Revista Iberoamericana de las Ciencias de la Salud | RICS ISSN: 2395 - 8057

https://doi.org/10.23913/rics.v9i17.82

Artículos Científicos

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Burnout Syndrome in University Students. Comparative Analysis Among Students Grouped by Educational Program Within the Instituto Tecnológico Superior de Ciudad Constitución

Síndrome de Burnout em estudantes de nível superior. Análise comparativa entre estudantes agrupados por programa educacional no Instituto Superior Tecnológico da Cidade Constitución

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Resumen

En esta investigación se indagó sobre la presencia del síndrome de *burnout* y el nivel de este entre estudiantes inscritos en diferentes programas educativos en una institución de educación superior en México. Para ello, se aplicó un cuestionario basado en el School-Burnout Inventory (SBI) a 871 universitarios del Instituto Tecnológico Superior de Ciudad Constitución, quienes fueron agrupados por carrera. Posteriormente se analizaron las respuestas y se calcularon puntuaciones medias obtenidas por programa educativo. Los resultados fueron los siguientes: Arquitectura = 30.7394; ingeniería Industrial = 30.3482; ingeniería en Industrias Alimentarias = 29.992; licenciatura en Administración = 27.7575; ingeniería en Electromecánica = 27.5561; ingeniería en Sistemas Computacionales = 27.3284: Gastronomía = 27.1443, e ingeniería en Gestión Empresarial = 25.8775. A partir de lo anterior se logró identificar que las puntuaciones más altas se obtuvieron en programas relacionados con el estudio de las ciencias de la ingeniería, aunque no corresponden en su totalidad a estas, ya que en la licenciatura en Administración la puntuación media obtenida se encuentra por encima de algunas ingenierías. Además, se analizó el nivel de este padecimiento entre los estudiantes matriculados exclusivamente en el programa de Arquitectura para identificar si la puntuación media aumenta conforme al grado de estudio, es decir, si el crecimiento se da uniformemente de primer hasta séptimo semestre. Los resultados indican que existe un crecimiento no uniforme, por lo tanto, no se puede reconocer que el síndrome de *burnout* estudiantil aumenta conforme el semestre de estudio.

Palabras clave: análisis descriptivo, educación, síndrome de *burnout*.

Abstract

In this research, the presence and level of burnout syndrome was identified among students enrolled in different educational programs in a higher educational institution in Mexico. For this, a questionnaire based on the School-Burnout Inventory (SBI) —adapted to Spanish— was applied to 871 university students enrolled in the Instituto Tecnológico Superior de Ciudad Constitución, who were grouped by their career. The answers were analyzed and the media obtained by educational program were calculated. The results were the following: Architecture = 30.7394; Industrial Engineering = 30.3482; Food Industry

Engineering = 29.992; Bachelor of Administration = 27.7575; Electromechanical Engineering = 27.5561; Computer Systems Engineering = 27.3284; Gastronomy = 27.1443, and Business Management Engineering = 25.8775. It was possible to identify that the highest scores were obtained in programs related to the study of engineering sciences, although they do not fully correspond to engineering, since in the Bachelor of Administration the average score obtained is above some engineering. In addition, the level of burnout syndrome among the students enrolled in the Architecture program was analyzed to identify if the average score increases according to the semester of study, that is, if the growth increases uniformly from the first to the seventh semester. The results of this analysis indicate that there is a non-uniform growth, therefore, it cannot be recognized that student burnout syndrome increases according to the semester of study.

Keywords: descriptive analysis, education, burnout syndrome.

Resumo

Esta investigação investigou a presença da síndrome de burnout e seu nível entre estudantes matriculados em diferentes programas educacionais em uma instituição de ensino superior no México. Para isso, um questionário baseado no School-Burnout Inventory (SBI) foi aplicado a 871 estudantes universitários do Instituto Superior Tecnológico da Cidade Constitución, que foram agrupados por carreira. As respostas foram posteriormente analisadas e as pontuações médias obtidas pelo programa educacional foram calculadas. Os resultados foram os seguintes: Arquitetura = 30.7394; Engenharia industrial = 30.3482; Engenharia da Indústria Alimentar = 29.992; Bacharel em Administração = 27,7575; Engenharia eletromecânica = 27.5561; Engenharia de sistemas de computador = 27.3284: Gastronomia = 27.1443 e Engenharia de gerenciamento de negócios = 25.8775. Pelo exposto, foi possível identificar que as pontuações mais altas foram obtidas em programas relacionados ao estudo das ciências da engenharia, embora não correspondam totalmente a essas, uma vez que, na graduação em Administração, é encontrada a pontuação média obtida acima de alguma engenharia. Além disso, o nível dessa condição foi analisado entre os alunos matriculados exclusivamente no programa Arquitetura para identificar se a pontuação média aumenta de acordo com o grau de estudo, ou seja, se o crescimento ocorre uniformemente do primeiro ao sétimo semestre. Os resultados indicam que há um

