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Self-concept, school adjustment and emotional exhaustion in students attending an online high school program**Autoconcepto, ajuste escolar y cansancio emocional en estudiantes que realizan estudios de bachillerato en línea****Autoconceito, adaptação escolar e exaustão emocional em alunos que fazem o ensino médio online**

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Abstract

The aim of the research is to describe the behavior of self-concept, school adjustment and emotional exhaustion in a sample of online high school students in Mexico, as well as to identify gender differences, analyze their relationships and generate a predictive model. It is a study with a quantitative, observational approach, and a predictive cross-sectional design. Five hundred and seventy-eight students from the 32 states of Mexico participated. A sociodemographic questionnaire, the AF5 Self-concept scale, the Brief School Adjustment Scale and the Emotional Exhaustion Scale were used. The findings show that the emotional, social and physical self-concept present the lowest scores. Men obtained higher scores than women in all dimensions of self-concept, mainly in the emotional factor. All the participants showed adequate levels of school adjustment, both in total and in all its factors. In emotional exhaustion, women showed slightly higher levels than men. The association between self-concept and school adjustment was positive, while the relationship of both with emotional exhaustion was negative. It is suggested to delve into the study variables and incorporate the evolutionary factor of self-concept into the analysis, beyond the educational context.

Keywords: self-concept; school adjustment; emotional exhaustion; students; distance education

Resumen

El objetivo del trabajo es describir el comportamiento del autoconcepto, ajuste escolar y cansancio escolar en una muestra de estudiantes que realizan estudios de bachillerato en línea en México; identificar diferencias en función del sexo, analizar sus relaciones y generar un modelo predictivo. Es un trabajo cuantitativo, de tipo observacional y diseño transversal predictivo. Participan 578 estudiantes de los 32 estados de la república mexicana. Se utilizó un cuestionario sociodemográfico, la escala de Autoconcepto AF5, la Escala Breve de Ajuste Escolar y la de Cansancio Emocional. Los hallazgos muestran que el autoconcepto emocional, social y físico presentan los más bajos puntajes. Los hombres logran puntuaciones más altas que las mujeres en todas las dimensiones del autoconcepto, mayormente en la emocional. El total de los participantes mostraron niveles adecuados de ajuste escolar, tanto en el total como en todos sus factores. En el cansancio emocional, las mujeres manifestaron niveles ligeramente superiores que los hombres. La asociación entre el autoconcepto y el ajuste escolar fue de tipo positiva;



mientras que la relación de ambas con el cansancio emocional fue de tipo negativa. Se sugiere profundizar en las variables de estudio e incorporar en el análisis el factor evolutivo del autoconcepto, más allá del contexto educativo.

Palabras clave: autoconcepto; ajuste escolar; cansancio emocional; estudiantes; educación a distancia

Resumo

O objetivo do trabalho é descrever o comportamento de autoconceito, adaptação escolar e exaustão escolar em uma amostra de estudantes que realizaram o ensino médio online no México, identificar diferenças em função do sexo, analisar suas relações e gerar um modelo preditivo. É um trabalho quantitativo, do tipo observacional e com delineamento transversal preditivo. Participam 578 estudantes dos 32 estados da República Mexicana. Foram utilizados um questionário sociodemográfico, a Escala de Autoconceito AF5, a Escala Breve de Ajustamento Escolar e a de Exaustão Emocional. Os achados mostram que o autoconceito emocional, social e físico apresentam as pontuações mais baixas. Os homens obtêm pontuações mais altas do que as mulheres em todas as dimensões do autoconceito, principalmente no emocional. Todos os participantes apresentaram níveis adequados de adaptação escolar, tanto no total quanto em todos os seus fatores. Na exaustão emocional, as mulheres apresentaram níveis ligeiramente superiores aos dos homens. A associação entre autoconceito e adaptação escolar foi do tipo positivo, enquanto a relação de ambos com a exaustão emocional foi de tipo negativo. Sugere-se aprofundar as variáveis do estudo e incorporar na análise o fator evolutivo do autoconceito, para além do contexto educacional.

