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Demotivation and its relation with academic and psychosocial factors in university students

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Abstract

Introduction: School dropout represents a problem among higher education institutions, that prevails and affects the professional development of students. **Objective:** Prove relations between demotivation, teaching skills, satisfaction of academic expectations and tutoring in a University in a South of Sonora, México. **Method:** A scale of factors associated with dropping out was used (Tutoring Scale, Scale of Satisfaction of Academic Expectations, Scale of Teaching Competencies and Scale of Motivation), applied to 359 students from 6 different professions, chosen at random where 161 were men, 191 women, aged from 18 to 51 years old. **Results:** Tutoring, academic expectations satisfaction and teaching competences had a positive and significative covariances among these constructs. Regarding the demotivation factor, it was appreciated a negative covariance with the remaining constructs, which suggest the presence of divergent validity between this and the rest of the constructs. **Conclusion:** At higher levels of tutoring, academic and teaching competences expectations satisfaction, there will be lower levels of demotivation. The limitations of the study are discussed.

Key words: quality of education; education and development; pedagogical innovation; motivation; tutoring (education).

La desmotivación y su relación con factores académicos y psicosociales de estudiantes universitarios

Resumen

Introducción: La deserción escolar constituye una problemática entre las instituciones de educación superior, que prevalece y afecta el desarrollo profesional de los estudiantes. **Objetivo:** Comprobar relaciones entre desmotivación, competencias docentes, satisfacción de expectativas académicas y tutorías en una universidad del sur de Sonora, México. **Método**: Se empleó una escala de factores asociados a la deserción (Escala de Tutoría, Escala de Satisfacción de Expectativas Académicas, Escala de Competencias Docentes y Escala de Motivación), aplicada a 359 estudiantes de seis carreras, elegidos al azar, 161 son hombres, 191 mujeres, con edades de entre 18 a 51 años. **Resultados:** Indican que la tutoría, satisfacción de expectativas académicas y competencias docentes tuvieron covarianzas positivas y significativas. Con respecto a la desmotivación,

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esta covarió de manera negativa con los tres constructos restantes, lo que sugiere validez divergente entre el resto de los constructos. **Conclusión:** A mayores niveles de tutoría, satisfacción de expectativas académicas y competencias docentes, existirán menores niveles de desmotivación. Se discuten las limitantes del estudio.

Palabras clave: calidad de la educación; educación y desarrollo; innovación pedagógica; motivación; tutoría (educación).

Introdución

School dropout is a big concern within institutions of Higher Education, since no matter how many efforts are made to solve it with funding, quality education programs, and strengthening of faculty training, the phenomenon prevails and affects the professional development of students. For that reason, it has become an object of study in order to find variables related to or causing the dropout of studies.

When investigating the factors that lead to dropout in university students, models and theories have been generated that attempt to explain the phenomenon. Zavala et al. (2015) developed a model organizing external, internal, and bilateral factors, and found that lack of motivation is one of the elements that constitute the internal aspects of the student that cause their desire to abandon their studies.

In another study carried out in Mexico, Mares et al. (2012) carried out a correlation between the motivational characteristics of students and their academic competencies, corroborating that the former are a factor of greater impact, which can lead students to make the decision to drop out.

On the other hand, in their research, Freixa et al. (2018) concluded that university dropout is a consequence of multiple factors among which stand out aspects of the context that can influence this decision, as well as psychosocial or academic factors, such as not being happy with the program they chose or with the achievements in their courses, and even the individual characteristics of each student.

According to the background, the factors that will be analyzed in this study are motivation, satisfaction of academic expectations, tutoring, and teaching performance.

According to Ramírez and Olmos (2020), motivation in an educational context can be defined as the positive attitude for learning to take place. From the point of view of Naranjo (2010), motivation can be related to personal or academic factors, with the teacher's attitude being one of the academic factors that causes students to become unmotivated. In this sense, Rodríguez-Pérez (2012) and Triana et al. (2016) highlighted the decisive role that motivation plays in students through the role of the teacher, the methodology used, and the relationships established to promote interaction with the students, managing to modify the students' interest, needs, and even skills.