crescimento não uniforme, portanto, não se pode reconhecer que a síndrome de burnout do aluno aumenta à medida que o semestre estudado.

Palavras-chave: análise descritiva, educação, síndrome de burnout.

Fecha Recepción: Julio 2019 **Fecha Aceptación:** Diciembre 2019

Introduction

Work exhaustion, work-wear syndrome or burnout syndrome, denominations of the same condition, became relevant as an object of study since the 1970s, particularly from the discipline of psychology. Since then it has been a concept that seems to point to an increasingly common experience for people, and, therefore, has not ceased to inspire researchers to study it and try to understand what it is and what its causes are. This visibility of burnout syndrome arises as a result of a series of economic, social and cultural changes that occurred during the first half of the 20th century (Schaufeli et al., 2009, cited in López, 2017; Salanova and Llorens, 2008). The first signs of its presence are identified during the 1960s in the United States (Schaufeli, Leiter and Maslach, 2008), although, as already mentioned, it does not take center stage until the 1970s (Freudenberger, 1974).

López (2017) comments that the initial popularity of burnout syndrome is due to the description of the conditions of employees in professions with a high degree of contact with third parties. In that same tonic, Perlman and Hartman (1982) suggest that this concern responds to the characteristics of the helping professions. Maslach, Schaufeli and Leiter (2001), meanwhile, report that these professions and occupations, in which the objective is to provide help and service to people in need, can be characterized as emotional and interpersonal stressors. In this way, the problem of job exhaustion caused calls for immediate solutions, despite the lack of a solid knowledge of its causes and correlates. This is how depletion workshops became a primary mode of intervention, and were also used as data sources by some researchers, for example, the work presented by Pines et al. (1981, cited in Martínez (2010), entitled "Burnout, from boredom to personal growth".

Burnout syndrome is commonly linked to professions where interpersonal relationships occur frequently. Freudenberger (1974) defines it as a combination of chronic emotional fatigue, physical fatigue, loss of interest in work activity, low personal fulfillment and dehumanization in the care and care of patients. From the 80s his study was

extended to other professions and other fields such as military and industrial, until considering, in 1995, university students (Uribe and Illesca, 2017, p. 235), where at the same time the investigations carried out have evolved the instruments to measure the level of said syndrome (Salanova y Llorens, 2008).

In a generic way, Maslach and Leiter (1997, cited in López, 2017) consider that the notoriety of the syndrome results from business policies as a result of economic globalization. The success of this system lies in the superiority of productivity and the maximization of benefits compared to the well-being of human resources, which, in the end, translates into a reduction in the levels of trust and commitment with respect to the employing organizations. The first thing that appears in the subject is emotional fatigue, which later gives way to depersonalization and low personal fulfillment (Maslach and Leiter, 1999, cited in Serrano et al., 2017).

Thus, burnout syndrome, also known as the syndrome of burnout or physical and mental exhaustion, is a problem of great social impact in our day.

Undoubtedly, the interest that currently awakens has facilitated an expansion of its field of study, as research began in other professional fields and much more recently studies with university students arise, among which some manage to develop the necessary skills in their process training that favor the achievement of their academic objectives, while others present difficulties that are only recorded in indicators of high academic dropout (Rosales and Rosales, 2013).

In the latter situation, students generally experience a high burden of mental fatigue during their training process. Some manage to develop appropriate strategies to meet academic demands, while others do not, and become unable to modify the problem situation, which results in the use of escape behaviors that are not appropriate in this situation (Gentleman, Hederich and Palacio, 2009).

The cognitive processes present naturally in the student context, according to Fuenmayor and Villasmil (2008), are essential for the constructive and interpretive process of understanding. Therefore, higher level students must find strategies that promote meaningful learning inside and outside the educational institution. Thus, the study of the mental requirements necessary to perform academic activities takes on great importance in educational research: the study of the causes that affect school performance is an important part of educational psychology.