Palavras-chave: autoconceito; ajuste escolar; exaustão emocional; estudantes; educação a distância

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The formation of an individual cannot be understood without taking into account her/his environment and circumstances. The different experiences lived in a given context can compromise the stability of the psychological system and upset the way we see and respond to reality. The COVID-19 outbreak brought with it multiple factors that demand high levels of physical and intellectual energy, generating uncertainty in various areas of human action (Cabezas, 2020). New challenges and tasks appeared in a world that suddenly seemed unknown, testing our psychological integrity and theories of oneself (Ibarra-Aguirre & Macías, 2021), unbalancing the compass of our performance (Parra, 2020; Valenzuela-Santoyo et al., 2021).

In the educational field, we went from face-to-face to the virtual mode of teaching and learning. This represented a challenge for the students that required adaptation and a fast transition to the new scenario (Portillo et al., 2020), disrupting their psychological structure, evident by signs of emotional exhaustion, stress, demotivation, anxiety, and family difficulties, which decreased their academic performance (González, 2020; Valenzuela-Santoyo, 2022).

There are psychological variables, such as self-concept, school adjustment and emotional exhaustion that show relationships with the educational processes and the students' school performance. These three variables, in situations of adversity, crisis, risk

or transition, become depressed and experience a decline in individuals and correlatively in the responses they give to reality (Ibarra-Aguirre & Jacobo, 2014; Van Rooij et al., 2018). However, in a health risk scenario, such as the COVID-19 pandemic and in an online educational environment, there is a gap around analyzing the behavior of these variables and the relationships between them.

A systematic review of the literature reveals that emotional exhaustion is gaining more interest in the workplace and, during the pandemic, it has been of greater interest regarding personnel in the health sector. In this topic, the studies related to students have been scarce, but the findings reveal high levels of fatigue in the face of the demands of the virtual mode of learning (Estrada & Gallegos, 2022). No studies were found that address school adjustment during the pandemic and in an online educational mode.

It is important to point out that the three variables have implications for physical and emotional health and are closely associated with academic achievement, which is the main reason why special attention is required in this area, in order to understand their behavior and the relationships with each other. Namely, research is already beginning to offer evidence that self-concept during the COVID-19 outbreak has an emotional and social decline (Ibarra-Aguirre & Macías, 2021).

The scenario in which this study takes place is the high school education level, specifically in the program called Online High School Service, which is studied remotely and allows the integration of students starting at the age of fifteen. This model is attractive for those who, in addition to studying, work and it is difficult for them to attend a physical classroom, as well as for being able to study it from anywhere using devices with an Internet connection. These students did not experience the transition from face-to-face to online learning, but online studies are already their usual mode.

Self-Concept

Self-concept has a flexible, hierarchical and multidimensional structure (Markus & Nurius, 1986; Shavelson et al., 1976), whose five-dimensional model by García and Musitu (2014) is one of the most accepted nowadays. Self-concept is a psychological construct defined as the perceptions, descriptions and evaluations that the subject constructs of himself. It integrates cognitive, emotional, and behavioral components (Reynoso et al., 2018; Shavelson et al., 1976).

Understanding self-concept as a multidimensional entity has been a theoretical milestone that raises a systemic and complex understanding of oneself. It allows weaving relationships with greater specificity between the dimensions of self-concept and other associated variables and gives greater clarity to the findings than when it is analyzed as a total self-concept (Ibarra-Aguirre & Jacobo, 2014). It is important to note that there is an association between total self-concept and academic performance, but its link is significant with the academic dimension (Chávez-Becerra et al., 2020). Likewise, academic and social self-concept better predict school adjustment (Antonio-Agirre et al., 2015; Fernández-Lasarte et al., 2019) and the emotional, physical, and social dimensions better predict social skills (Caldera-Montes et al., 2018).

Moreover, it should be recognized, that the structure of self-concept is not fixed, but rather experiences complementary periods of chaos and order, allows us to admit its flexibility and explain the weak or radical transformations in its dimensions due to factors such as life context (Ibarra-Aguirre, 2021), living the school experience (García & Musitu, 2014), transitions from one educational level to another (Ibarra-Aguirre & Jacobo, 2014) or the pandemic context (Ibarra-Aguirre & Macías, 2021).