Motivation has a special interest in cognitive aspects, intelligence or meaningful learning, and the overcoming of motivational situations in diverse fields, such as the social and educational (Armas, 2019). This diversification allows the emergence of diverse points of view that help to understand the construct of motivation in certain areas (Reeve, 2008).

According to the theory of self-determination, motivation does not have a single component that defines it; it is composed of three aspects or approaches to analysis: the global, the contextual, and the situational. The global has a general orientation and is associated with the personality of the subject. The contextual locates the subject in specific activities, such as education or work, and is directly influenced by social aspects. In relation to the situational sphere, specific actions or situations occur at a specific time, which will not repeat themselves in their lives (Stover et al., 2017).

On the other hand, according to Pichardo et al. (2007), expectations have been studied in psychology and education under the precept of the influences of some people on others and of expectations themselves becoming reality, which is a process in which beliefs and expectations affect their behavior, leading others to a response that confirms those beliefs. This phenomenon has been called the Pygmalion effect or self-fulfilling prophecy. Similarly, Bandura (1977), to

describe the elements of expectations, included in his terms the attainment of goals based on the experiences of individuals, as well as expectations of results and expectations of efficacy. For the analysis of personal efficacy expectations, he also considered four elements, such as performance achievements, indirect experiences, verbal persuasion, and physiological states, with which, in the end, the individual will or will not manifest coping behaviors on different experiences.

Expectations have been studied from the point of view of both teachers and students. With regard to the latter, research has attempted to determine what they expect from the university as an institution and from its services. The expectations they have towards the teaching-learning process have also been analyzed, being here where the teacher's relationship with expectations has been examined (Castañeda & Alarcón, 2019; Pérez, 2015; Pichardo et al., 2007), which are represented by everything students expect to do and achieve in university, symbolized in the academic and social adjustment dimensions. They can serve as cognitive orientation and motivation and help students commit to their education, so it is necessary for institutions to know what students expect in terms of their satisfaction and needs in order to plan accordingly (Conde et al., 2017).

In the opinions of Orozco et al. (2021) and Torres et al. (2014), teaching competencies refer to everything related to teaching practice, its aims, improvement, and professionalization. In addition, they argue that they integrate knowledge, skills, and attitudes related to research, association, dissemination, teaching quality, cooperation, and leadership in different educational contexts, and that the competencies that teachers should develop are the ability to plan and organize learning, manage learning, communicate effectively, value learning achievements, and organize their improvement and training.

In that sense, the United Nations Educational, Scientific and Cultural Organization and the International Labor Organization (UNESCO & ILO, 2008) established as duties of university professors to teach effectively, to be impartial and equitable with students and colleagues, to encourage the free exchange of ideas, to conduct research in an ethical manner and disseminate their conclusions, or stay updated on the subject in which they are specializing, as well as to honestly manage the funds assigned to them. Likewise, Salazar et al. (2016) pointed out that, for the professional profile of professors, competencies would refer to (a) knowledge, including information, theories; (b) know-how, by performing competent actions; and (c) knowing how to be, explained through values and standards required for performance.

Arias et al. (2018), considering the recommendations of UNESCO and the Organisation for Economic Co-operation and Development (OECD), established that university teaching competencies are composed of skills, abilities, aptitudes, attitudes, and values used in teaching and learning so that students develop their competencies for their professional life. Some of the university teaching competencies are content selection, being comprehensible, use of ICTs, design and organization of learning activities, communication with students, tutoring, evaluation of teaching and learning, research, teamwork, and use of didactic techniques.

Regarding the effect of the competencies of university professors, Díaz and Osuna (2021), and Román (2013) found that they have a strong impact on the permanence or dropout of students. This can be determined through the interaction and the implementation of certain pedagogical practices by offering cognitive and socio-affective strategies, by promoting the development of skills and abilities, as well as by showing interest, motivation, certain expectations or attitudes, as good teaching performance is a protective factor against school dropout or failure.