During the development of the learning activities in which the university student is involved, there may be different situations in which the understanding, analysis and processing of information constantly exceed their mental abilities, which gives rise to mental overload. Likewise, it can be considered that mental fatigue in students can be related to the excess of intellectual work, forcing the person continuously to situations of reasoning, problem solving and conceptualization that generate an extra load of information difficult to process, so that is able to suffer risks and psychosocial damages to these stressors and concurrent demands, excessive or inappropriate, to which it can give non-adaptive and pernicious responses (Caballero, Breso and González, 2015).

These and other situations related to academic performance in university students can contribute to generate feelings of not being able to give more of oneself physically and mentally, a negative attitude of criticism (Rosales, 2012) and a devaluation in academic work that can facilitate manifestation of the condition in question, which can lead to school dropout (Salanova and Llorens, 2008).

In the school environment there are several investigations that have identified that university students are faced with mental pressures and overloads typical of the academic activities they perform. Thus, student burnout syndrome is defined as a condition of the student, characterized, as already mentioned, by the feeling of not being able to give more of himself, an attitude of negative criticism, devaluation, loss of interest about the ability to carry out his studies (Schaufeli, Martínez, Pinto, Salanova and Bakker, 2002). The combination of these emotional factors can cause poor school performance, which gives rise to demotivation, as well as lack of interest, reasons why students can make the decision to abandon their studies and leave an academic preparation incomplete It would provide the necessary tools to meet the demands of the world of work. Based on the fact that the mental burden generated by the demands of a study program can be a factor that facilitates the onset of student burnout syndrome, it can be considered that a student who is studying engineering is more likely to suffer from this syndrome in comparison with a student attending a program with a relatively lower requirement. In this sense, differences have been found regarding the level of exhaustion between different careers (Bittar, 2008, cited in Rosales and Rosales, 2013; Martínez and Salanova, 2003, cited in Caballero et al., 2015), which implies a effect by the demands of each educational program.

On the other hand, a study carried out at the University of Granada (Balsera et al., 2016) states in its results that student attrition affects mostly students who attend higher levels, which means that students of advanced degrees have a higher level of burnout syndrome compared to peers from previous grades.

Considering the above, basic knowledge of descriptive statistics was used to measure, analyze and disseminate the prevalence of student burnout syndrome using the questionnaire based on the School-Burnout Inventory [SBI] (Salmela, Kiuru, Leskinen and Nurmi, 2009), adapted to Spanish by Boada (2015), in students enrolled in the different educational programs belonging to the Higher Technological Institute of Ciudad Constitución (Baja California Sur, Mexico). The above in order to respond to the following hypotheses:

1) Participants enrolled in educational programs that involve the highest level of study of the exact sciences (mathematics, physics and chemistry) have higher scores in the SBI-U-9.

2) The level of student burnout syndrome gradually increases as the semesters in the educational program have the highest average score, based on this same instrument.

The statistical analyzes carried out served to identify if the students of the Higher Technological Institute of Ciudad Constitución have a strenuous academic life that generates a mental overload in relation to the educational program, and if this overload increases according to the semester in which the participants were enrolled.

Materials and methods

For this work, a total of 871 students enrolled in one of the study programs offered by the Higher Technological Institute of Ciudad Constitución, in the state of Baja California Sur, Mexico, were considered during the semester of August 2018 to January 2019. During this period, the first, third, fifth and seventh semesters were taught for the different programs, which were thus considered in the study.

The instrument used was the SBI-U questionnaire (Salmela et al., 2009), adapted to Spanish by Boada (2015), which consists of nine items. The answers for each one are presented by scores in an interval of one to six, where the study subject will choose option one if he totally disagrees with the affirmation of each item, or six if he totally agrees with what has been expressed. In this way, you can choose any alternative in relation to the last

month to your situation at the university. This instrument has shown good reliability and has been applied in different countries and continents, as well as at different educational levels (Boada, 2015).

To carry out the application, the support of a group of students enrolled in the Industrial Engineering education program was required, who were trained on the intention of the questionnaire and the process to complete it properly. This training was carried out by the teachers involved in the research. After the training and organized by work teams, the questionnaires were distributed in paper format for the different groups, considering the availability of the study subjects in the classrooms. Specifically, the application involved visiting each group, and if this was available and there was sufficient time to respond, the instrument was applied. Each study group was given an explanation of the intentions of the questionnaire and its correct filling before submitting it to the participants who agreed to the study, since it was voluntary and anonymous.