Self-concept is not the same between men and women. Although the findings cannot be generalized and vary depending on the context and age of the individuals (Herrera et al., 2017; Vicent et al., 2015), it is important to note that, regardless of sex, the emotional dimension presents the same lower scores (García & Musitu, 2014), with a greater decline in women than in men (Ibarra-Aguirre, 2021). In the context of the COVID-19 outbreak, it is noted that the social dimension also presents low scores in both sexes, attributed to social confinement and distancing from friendly ties (Ibarra-Aguirre & Macías, 2021).

School adjustment

School adjustment represents an adaptation process that students experience in transition periods between school levels (Van Rooij et al., 2018), as well as the degree to which teenagers feel comfortable, committed and accepted by the educational environment (Gutiérrez et al., 2021). The level of school adjustment can be conceived as the perceived state of the students at the moment of evaluating themselves in different aspects of their lives (Willems et al., 2021). Namely, the idea that positive self-perceptions are closer to success is maintained, while negative self-perceptions have been associated to a greater extent with failure. Therefore, it is possible to talk in positive terms of adjustment and negative ones of maladjustment.

Caldera-Montes et al. (2022) point out that the school adjustment construct must be understood from the grouping of several dimensions associated with the academic context (academic performance, learning competence, socialization among students, predispositions towards the school and the teaching staff). In such a way that, if the different areas in which the adjustment can be visualized and the line of assessment that the students make about themselves are considered, the school adjustment at a general level must be considered in positive terms when the good student is visualized, the motivation he/she presents in attending school and doing school tasks, among other social activities that he/she can do at school (make friends, get along with teachers). On the other hand, school maladjustment is seen as a negative state in which, at the school level, there is no commitment and satisfaction for attending school and doing tasks, as well as feeling not as part of a group (peers, teachers, and the educational community in social terms, affecting antisocial, disruptive, violent and challenging attitudes (Valenzuela-Santoyo et al., 2021).

Different studies have related school adjustment to the school environment and social support (Bernal & Gálvez, 2017; Pérez et al., 2020), self-concept (Fernández-Lasarte et al., 2018; Portillo & Reynoso, 2021), self-regulation and self-efficacy (Van Rooij et al., 2018), emotional intelligence (Calero et al., 2018; Fernández-Lasarte et al., 2019), the teachers' perception (Cava et al., 2015; Valenzuela-Santoyo et al., 2021), academic performance (Fernández-Lasarte et al., 2019; Longobardi et al., 2016; Willems et al., 2021) and variables related to family support and subjective well-being (Gutiérrez et al., 2021). Previous research reports high adjustment rates in adolescent and young adult populations (Pérez et al., 2020) with better adjustment levels in women (Fernández-Lasarte, 2019; Pérez et al., 2020).

Emotional exhaustion

Barreto-Osama and Salazar-Blanco (2021) refer to different situations that people must face in various areas of their lives (academic, work, family and social) that can lead to emotional exhaustion: events and long academic or working hours, carrying out procedures and decisions that have an impact on the well-being of others, as well as other psychosocial issues that take place in environments of great physical or psychological

demand without spaces to recover energy to face those activities. Dominguez-Lara et al. (2018) and Mayorga-Lascano et al. (2021) point out that exposure to activities that imply a sustained effort without the desired results or with unpleasant experiences generate, over time, the feeling of exhaustion, which can be expressed as fatigue and lack of energy (emotional exhaustion), distancing (indifference) and incompetence at work (professional inefficiency).

At the school level, Barreto-Osama and Salazar-Blanco (2021) indicate that the feeling of exhaustion is mainly caused by academic commitments, which consequently cause negative attitudes. For example, Castro-Rodriguez et al. (2019) and Dominguez-Lara (2013) identify multiple concerns that students experience in their daily school activities that generate stress (schedules, homework, exams, overloads, reduced leisure time) and states of demotivation, failure and physical and mental fatigue, that is, emotional exhaustion, considered the primary manifestation of burnout syndrome (Lledó et al., 2014). Emotional exhaustion occurs when the psychological and physical system overwhelms, when the academic demands are more than the energy available to respond to them, or the body's inability to recover energy.

Empirically, emotional exhaustion is inversely related to self-efficacy (Dominguez-Lara, 2013). On the other hand, the state of mental and physical fatigue in which the subjects remain can lead to feelings of dissatisfaction and negative emotions (Buitrago & Sáenz, 2021) and burnout (Liébana-Presa et al., 2017; Mayorga-Lascano et al., 2021). In the context of online learning, Álvarez et al. (2022) have linked emotional exhaustion in students during the first semesters of high school. Regarding sex, previous research indicates that women present greater emotional exhaustion than men (Barreto-Osama & Salazar-Blanco, 2021; Herrera et al., 2016; Seperak-Viera et al., 2021).

