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Influence of attitudinal factors towards the COVID19 pandemic as a predictor of academic self-efficacy in psychology undergraduates

Influencia de los factores actitudinales hacia la pandemia COVID19 como predictor de la autoeficacia académica en ingresantes de Psicología

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Abstract

The objective of this research was to establish a relationship between attitudinal factors as predictors of academic self-efficacy in Psychology students at a private university in Lima. For this purpose, a sample of 187 students belonging to the first cycle of the School of Psychology was used. Under a non-experimental descriptive correlational design. Instruments such as the Questionnaire of Attitudes towards the Pandemic COVID19 and the Scale of Perceived Self-Efficacy specific to academic situations - EAPESA were used. As for the correlation, the value of the coefficient of determination (R-squared = 0.51) indicates that attitudinal factors influence academic self-efficacy by 5.1% in variation. And as for the linear regression, a prediction model of academic self-efficacy was established, taking into account the following data Y1= 18.427 + .97 (Attitudinal factors). Finally, it is concluded that attitudinal factors do not significantly predict academic self-efficacy.

Keywords: Attitude, self-efficacy, university students.

Resumen

La autoeficacia académica ha sido uno de los elementos fundamentales en la influencia de los factores actitudinales hacia la pandemia por la COVID19. La presente investigación tuvo como objetivo establecer una relación entre los factores actitudinales como predictores de la autoeficacia académica en ingresantes a la carrera de Psicología en una universidad privada en Lima. Metodología: Se tuvo una muestra de 187 estudiantes pertenecientes al primer ciclo de la escuela de Psicología. Bajo un diseño no experimental descriptivo correlacional. Se utilizaron instrumentos como el Cuestionario de actitudes hacia la pandemia COVID19 y la Escala de Autoeficacia percibida específicas en situaciones académicas – EAPESA. En cuanto a la correlación, el valor del coeficiente de determinación (R cuadrado= 0.51), indica que los factores actitudinales influyen en un 5.1% en variación a la autoeficacia académica. Y en cuanto a la regresión lineal, se estableció un modelo de predicción de la autoeficacia académica, teniendo en cuenta los siguientes datos Y1= 18.427 + .97 (Factores actitudinales). Finalmente, se concluye que los factores actitudinales no predicen de manera significativa la autoeficacia académica.

Palabras clave: Actitud, autoeficacia, universitarios.

INTRODUCTION

The COVID-19 pandemic has been one of the events with the greatest impact on the population worldwide in recent years, as reported by the Neuropsychology Service of the National Institute of Neurological Sciences, which indicates that this has been evidenced in the psychological distress of the population that has experienced an imbalance at the emotional, social, etc. level. Rodríguez, et. al. (2021).

Likewise, the populations that have experienced the greatest impact at the psychological level are children and young people since, according to the United Nations Children's Fund [UNICEF] (2021), 1 in 5 young people between 15 and 24 years of age indicate having experienced depressive symptoms and little interest in carrying out their daily activities.

On the other hand, young university students need certain intrinsic elements to perform in an academic environment, such as motivation and self-efficacy, which are influential factors in the academic performance of young people in an educational context; in this case, university Gonzáles-Benito et al. (2021).

Similarly, according to Coque and Ponce (2019), attitudinal factors are another of the main elements in this population because they are related to the establishment of personal goals, identification of interests, willingness, and commitment to perform certain activities, specifically in the academic environment.

Based on this, it is necessary to study the impact of the epidemiological context on self-efficacy and how it is influenced by attitudinal factors that play an important role in the student's academic development and, therefore, in academic performance. Based on the above, the main objective of this study was to establish a relationship between attitudinal factors as predictors of academic self-efficacy in Psychology students at a private university in Lima.

At a theoretical level, according to Allport (1935), attitude is defined as a mental and neurological state of readiness to react, structured by experience and directive or dynamic, to behavior with respect to all the objects and circumstances with which it is associated.

Similarly, Padua and Ahman (1979) argue that various meanings refer, for example, to the stable structure of an individual's motivational, emotional, perceptual, and cognitive processes in relation to some part of his or her environment. Consequently, it is a behavioral construct consisting of an individual's internal tendencies to act on a person, object, or circumstance. Although behavior can be considered an element linked to an attitude, it does not cause behavior (Escalante et al., 2012).