Following this procedure, all the groups ranged from the first to the seventh semester; thus, all educational programs with one participation per career were completed as indicated in table 1.

Tabla 1. Cantidad de estudiantes por programa educativo que participaron en el estudio

Programa educativo	**Cantidad de estudiantes que respondieron de manera adecuada el cuestionario**

Ing. Electromecánica	154
Lic. en Administración de Empresas	187
Ing. en Gestión Empresarial	123
Ing. en Industrias Alimentarias	56
Ing. Industrial	96
Ing. en Sistemas Computacionales	63
Arquitectura	59
Gastronomía	133
Total	**871**

Fuente: Elaboración propia

After the application of questionnaires, the results obtained were organized in a database. Each answer was emptied into a Microsoft Excel spreadsheet for subsequent descriptive statistical analysis using the SPSS software.

For each student, the total score was determined according to their answers to the nine items of the questionnaire, and based on these quantities, a descriptive statistics analysis was carried out by career. This means that for the Architecture program the total score obtained from the 59 students mentioned in table 1 was taken and their average was calculated without considering the grouping by semesters. This methodology was applied in all educational programs to respond to the first hypothesis of this research.

For Wayne (1988), "analysis of variance [Anova] is an arithmetic procedure whereby the total variation of a data set is divided into two or more components, each of which can be attributed to an identifiable source" (p. 274). Considering this, it was decided to complement the analysis by comparing the average scores of the programs by applying the Anova tool of a factor, using the SPSS software and proposing the hypothesis of equality of means, which should be rejected if the means obtained by educational program are not significantly equal. In this case, the average score was considered as the dependent variable and the educational program as a factor; numerical values from one to eight were assigned to each program in order to quantify the scores per semester, as shown in table 2.

Tabla 2. Muestra la codificación para cada programa por semestre

	Arquitectura (semestre 1, 3, 5 y 7)	**Administración (semestre 1, 3, 5 y 7)**

Valor numérico para cada semestre	1	1	1	1	2	2	2	2
Media obtenida por semestre	28.3077	24.7333	37.75	32.1667	27.1731	28.8361	28.55	26.4706
	Ing. Industrial (semestre 1, 3, 5 y 7)				**Ing. en Industrias Alimentarias (semestre 1, 3, 5 y 7)**			
Valor numérico para cada semestre	3	3	3	3	4	4	4	4
Media obtenida por semestre	27.3902	27.28	34.6316	32.0909	26.4375	34.1875	33.2	26.1429
	Ing. en Sistemas computacionales (semestre 1, 3, 5 y 7)				**Ing. en Gestión Empresarial (semestre 1, 3, 5 y 7)**			
Valor numérico para cada semestre	5	5	5	5	6	6	6	6
Media obtenida por semestre	28.68	26	27.1667	27.4667	25	24.7826	26.7273	27

	Ing. en Electromecánica (semestre 1, 3, 5 y 7)				Gastronomía (semestre 1, 3, 5 y 7)			
Valor numérico para cada semestre	7	7	7	7	8	8	8	8
Media obtenida por semestre	27.16	26.3438	28.3636	28.3571	26.34	26.2308	28.4063	27.6

Fuente: Elaboración propia

To know if the burnout syndrome increases gradually, a comparison was made between the average scores obtained in the participating students grouped by semesters (first, third, fifth and seventh) of the educational program that turned out to have the highest overall score and, using the SPSS software, Pearson's correlation coefficient was obtained to know the relationship between the semester and its score. This responded to the second hypothesis of the present investigation.