Relationships between self-concept, school adjustment and emotional exhaustion

The self-concept has been established as a psychological entity whose main characteristic is to provide psychological well-being to the individual (Gutiérrez & Martín, 2021; Rodríguez-Fernández et al., 2016) and to be a protective barrier in stressful situations (Schleicher & McConell, 2005) as risk scenarios, insecurity, marginalization, sociocultural closure (Ibarra-Aguirre, 2021); but, particularly, for being a predictor of the behavior of individuals, evident in the educational field, because it determines the academic performance of school subjects (Salum et al., 2011). Empirically, it has been found that self-concept functions as a modulator of school adjustment and emotional exhaustion. Fernández-Lasarte et al. (2019) for example, show the predictive capacity of the academic and global self-concept towards the levels of school adjustment of the students. Other results indicate that depending on the self-concept that students have, this is how they face school challenges and show their school adjustment (Antonio-Agirre et al., 2015; Portillo & Reynoso, 2021). Perez et al. (2020) indicate that it is through the family dimension of self-concept that school adjustment explains to a greater extent the lack of support (social-family), the lack of affiliative ties and school integration.

Regarding the links between self-concept and emotional exhaustion, an association has repeatedly been found in the sense that those who have a higher self-concept present lower levels of emotional exhaustion and, vice versa, the lower the self-concept, the higher the levels of emotional exhaustion (Dominguez-Lara, 2014; Fínez & Morán, 2014; Gómez-Urquiza et al., 2017; Herrera et al., 2016; Lledó et al., 2014). No studies are reported where school adjustment and emotional exhaustion are related to each other.

Online high school

The National Online High School Service through the *Prepa en Línea SEP* program has become the main promoter of online education in Mexico, it represents an innovative, free educational service, with official validation and national coverage. Being able to access this study program remotely through different devices is related to the cultural meanings that students give to the use of the Internet, such as information search and access, communication network, use of services and tools for performing tasks, among others (Hernández & Reséndiz, 2020).

The online high school program is structured into modules that address different disciplinary areas (Communication, Mathematics, Experimental Sciences, Social Sciences and Humanities), academic support during courses (virtual advisors), social and emotional support (tutors), support between peers (students) and areas for the integration of a virtual learning community (messaging between users, forums, blogs, social networks and official channels). In this sense, as in the face-to-face system, content and study units have to be reviewed, activities and projects carried out individually or collaboratively. In this regard, Casillas et al. (2020) express that, as in face-to-face learning, the student will have to know how to behave, an issue that implies knowing the devices, programs, tools, and behaviors that concern virtual situations. Therefore, he/she will have to implement academic, social, cultural, emotional and technological competences.

Materials and methods

The study was developed under a quantitative, observational research approach. In accordance with the proposal of Ato et al. (2013), the research is classified in the associative strategy, with a predictive cross-sectional design. It has four objectives: (a) to describe the behavior of self-concept, school adjustment, and emotional exhaustion in a sample of students who are studying an online high school program in Mexico, (b) to identify whether there are differences between self-concept, school adjustment, and emotional exhaustion based on sex, (c) to correlate self-concept, school adjustment and emotional exhaustion and (d) to generate a predictive model of emotional exhaustion, considering self-concept and school adjustment as exogenous or predictor variables.

Population and sample

The study population were students of the National Online High School Service. An incidental sample was obtained and made up of 578 participants from the 32 Mexican states, from an urban (79.2 %), suburban (9.3 %), rural (11.2 %) and indigenous (.2 %) context. Regarding the sociodemographic characteristics, 392 were women (67.8 %) and 186 (32.2 %) men, 15 to 61 years of age ($M = 30.6$; $SD = 11.3$). Regarding marital status, 53.3 % were single and 46.7 % married.

Instruments

Sociodemographic questionnaire. Carried out by the research team with the purpose of obtaining data about the age, sex, state of residence, marital status and type of context of the participants.