Among the pedagogical practices, we find tutoring, defined as the pedagogical action which provides monitoring, accompaniment, or guidance in educational processes to improve the students' performance based on their needs and conditions, in addition to aiming for their comprehensive growth (Cambours de Donini et al., 2011; Martínez et al., 2017). It is also considered a teaching action of intervention for training purposes established to follow up on students so that they develop rational qualities (Aguilera, 2019; Arbizu et al.,

2005). Although the concept has been approached in different languages—in English *mentoring, tutoring, coaching;* in French *tutorat, conseil pedagogique, acompagnement*—, they have something in common: a teacher-tutor who guides or orientates students in academic, administrative, and intellectual aspects (Delgado-García et al., 2020; Lobato et al., 2004).

Through tutorial action, factors related to integration into university life, academic development, shaping of the professional profile, development of competencies, insertion into the labor market, and personal development can be addressed (Pérez et al., 2017). In addition, it is a prevention strategy, as the student is guided in their academic, personal, and professional development. It also supports learning, and the acquisition of certain skills is facilitated (De la Cruz et al., 2011; Martínez et al., 2016).

It is crucial to study the factors related to higher education dropout, as it is a severe problem that affects most Higher Education Institutions (IES). In this university in southern Sonora, which is the subject of study, according to information provided by the Department of Student Registration, specifically in the 2009 cohort in one campus, Industrial and Systems Engineering (IIS) recorded a total dropout of 42.5%; Software Engineering (ISW), 16.6%; Business Administration (LA) and Tourism Business Administration (LAET), 49.9%; Education Science (LCE), 24.3%; and Psychology, although it does not yet have a graduating class, 36%. In another campus, 33.33% dropped out of IIS; 26%, of LA; 30%, of LCE; and 35%, of LAET. In general terms, it can be determined that 35.25% and 31.37% of the students enrolled in some of the educational programs in the 2009 cohort at these campuses, respectively, dropped out (Technological Institute of Sonora [Instituto Tecnológico de Sonora, ITSON], 2015).

Considering the above, this study identifies student psychosocial factors, such as lack of motivation and satisfaction of academic expectations, and institutional and administrative factors related to tutoring and teaching competencies. The study aims to test the relationships between these four constructs in a university in southern Sonora (Mexico). For this purpose, three hypotheses were proposed:

1. Tutoring is related to the satisfaction of academic expectations and teaching competencies.
2. Teaching competencies are related to the satisfaction of academic expectations.
3. Demotivation is negatively and significantly associated with tutoring, satisfaction of academic expectations, and teaching competencies.

Method

Design

The research approach is quantitative and its scope is explanatory, seeking an explanation and determination of the phenomena (Hernández et al., 2014). In the quantitative context, predictive studies can be applied in which a causal relationship is established between various variables with the aim of testing the relationship and influence of quantitative variables and establishing a prediction fit model.

Participants

For the study, the probabilistic method was used (Hernández et al., 2014) with randomly selected students enrolled in six educational programs at a university in southern Sonora, being a total of 359 students. They represent 40% of the student population, from different terms, of which 161 are men (45%), 191 are women (53%), and eight are missing values (2.2%); their ages are between 18 and 51 years; 351 of them reported being single, while seven subjects indicated that they were married. With respect to family income, it was found that they were in the category of 2,501 to 4,000 pesos per month.

Instrument

For the development of the study, a scale of factors associated with dropout elaborated by Zavala, et al. (2018) was used. The instrument showed high indexes of internal consistency for each factor (the Omega coefficient varied between .89 and .95 for the twelve factors). A confirmatory model

with an acceptable goodness of fit was obtained (Chi-square = 151.94; P = 0.00001; CFI = .91; RMSEA = .089; in -90% confidence interval of RMSEA= .07, .10 and r_s coefficient = .86), where four constructs were selected: tutoring, teaching competencies, satisfaction of expectations, and demotivation.