Results

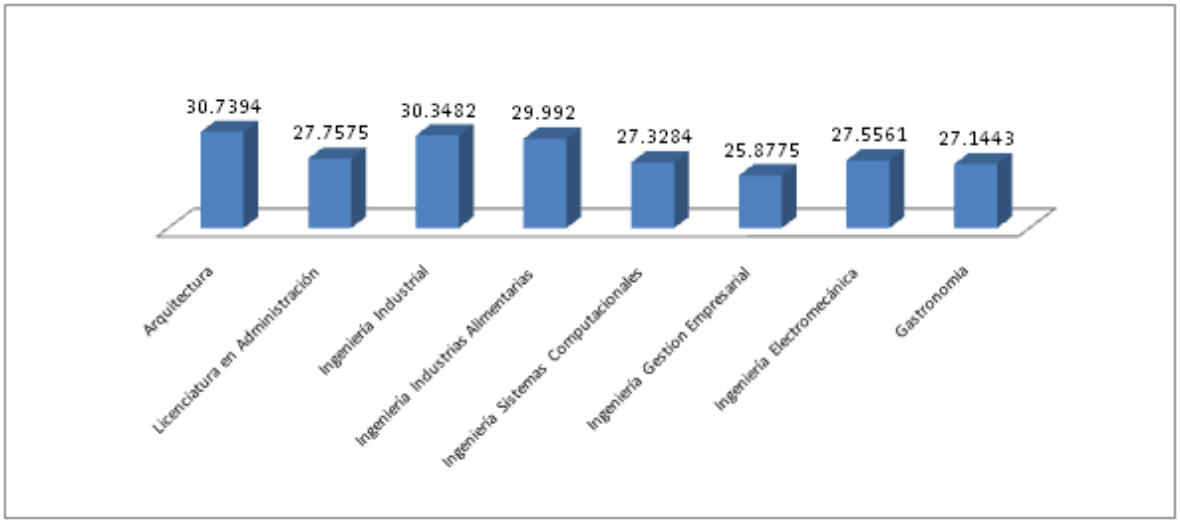
To test the first hypothesis, the scores of the participants were ordered by educational program. In each case the score of the answers per student was added and an average was obtained. The Architecture degree, with 30.7394, obtained the highest average score and the lowest was obtained in Engineering in Business Management, with 25.8775 (see table 3 and figure 1). The general descriptions obtained through the SPSS program are shown in table 4.

Tabla 3. Puntuaciones medias obtenidas por programa educativo en el periodo de estudio, luego de tener la puntuación total por estudiante matriculado en los programas incluidos

Programa educativo	Arquitectura	Lic. en Administración	Ing. Industrial	Ing. en Industrias Alimentarias	Ing. en Sistemas Computacionales	Ing. en Gestión Empresarial	Ing. en Electromecánica	Gastronomía
Puntuación media obtenida	30.7394	27.7575	30.3482	29.992	27.3284	25.8775	27.5561	27.1443

Fuente: Elaboración propia

Figura 1. Diferencia en las puntuaciones obtenidas por programa educativo



Fuente: Elaboración propia

Tabla 4. Estadísticos descriptivos obtenidos mediante el programa SPSS

Programa educativo	N	Media	Desviación típica	Error típico	Intervalo de confianza para la media al 95%		Mínimo	Máximo
	Límit	Límite	Límite	Límite	Límite	Límite	Límit	Límite

	e inferior	superior	inferior	superior	inferior	superior	e inferior	superior
Arquitectura	4	30.739425	5.5729137	2.7864568	21.871676	39.607174	24.7333	37.7500
Lic. en Administración	4	27.757450	1.1238430	.5619215	25.969165	29.545735	26.4706	28.8361
Ing. Industrial	4	30.348175	3.6308004	1.8154002	24.570761	36.125589	27.2800	34.6316
Ing. en Industrias Alimentarias	4	29.991975	4.2950951	2.1475475	23.157520	36.826430	26.1429	34.1875
Ing. en Sistemas Computacionales	4	27.328350	1.1010212	.5505106	25.576380	29.080320	26.0000	28.6800
Ing. en Gestión Empresarial	4	25.877475	1.1476031	.5738015	24.051382	27.703568	24.7826	27.0000
Ing. en Electromecánica	4	27.556125	.9866144	.4933072	25.986201	29.126049	26.3438	28.3636
Gastronomía	4	27.144275	1.0458947	.5229474	25.480023	28.808527	26.2308	28.4063
Total	32	28.342906	3.0775068	.5440315	27.233347	29.452466	24.7333	37.7500

Fuente: Elaboración propia

The results of the unifactorial Anova showed a level of significance of 0.226, as shown in table 5. Therefore, it was unnecessary to perform the analysis of multiple comparisons, since 0.226> 0.05; thus it was demonstrated that the hypothesis of equality of

means is not rejected, and it is possible to affirm that there are no significant differences between the average scores obtained by educational program.