Self-concept Questionnaire Form 5 (AF-5). Developed by García and Musitu (2014), this instrument analyzes self-perception through 30 items. The participant is asked to establish his/her degree of agreement based on a numerical score, where 1 means *completely disagree* and 99 means *completely agree*. The items are grouped into five

factors: academic-work (e.g. “My teachers consider me intelligent and hardworking”), social (e.g. “It is difficult for me to make friends”), emotional, (e. g. “I get very nervous when the teacher asks something to me”) family (e.g. “My family would help me with any kind of problem”) and physical (e.g. “I like the way I am, physically”). Regarding its psychometric properties, studies in a similar population have verified adequate internal consistency both in the total and in the different factors (Portillo & Reynoso, 2021). Similarly, in this study, satisfactory internal consistency indices were found ($\alpha > .74$; $< .88$).

Brief Scale School adjustment. Developed by Moral et al. (2010), it aims to identify the degree of adaptation of the student to the school environment. It is made up of 10 items and three factors: school performance (e.g., “I have good grades”), interest in attending school (e.g., “I plan to finish high school”), and adjustment problems (e.g., “I think my classmates make fun of me”). The adjustment problems dimension is inverse to the total score and the rest of the factors. It has a response format of ordered categories (Likert) of six options, where 1 means *completely disagrees* and 6 *completely agrees*. Previous studies have confirmed satisfactory psychometric properties in the total score and its dimensions (Portillo & Reynoso, 2021). Similarly, in this study, satisfactory levels of internal consistency were found ($\alpha > .79$; $< .85$), except in the case of the dimension *Interest in attending university* ($\alpha = .35$).

Emotional exhaustion scale. Developed by Ramos et al. (2005), it intends to analyze the emotional and physical exhaustion in the educational environment. It is made up of 10 items in a unifactorial manner (e.g., “There are days when I notice more fatigue, and a lack of energy to concentrate”). The items are scored on a five-point Likert-type scale, where 1 is *rarely*, and 5 is *always*. When answering, it is requested to think about the last 12 months of student life. Previous studies have satisfactorily evaluated its psychometric properties (González & Landero, 2007). In this study, adequate values of internal consistency were confirmed ($\alpha = .91$).

Data collection and analysis

Once the institutional consent was obtained, the instruments were transferred to the Google Forms platform. To send the link to the participants, an advertisement was published in the Online High School Room, which is a space for virtual interaction between students of the institution. After obtaining the answers, a debugging was carried out to eliminate the incomplete cases or with filling errors.

First, descriptive tools were used to identify the levels of each variable. The Kolmogorov-Smirnov test (with the Lilliefors correction) and the skewness and kurtosis values confirmed the absence of a normal distribution in most of the factors. In this sense, the Mann Whitney *U* test (with Rosenthal's *r* for effect size) was used for the comparison by sex and Spearman's Rho coefficient to address the association between variables. Finally, by means of a hierarchical multiple regression analysis, the capacity of self-concept and school adjustment in the prediction of levels of emotional exhaustion was addressed. Previously, the assumptions of linearity and non-collinearity were evaluated, eliminating the total scores from the equation and leaving only the factors. In addition, normality ($p < .05$ in the Kolmogorov test), homoscedasticity (absence of correlation between the standardized residuals and the standardized predicted residuals) and independence ($DW = 2.17$) of the residuals were verified (Pardo & Ruiz, 2005). Data analysis was performed using the statistical software SPSS version 25.

Ethical considerations. Before the users had access to the instruments, the form showed an informed consent in which the objectives of the study were clearly shown, specifying that participation was voluntary and that there was a commitment not to

disclose the data individually, but globally, and only for academic and scientific purposes. In the case of underage participants, informed consent was endorsed by the parents.

Results

Table 1 shows the levels obtained in each of the study variables and factors (median) together with the minimum and maximum possible values in each case (range). Additionally, measures of distribution are included to identify the scores in the response spectrum.