Scale of Tutoring

It evaluates aspects related to the solution of students' academic problems, as well as the promotion of study strategies. It has six items in Likert response format with five response options (1 = *Strongly Disagree* to 5 = *Strongly Agree*). An example of an item is "the tutor showed interest in the academic problems you had."

Scale of Teaching Competencies

It was used to measure those activities that professors carry out during class, as well as to evaluate attitudes of positive interaction with students. It has nine items, with five response options in Likert format (1 = *Never* to 5 = *Always*). An item that exemplifies this scale is "professors use different strategies to teach."

Scale of Satisfaction of Academic Expectations

It evaluates the degree of identification of the student in relation to the university, the programchosen, and what they expect from each. It is made up of four items, with five response options in Likert format (1 = *Definitely not* to 5 = *Definitely yes*). An example of an item on this scale is "you find the program you have chosen interesting."

Scale of Demotivation

It focuses its indicators on academic performance to obtain passing grades, as well as the effort to attend and arrive on time to class. It has six items in Likert format with five response options (1 = *Definitely not* to 5 = *Definitely yes*). One item to exemplify the content of this test is "you make an effort to excel at your studies." It should be noted that the responses of the items were recoded inversely.

Procedure

In order to carry out the study, students were asked to sign an informed consent form in which they expressed their agreement to participate in the study, they were informed of their rights and ethical responsibility in the answers they gave, and they were assured of the protection of the identity of the people who participated as informants in the research. Subsequently, the groups were visited, and the questionnaire was applied collectively to 359 second, fourth, and sixth-term university students; however, within these groups, it was also applied to first, third, fifth, seventh, eighth, and tenth-term students, with a response time of between 20 and 30 minutes.

Data Analysis

For the analysis, the scales of the instrument were selected. Descriptive statistics were computed with the statistical program SPSS 27.0; the JASP program was used to determine the McDonalds Omega coefficient for each indicator; and the EQS software was used for the covariance model. Based on the indicator variables elaborated from the means of the items of each factor, the Pearson's bivariate correlation test was carried out in order to demonstrate the relationship between the four constructs addressed as a preliminary step to testing the covariance model.

Before analyzing the results of the covariances to ensure the possibility of causal relationships, there must be evidence of convergent validity if there are high and significant factor weights between the observed variables and the proposed factors to which they correspond (Kline, 2005; Nunnally & Bernstein, 1995). As for divergent validity, evidence of divergent validity is obtained if two different constructs exhibit negative correlations (Campbell & Fiske, 1959).

Likewise, it was observed whether the data satisfied the assumption of multivariate normality; if not, it is suggested to estimate the model with the robust maximum likelihood method (Satorra & Bentler, 2001). Authors such as West et al. (1995) suggested evaluating whether the value of the multivariate standardized Mardia's coefficient is situated at values greater than seven, which would indicate multivariate non-normality. To assess whether the model of covariance between the four constructs exhibits goodness of fit, six indicators were considered. It was evaluated whether the $\chi 2$ value was non-significant ($p > .05$), which indicates

the absence of discrepancy between the data matrix and the proposed model. Regarding the practical fit indexes, the CFI, the NNFI, and the RMSEA were evaluated. The criterion for the first two is that their values should be above .95, while for the third, it is suggested that they should be less than .06 (Hu & Bentler, 2009). Finally, the fifth indicator to be evaluated consisted of the 90% confidence interval of the RMSEA, whose upper limit is suggested not to exceed .10 (Kline, 2005).