Tabla 5. Resultados del procedimiento Anova de un factor utilizando el programa SPSS

	Suma de cuadrados	gl	Media cuadrática	F	Sig.
Intergrupos	87.960	7	12.566	1.467	0.226
Intragrupos	205.642	24	8.568		
Total	293.602	31			

Fuente: Elaboración propia

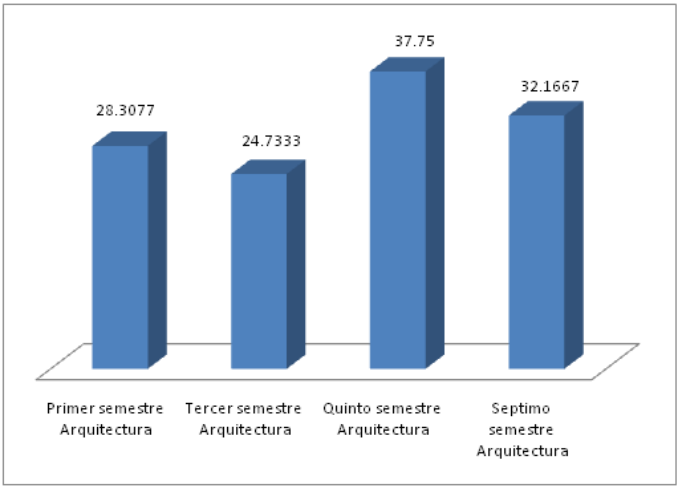
In relation to hypothesis number two, because it obtained the highest average score (30,7394), the Architecture degree was considered. To identify if there is a gradual increase in the average score from the first to the seventh semester, the results were classified according to the semester in which the participants were enrolled at the time of the application of the questionnaires (Table 6 and Figure 2).

Tabla 6. Puntuaciones medias obtenidas por semestre en el periodo de estudio para el programa de Arquitectura

	Primer semestre	Tercer semestre	Quinto semestre	Séptimo semestre
Puntuación media obtenida	28.3077	24.7333	37.75	32.1667

Fuente: Elaboración propia

Figura 2. Puntuaciones obtenidas por semestre del programa educativo de Arquitectura



Fuente: Elaboración propia

To complement the verification of this hypothesis, Pearson's correlation coefficient was calculated, using the SPSS bivariate correlation analysis tool. In this way, a value of 0.570 was obtained in the relationship between the Semester and Average Score variables with a bilateral significance of 0.430, as shown in Table 7, indicating that it is not allowed to reject the null hypothesis (sig. > 0.05), that is, there is no relationship between the variables, therefore, there is no gradual growth (as seen in Figure 2) between the average scores obtained from the semesters of the Architecture program.

Tabla 7. Resultados del coeficiente de correlación de Pearson para las variables Semestre y Puntuación media, utilizando el programa SPSS

		Semestre	**Puntuación media**
Semestre	Correlación de Pearson	1	0.570
	Sig. (bilateral)		0.430
	N	4	4
Puntuación media	Correlación de Pearson	0.570	1
	Sig. (bilateral)	0.430	
	N	4	4

Fuente: Elaboración propia

Discussion

Considering the results obtained in the comparison of average scores of the study subjects grouped by educational program (table 3), there is no significant difference between the average scores by educational program, but there is a trend taking the highest, Architecture and engineering Industrial, with a similar score, which are above other programs of an economic-administrative nature, such as a degree in Administration and Engineering in Business Management. Entering the field of speculation, one could say that one of the reasons for these results may be the requirement of academic activities that involve greater understanding of the subjects related to mathematics, since in the case of the training of engineers It is said that they devote about 80% of the study time to basic sciences, engineering sciences and applied engineering (Cantoral, 2001), as well as a greater need to concentrate more time on the corresponding academic activities. It is suggested to carry out future research on this point to verify the causes, since, as mentioned, given the burden they present, there are excesses of work in the students, due to the different conditions in which they develop, which cause the burnout syndrome (Barraza, 2008, 2011, cited in Uribe and Illesca, 2017; Caballero et al., 2015; Rosales and Rosales, 2013).

Taking into account that the hypothesis of equality of means considered in the unifactorial Anova was accepted, as demonstrated in the results, there is similarity between the average scores of the educational programs analyzed. This is presented with greater notoriety in the degree programs in Administration, Gastronomy, Electromechanical Engineering and Computer Systems Engineering. It can be deduced that students enrolled in these careers have similar levels of exhaustion despite the fact that the thematic contents of the subjects that make up each of them differ in relation to the study of engineering sciences. This condition may result from a combination of circumstances surrounding students, including, as mentioned by Barradas, Trujillo, Sánchez and López (2017), teacher evaluation, work overload, classroom exposures, essays or research work, tension with their teachers, factors considered by the students themselves as stressors, all of which can result in burnout syndrome. On the other hand, a low dedication to the study can lead the student to feel greater tension in the evaluations, which also leads to the presence of the mentioned syndrome (Novoa, Burgos, Zentner and Toro, 2018). In this way, the similarity of wear between races with different level of demand from the point of view of the exact sciences could be explained.