Table 1

Descriptive statistics for self- concept, school adjustment and emotional exhaustion

Variable/Factor	Median	Range	Asymmetry	Kurtosis
Self- concept	69.35	1-99	-0.40	0.23
Academic-work	83.08	1-99	-1.42	2.76
Social	66.33	1-99	-0.50	-0.16
Emotional	53.33	1-99	-0.13	-0.73
Family	85.50	1-99	-1.37	1.79
Physical	66.33	1-99	-0.51	-0.07
School adjustment	56	10- 60	-2.30	7.30
Academic performance	15	3-18	-0.99	1.23
Interest in attending university	12	2-12	-3.22	13.86
Adjustment problems	5	5-30	3.93	18.26
Emotional exhaustion	21.5	0-50	0.54	-0.40

Starting with self-concept, the results indicate that, in general, the participants have adequate levels, taking into account that the medians are above the mean value of the possible range (Median > 50) and that there is a negative asymmetry. It is noteworthy that the family (Median = 85.50) and academic-work factors (Median = 83.08) obtained the highest preferences, while the emotional (Median = 53.33), physical (Median = 66.33) and social (Median = 66.33) factors the lowest.

School adjustment also had satisfactory scores in the total (Median = 56) and in the factors of school performance (Median = 15) and interest in attending university (Median = 12) the medians were very close to their respective upper limits. Even the adjustment problems factor (inverse in relation to the school adjustment) remained at the lower limit (Median = 5) denoting that for the students, in general, there are no adaptation problems to the school environment. Lastly, emotional exhaustion obtained a median between low and medium (Median = 21.5).

Then the study variables and factors were compared between men and women. Table 2 shows the results of the Mann Whitney *U* test.

Table 2*Comparison of self-concept, school adjustment and emotional exhaustion by sex*

Variable/Factor	Women	Men	Z	p	r
	Range	Range			
Self-concept	253.13	350.50	-6.57	<.001	.27
Academic-work	276.75	300.80	-1.53	.125	.06
Social	259.60	336.89	-5.16	<.001	.21
Emotional	247.65	362.04	-7.85	<.001	.33
Family	266.47	322.42	-3.87	<.001	.16
Physical	267.06	321.18	-3.48	<.001	.14
School adjustment	282.64	288.41	-0.24	.811	.01
Academic performance	277.94	298.30	-1.22	.222	.05
Interest in attending university	285.38	282.65	-0.29	.770	.01
Adjustment problems	274.63	305.27	-2.62	.009	.11
Emotional exhaustion	301.89	247.91	-3.70	<.001	.15

A statistically significant difference was found in the total self-concept ($Z = -6.57$; $p < .001$; $r = .27$) and in the social ($Z = -5.16$, $p < .001$, $r = .21$), emotional ($Z = -7.85$; $p < .001$; $r = .33$), family ($Z = -3.87$; $p < .001$; $r = .16$) and physical ($Z = -3.48$; $p < .001$; $r = .16$). In all cases, men obtained higher scores than women with discrepancies between small and medium (Dominguez-Lara, 2018). In the case of school adjustment, only the adjustment problems dimension showed discrepancies ($Z = -2.62$; $p = .009$; $r = .11$), indicating that men have a greater difficulty adjusting (although such differences were small). Lastly, differences were found in emotional exhaustion, where women showed slightly higher levels than men ($Z = -3.70$; $p < .001$; $r = .15$).

Later on, the association between the study factors was addressed. Table 3 shows the Spearman correlation coefficients.

Table 3
Correlation between study variables

Variable/Factor	1	2	3	4	5	6	7	8	9	10	11
1. Self -concept	-										
2. Academic-work	.63*	-									
3. Social	.75*	.36*	-								
4. Emotional	.64*	.20*	.37*	-							
5. Family	.66*	.39*	.40*	.28*	-						
6. Physical	.70*	.46*	.45*	.22*	.33*	-					
7. School adjustment	.49*	.55*	.32*	.27*	.32*	.34*	-				
8. School performance	.50*	.61*	.31*	.26*	.31*	.35*	.84*	-			
9. Interest in attending university	.18*	.22*	.14*	.08	.09*	.16*	.45*	.31*	-		
10. Adjustment problems	.27*	.22*	.15*	.19*	.20*	.17*	.67*	.32*	.16*	-	
11. Emotional exhaustion	.55*	.34*	.41*	.42*	.40*	.35*	.43*	.36*	.12*	.34*	-

Leaving aside the correlations between the variables and their own factors, a positive association was detected between self-concept and school adjustment, with a strength of the association that ranged from very low to high ($\rho > .08$; $< .61$); only the adjustment problems factor presented its association inversely. On the other hand, emotional exhaustion showed a negative alteration with both variables ($\rho > .12$; $< .55$), indicating that, by decreasing the levels of self-concept and school adjustment, the values of emotional exhaustion increase.