Results

Descriptive statistics were obtained for the items on each scale, and its corresponding Omega coefficient was computed since it is considered an adequate measure of reliability and allows for a more precise measurement. The results are shown in Table 1.

accompaniment of professors in terms of the tutoring program. However, in relation to the professors' competencies, they stated that they almost always show positive interaction attitudes towards the students, motivate them, and use relevant strategies for them. Regarding the satisfaction of expectations, it was found that they have definitely fulfilled their expectations and that there is a sense of belonging to their university. Regarding demotivation, no negative indicators were found in their academic performance to obtain passing grades, as well as in the effort for attendance and punctuality. The four factors analyzed showed high reliability, which demonstrates confidence in the results of the scale.

A Pearson's bivariate correlation analysis was carried out to determine the degree of association of the constructs addressed in terms of direction and magnitude. The results can be seen in Table 2.

According to the results, there is a negative correlation with the demotivation construct and the rest, which indicates that when there is demotivation, it moves in the opposite direction to tutoring, teaching competencies, and the satisfaction of expectations. The rest of the correlations are positive and significant, showing that these variables move in the same direction.

Taking into account the results of the correlation analysis, we proceeded to test a structural model of covariance between the constructs. The value of the normalized Mardia's coefficient was 43.56, showing no multivariate normality. Therefore, the estimation of the model was carried out with the robust maximum likelihood method. Regarding the values of the fit indicators, the Satorra-Bentler Chi-square test (S-Bχ2) was 425.12, with 269 degrees of freedom, being significant ($p < .05$). Nevertheless, the practical indexes reveal evidence of fit: the CFI reached a value of .95; the NNFI was .94; and the RMSEA obtained was .04. Likewise, the 90% interval of the RMSEA had adequate values (.03 and .05), and all factor weights obtained significant values ($t > 1.96$, $p < .05$).

It was observed that, among three of the four constructs addressed (tutoring, satisfaction of academic expectations, and teaching competencies), there were positive and significant covariances that were directly proportional to each other, showing that they vary in the same direction. On the other hand, the demotivation factor was found to covary negatively with the other three constructs, which suggests that when one variable increases, the other variable decreases. According to the results, the greater the increase in tutoring, satisfaction of academic expectations, and teaching competencies, the greater the decrease in demotivation, which is supported by the specialized literature.

Discussion

In relation to the first hypothesis, which refers to the relationship between tutoring and the satisfaction of academic expectations and teaching competencies, evidence was found to confirm it. With tutoring actions, students' academic performance can be improved, including here the subjects passed per term (Cuevas et al., 2017; Guerra-Martín et al., 2017), and academic potential can be maximized (Walvoord & Pleitz, 2016). Similarly, students can gain confidence, feel less intimidated by revision exercises and exams, and work collaboratively by volunteering to participate in tutoring (Eaton, 2015).

Table 1

Descriptive Statistics of the Measures Used

Scale/Items	Min	Max	M	SD	ω
Tutoring					
Your integration into university has improved with the academic tutoring program.	1	5	3.42	1.15	0.89
The tutor gave you guidance on study habits.	1	5	3.61	1.17	0.89
The tutor recommended techniques to help you study effectively.	1	5	3.45	1.23	0.89
The tutor helped you find solutions for the problems you presented during the tutorial sessions.	1	5	3.63	1.20	0.89
The tutor supported you in problem-solving activities.	1	5	3.58	1.18	0.89
The tutor showed interest in the academic problems you experienced.	1	5	3.88	1.11	0.89
Teaching competencies					
Professors stick to the course syllabus.	1	5	4.36	.711	0.89
Professors set the rules with the students in mind.	1	5	4.09	.873	0.89
Professors motivate you to do the activities and tasks in class.	1	5	3.98	.931	0.89
Professors provide advice when requested.	1	5	3.96	1.00	0.89
Professors use different strategies to teach.	1	5	4.12	.867	0.89
Professors provide relevant activities for students.	1	5	4.05	.847	0.89
Professors provide feedback on homework assignments.	1	5	4.12	.790	0.89
Professors support students and help them solve academic problems.	1	5	4.06	.864	0.89
Professors evaluate and give feedback on each mid-term exam.	1	5	4.14	.902	0.89
Satisfaction of expectations					
So far, the program has met your expectations.	1	5	4.18	.932	0.89
You feel identified with the university.	1	5	4.15	.978	0.89
You find your chosen program interesting.	1	5	4.57	.805	0.89
You feel proud to belong to the university.	1	5	4.33	.951	0.89
Demotivation					
You strive to excel in your studies (R).	1	5	1.38	.613	0.89
You strive for good grades in all subjects (R).	1	5	1.51	.783	0.90
You are punctual in attending classes (R).	1	5	1.73	.884	0.90
You attend class normally at the established times (R).	1	5	1.42	.723	0.90
So far, you have been credited for the subjects you have taken (R).	1	5	1.56	.927	0.90
You consider to have an average grade higher than 8 (R).	1	5	1.65	1.02	0.90