In general, the results can be ordered in a decreasing manner to identify which are the programs with the highest levels of exhaustion: Architecture = 30.7394; Industrial engineering = 30.3482; Food Industry Engineering = 29,992; Bachelor of Administration = 27.7575; Electromechanical engineering = 27.5561; Computer Systems Engineering = 27.3284; Gastronomy = 27.1443, and engineering in Business Management = 25.8775. Other studies coincide with the differences in burnout syndrome between careers (Bittar, 2008, cited in Rosales and Rosales, 2013; Martínez and Salanova, 2003, cited in Caballero et al., 2015).

On the other hand, taking into account that older people are more likely to suffer from this condition (del Río, Rivera, Rueda, Serrano and Villalta, 2015), it was considered the hypothesis that advanced-grade students would have higher levels of exhaustion . To verify this, students whose educational program had the highest average score were selected, namely the Architecture program. As demonstrated above and can be seen in Figure 2, there is no uniform upward growth among students grouped from first to seventh semester. In addition, it is important to note that the first semester students were not the ones who obtained the lowest score, since they are below the fifth and seventh semesters. This is checked by the correlation analysis performed in Table 7, where it was demonstrated with the value of the significance that the Semester and Average Score variables are not related to each other. In conclusion, it cannot be affirmed that burnout syndrome increases or decreases among architecture students according to the degree taken. This may suggest that the requirement of higher education may inflict greater concern on new entrants.

In this regard, González and Abarca's research (2017) mentions that part of the adaptation process involves carrying out activities that were not very frequent in upper secondary education, such as learning to be self-sufficient, making citations in texts, revealing themselves studying and applying New learning strategies Therefore, your emotional state may be affected during the transition process from upper secondary to higher education. It is likely that when developing a career the requirement is not gradual, or at least the perception of the student's requirement in its adaptation and development at the higher level is not gradual, that is, it does not feel more demanding as it progresses in the curriculum , but that certain semesters, as in this case the first and fifth, represent a greater requirement. Coincidentally, Uribe and Illesca (2017), in an effort to verify that the

overload of student demands is an important risk to develop prolonged stress, resulted in physical, cognitive and emotional exhaustion, and thus validated the definition of burnout syndrome academic. According to studies, the first and fifth semesters are those that stand out as the most critical when facing stress, a situation that derives from academic and social demands (Uribe and Illesca, 2017). As can be seen in Table 6, the lowest score was obtained in the third semester students, which suggests that they are better suited in that grade than at the beginning of their academic training. This can be a relaxation thanks to a better adaptation to the demands of higher education. It may be at this point when some students manage to develop appropriate strategies to meet academic demands (Rosales and Rosales, 2013). Considering the above, the second hypothesis raised cannot be accepted, since the levels of the variables (average score and semester) do not have a direct relationship. Likewise, a gradual increase is not visible as students progress through the semester.

Conclusións

According to the analysis of the results obtained, there is a difference, although not statistically significant, between educational programs regarding the level of burnout syndrome presented by students, which derives from the demands of student life with factors such as assessments, homework preparation, projects and exams, the relationship with teachers and schedules. It can be seen in Table 3 of this study that the level of exhaustion is higher in the Architecture degree, which is not classified as an engineering. However, as demonstrated in the reticle (Instituto Tecnológico Superior de Ciudad Constitución, s. F.), The contents of the subjects have a significant relationship with the contents of the exact science subjects applied to engineering. In this context, it can be concluded that this career has similar levels to those obtained in the engineering of the Higher Technological Institute of Ciudad Constitución, given the contents and added to this the pressures of student life.

Likewise, the growth of burnout syndrome levels was analyzed according to the increase in the degree of studies, taking into account the degree of Architecture, and it was determined that the highest level occurs in the first and fifth semester, which coincides with other studies. This demonstrates that each semester can have its peculiarities that make it

different in relation to the academic requirements that the student faces regardless of the level of reticular progress.

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