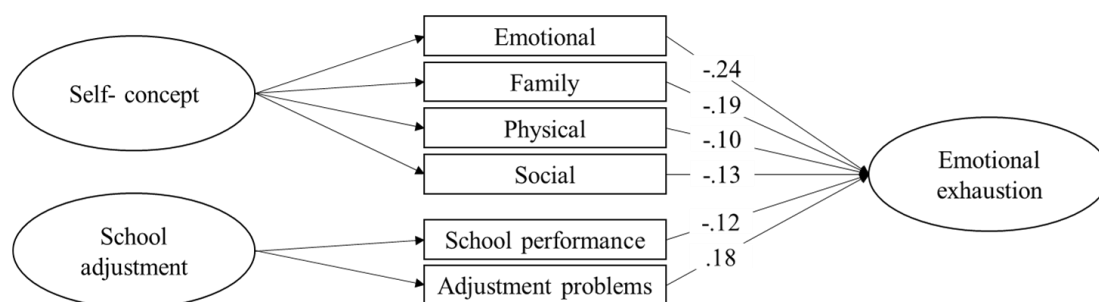
Finally, through a hierarchical multiple linear regression analysis, the degree to which the self-concept and school adjustment factors predict the values of emotional exhaustion was addressed. Table 4 shows such findings.

Table 4
Hierarchical regression results for emotional exhaustion

Variable	B	CI 95% for B		SE B	B	R ²	ΔR^2
		LI	LS				
Constant	47.04***	42.11	51.98	2.51		.35	.34***
Emotional	-0.10***	-0.12	-0.07	0.01	-.24		
Family	-0.10***	-0.14	-0.06	0.02	-.19		
Adjustment problems	0.48***	0.30	0.66	0.09	.18		
Physical	-0.05**	-0.08	-0.01	0.02	-.10		
School performance	-0.48***	-0.77	-0.19	0.15	-.12		
Social	-0.06**	-0.09	-0.02	0.02	-.13		

The final model was made up of six predictor variables. First, the emotional ($\beta = -.24$) and family ($\beta = -.19$) factors of self-concept in a negative sense and adjustment problems in a positive sense were integrated. All of them with a moderate-low contribution to the variance (Dominguez-Lara, 2018). Subsequently, the physical ($\beta = -.10$) and social ($\beta = -.13$) factors of self-concept and school performance ($\beta = -.12$) were added inversely with weak contributions to the models' percentage of variance (Dominguez- Lara, 2018). In sum, the four predictors explain 35 % of the variance ($\Delta R^2 = .35$). Figure 1 shows the model.

Figure 1
Emotional exhaustion predictive model



Discussion and conclusions

This research intended to describe the behavior of self-concept, school adjustment and emotional exhaustion, the differences based on sex, to analyze the links between the three variables and to generate a predictive model of emotional exhaustion, considering self-concept and school adjustment as predictor variables. At the outset, it is worth noting that our findings confirm the multidimensional structure of self-concept (García & Musitu, 2014; Ibarra-Aguirre & Jacobo, 2014; Shavelson et al., 1976).

In the current context of this work, it was found that the different selves that make up the totality of the self-concept have a particular behavior that differentiates them from each other. The emotional, physical and social dimensions present lower scores than the academic-work and family dimensions, which does not seem to change over time, if we compare the results with a previous study, where the emotional and social self becomes more depressed than the other dimensions, findings that are confirmed in a more recent study addressing the COVID-19 pandemic (Ibarra-Aguirre & Macías, 2021).

It was also found that men achieve higher scores than women in all the dimensions of self-concept, but regardless of sex, a fact to highlight is that the emotional dimension presents the lowest scores among all the dimensions of self-concept. This is similar to what has been found in different studies, when individuals are exposed to some type of adverse context, whether due to marginalization (Ibarra-Aguirre, 2021), perception of risk in the face of insecurity, or in the context of a pandemic such as the current one. (Ibarra-Aguirre & Macías, 2021). These results are to be expected if we recognize that the pandemic context generates a perception of fear.