Note. Min.: minimum; Max.: maximum; M: measure; SD: standard deviation; ω omega coefficient; R; Inverse coding

Table 2

Pearson's Bivariate Correlations

Constructs	M	SD	1	2	3	4
1 Tutoring	3.60	1.03	1.0			
2 Teaching competencies	4.10	.609	.44*	1.0		
3 Satisfaction of academic expectations	4.30	.757	.29**	.40	1.0	
4 Demotivation	1.54	.582	-.16**	-.24	-.31	1.0

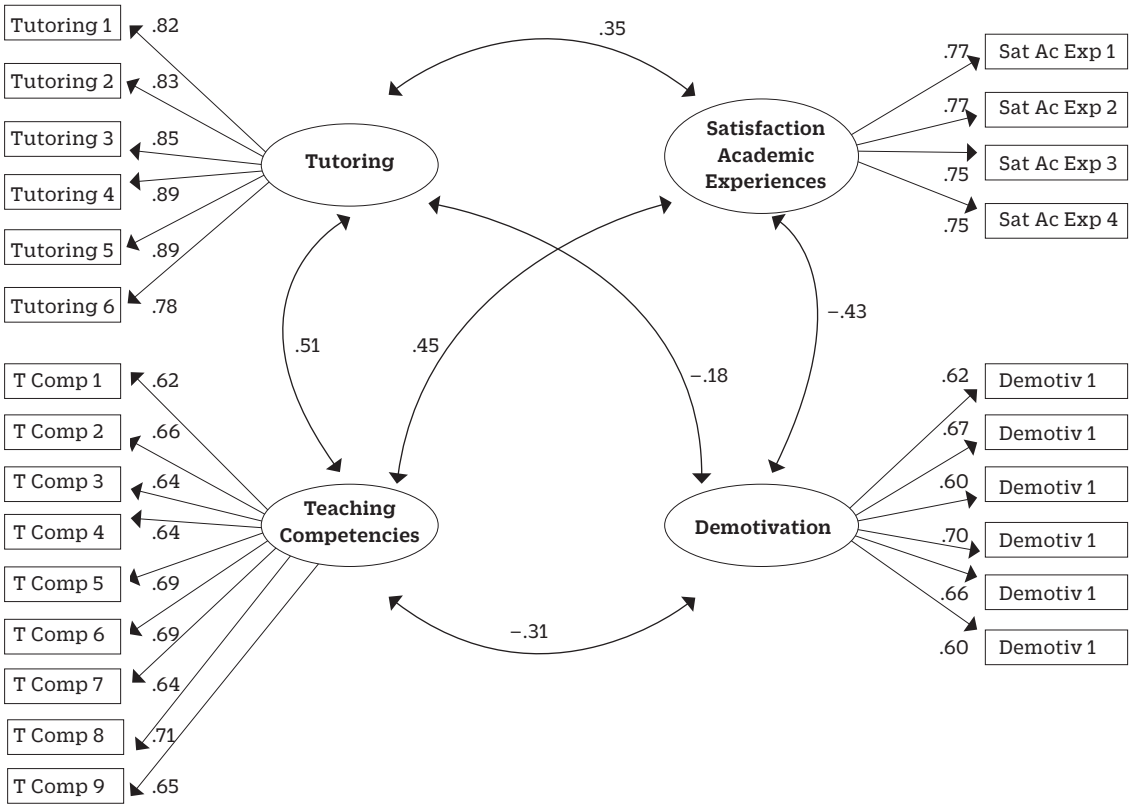
In addition, they can positively influence the acquisition of certain skills, the perception of self-efficacy, and attitudes towards tutoring (Uzuner & Aktas, 2016). Finally, they can develop cognitive self-regulation skills such as monitoring, evaluation, and guidance (De Backer et al., 2014).

