the highest incidence are: 0.21P21 (Search for information about the situation that worries me) 0.23 P25 (Evaluate the positive and negative of my proposals in the face of a stressful situation), 0.23P29 (. Elaboration of a plan to face what stresses me and execution of their tasks) and 0.25P30 (Look or try to obtain the positive of the situation that worries).

Finally, the symptoms that resulted in students generate greater restlessness, nervousness, arguing and irritability, which could be the cause of conflicts, so it would be necessary to take care of those reactions that prevent students from having greater difficulties due to these symptoms that they suffer from. cause of stress, as it doubles due to working and studying at the same time. However, it is also to be recognized that the coping strategies used by these students, such as looking for information about what stresses them, evaluating the positive or paying attention to it, can help them continue a stable life and maintain their undergraduate studies.

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