When the differences between men and women are analyzed, it is perceived that women are more psychologically vulnerable to fear scenarios, since emotional self-concept is lower than men, as seen in previous studies with samples of different ages (García & Musitu, 2014; Herrera et al., 2017; Ibarra-Aguirre & Macías, 2021).

On the other hand, the school adjustment presented adequate levels, both in the total score and in each factor. In this regard, Willems et al. (2021) point out that adjustment is a predictor of academic performance in professional academic contexts. These results could be due to the fact that the study sample belongs to the online high school system, whose working modality is remote. Unlike the students who attend a face-to-face learning system, the study sample did not experience a modality change in their classes since the pandemic, the so-called emergency remote teaching (Portillo et al., 2020), which is the reason why they did not present a decrease in school adjustment.

When addressing the relationship between variables, it was observed that the association between self-concept and school adjustment was positive, while the relationship of both with emotional exhaustion was negative. Although some previous studies had confirmed significant relationships between them (Dominguez-Lara, 2014; Fernández-Lasarte et al., 2018; Herrera et al., 2016; Lledó et al., 2014; Pérez et al., 2020; Portillo & Reynoso, 2021), by analyzing the way in which self-concept and school adjustment predict emotional exhaustion, the model integrated emotional, family, social, and physical factors from the first construct and academic performance and adjustment problems from the second. The negative relationship of emotional exhaustion with self-concept and school adjustment means that the lower the self-concept and adjustment, the higher the level of exhaustion. In this sense, emotional competence in the school context becomes relevant, since it represents a barrier to academic stress and the attitude of being burned out (burnout) (Lledó et al., 2014). This suggests that a student with an adequate self-concept will believe in himself and face school challenges positively, increasing his chances of success (Bernal & Gálvez, 2017).

From a multidimensional perspective of self-concept, multiple aspects that can increase the levels of emotional exhaustion in students must be considered. For example, the context of COVID-19 outbreak increases the levels of emotional exhaustion due to social restrictions and recreational spaces due to confinement, as well as due to the physical and emotional changes, added to the fear of contracting the virus both individually and at the family level and at the same time, maintain a dynamic of life in the new normality and a good academic performance before school tasks.

Although the online mode of learning did not represent a drastic change for this study group, the new psychological demands with the care of oneself and others did (Barreto-Osama & Salazar-Blanco, 2021), issues which, added to the loss of family members, or to carrying out other types of activities at the same time to the online study, could cause unwanted results or unpleasant experiences that led to fatigue and emotional exhaustion (Dominguez-Lara et al., 2018; Mayorga-Lascano et al., 2021). All this, having a negative impact on a positive self-concept and school adjustment. Regarding the comparison by sex, women presented a greater emotional and physical exhaustion in the educational environment, a situation that confirms previous research (Barreto-Osama & Salazar-Blanco, 2021; Herrera et al., 2016; Seperak-Viera et al., 2021).

Globally, the statistical model obtained has certain theoretical repercussions. In the first place, the perceptions, descriptions and evaluations that the subject constructs of himself have an important weight in emotional exhaustion, especially those involved in the emotional, family, physical and social evaluation of the individual. This is consistent with previous studies (Dominguez-Lara, 2014; Fínez & Morán, 2014; Gómez-Urquiza et al., 2017; Herrera et al., 2016; Lledó et al., 2014), which confirm the link between the variables, assuming that self-concept is a protective barrier in stressful situations (Schleicher & McConell, 2005). On the other hand, the adjustment to the academic environment is a resilient factor against emotional exhaustion itself, which protects the student from being overwhelmed by school demands, avoiding wear and tear. The

relationship between school adjustment and emotional exhaustion represents one of the main findings and is a first approximation of studies in the area.

Finally, it should be said that there are limitations in the study. The answers come from self-reports, which implies a certain degree of subjectivity. Another aspect refers to the sample of a suitable type, which implies an incidental participation and not a random selection. Despite this, a sufficiently large sample was formed to achieve representativeness and generalization of the findings. The generational approach was left out of the analysis, given that the students of the online high school program have a significantly wider age range than those attending a face-to-face mode of learning (where the common range is 15 to 18 years of age), some substantial changes were detected between the younger or older groups. It is recommended that future studies analyze the study variables, mainly self-concept, generationally, to identify changes throughout the people's life cycle, beyond the academic context. Also, it is necessary to think about strategies that allow individuals to better face adversity, mostly with women.

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