As to the second hypothesis, which postulated that teaching competencies are related to the satisfaction of academic expectations, it was also confirmed. According to Feldman and Theiss (1980), the expectations of students and teachers affect their attitudes and behaviors, as well as the people with whom they interact. These authors point out that they can simultaneously keep their expectations at such level that they will affect their attitudes towards themselves, their peers, and the teaching situation in general. Likewise, when students expect to find a competent teacher in the classroom, they perceive them in a positive way, just as the class; the opposite happens when they have the expectation that the teacher will perform poorly. The authors agreed with other researchers on the fact that when students expect a poor teacher, they tend to have less favorable attitudes and behaviors towards the teacher and their own learning.

According to Villalobos et al. (2010), knowing the perceptions and expectations that university students have about university teaching helps to promote a change in the pedagogical structures

Figure 1

ovariance Model Between Tutoring, Teaching Competencies, Satisfaction of Academic Experiences, and Demotivation; Factorial Weights; and Significant Covariances.



Note. (t > 1.96, p < .05). Goodness of fit: S-Bχ2 (269 degrees of freedom, N = 359) = 425.12, p > .05; CFI = .95; NNFI = .94; RMSEA = .04. 90% confidence interval of RMSEA (.03, .05).

and practices of higher education. The data obtained reveal the need to review the current conception of university teaching, especially with regard to undergraduate education, where students report a less positive perception of teaching and—this requires greater attention—lower expectations. In the same vein, Morgan (2015) stated that expectations and experiences from other studies can be useful in attracting more students by improving educational processes, retention rates, and student experiences.

As for the last hypothesis, which stated that demotivation is negatively and significantly associated with tutoring, satisfaction of academic expectations, and teaching competencies was also corroborated: there were negative covariances between demotivation and the three previous constructs. According to Freixa et al. (2018), for students who have to work and study at the same time—implying a double effort to stay at university—the dissatisfaction of academic expectations and demotivation become determining factors for them to drop out of their studies.

According to Torres (2016), it is no longer enough to have teachers in the classroom with their plans, methodologies, and materials ready to adequately conduct a class. What students are really looking for is the affection that allows them to establish a class full of trust where the teacher interacts with the students, an environment of safety and respect. Accompaniment and understanding of the needs and expectations of students, as well as the ability to provoke in them the desire to continue with their training process until the successful completion of their studies, are elements that are currently required to maintain the motivation of students. Finally, the affective aspect promoted by the teacher can lead to motivation or demotivation in students.

It is concluded that tutoring actions can improve the academic performance of students; therefore, it is essential that universities pay special attention to this area, since it can make a difference in retaining students and keep them accompanied, advised, and guided until they finish their university studies. According to Feldman and Theiss (1980), students' expectations can be kept positive when the professors generate an environment of trust, openness, accompaniment, and interaction between students and them.

From this research, there are some recommendations for future studies. It is suggested to evaluate other undergraduate students to corroborate if the relationships between the constructs addressed remain or not. In addition, the research could be complemented with a qualitative approach to deepen on the responses provided and other categories that could emerge to add other variables that would allow a better explanation of the study phenomenon.

One limitation of this study is that the sample data was obtained from one university, so its findings cannot be generalized to the reality of institutions of other higher education in the region or in the country.

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