On the other hand, at the contextual level, the pandemic began with the identification of the first cases of pneumonia in Wuhan residents caused by SARS-CoV2. It spread to countries on all continents between February and March, with Spain and Italy being the most affected in Europe, the United States in North America, and Brazil in South America; adding to this, the inadequate political decisions to address such an epidemiological situation (Chang et al., 2020).

From this situation, the information provided by the media motivated the population to experience psychological discomfort, represented by anxiety and fear, fostering rumors so that people infected by the disease were subject to social rejection and discrimination (Shigemura et al., 2019).

On the other hand, several population groups were affected by this atypical situation; one of them was the university student population since their face-to-face teaching was interrupted by the pandemic, which encouraged online learning, so as not to lose the academic semester (Gaur et al., 2020).

Indeed, attitudinal factors refer to the ingrained habits of individuals to survive and thrive in severe conditions, such as the pandemic by COVID-19. From this, recent research was identified revealing that students, residents, and mental health professionals show hopeful attitudes and a greater propensity to actively participate in pandemic containment; therefore, increased training of healthcare employees could result in better management of the health crisis (Puspitasari et al., 2020).

Likewise, studies conducted during past epidemics showed that better emergency management and containment can be achieved if the community has sufficient knowledge of the causative agent of the disease and favorable attitudes and behaviors towards the disease. Similarly, the correlation between increased knowledge and improved attitudes has been demonstrated (Alkot et al., 2016).

Attitudes about COVID-19 are the result of the transfer from the physical campus environment to the home environment, as this issue led to isolation, stress, inattention, decreased peer contact, and disruption. In addition, the abrupt shift from classroom learning to home learning had a negative impact on students' performance; therefore, adapting to home learning was a difficult challenge (Torda et al., 2020; Liang et al., 2020).

In addition, COVID-19 elicited generalized fear and elevated anxiety. Furthermore, it is recognized that such anxiety can intensify symptoms of anxiety and depression in the most susceptible individuals, as well as anxiety, mood abnormalities, loss of sleep, hypochondriacal beliefs, generalized emotions of despair, uncertainty, and dread. These feelings may be the result of heightened perceptions of danger, which motivate individuals and communities to engage in maladaptive safety-seeking activities. These include hypervigilance, which is characterized by a continuous state of alertness to potential threats, and avoidance, which is characterized by risk avoidance (Hisham et al., 2020).

Therefore, it is necessary to explain the main theories associated with this topic; we will start with Ajzen & Fishbein's (1980) Theory of Reasoned Action (TAR); this model was created by Ajzen and Fishbein (1980). It is a broad theory of human behavior that examines the interaction between ideas, attitudes, intentions, and behavior in relation to behavioral decision-making. It postulates that thoughts about a provided attitudinal-psychosocial object are the basis for the development of attitudes and constitute a person's positive or unfavorable attitude toward an object stimulus (Fishbein et al., 1988). They also hypothesize that an attitude toward an item is formed naturally when one learns its correlations with other things against which one already has an attitude. These attitudes are evaluations of the attribute and result from beliefs that link a new attribute with other qualities and judgments of those traits (Ajzen & Fishbein, 1980).

Allport also conducted a study whose analysis contributes to a better understanding of the idea of attitude. His study was based on the broad field of attitude theory, where he discovered his concept of attitude. According to Allport, an attitude is the taught propensity to consistently react favorably or negatively to an item or collection of objects. Because of his unique definition, he postulated that a person's behavior could not be predicted by attitude alone. He considered that predicting behavior was almost difficult because of the varying degrees of attitude that individuals had toward a given thing (Allport, 1935).

Several authors have hypothesized that attitudes can be formed by classical conditioning and that this could influence subsequent behavioral responses. Staats and Staats (1958), who presented students with the names of various countries linked to positive, negative, or neutral words, found that those associated with positive adjectives were judged more positively. According to classical conditioning, the attitude response is caused by the simple connection between the conditioned stimulus and the unconditioned stimulus. However, this method has yet to be questioned since it does not explain the mechanisms that mediate the link between evaluative reactions and unconditioned inputs.

According to Ajzen and Fishbein (1980), attitude is determined according to the intention to perform it, which is a function of two factors: attitudes towards a given activity are a personal component composed of the individual's emotional feelings, whether positive or negative, towards the performance of a preventive behavior and perceptions of social support for that behavior. Attitudes, in turn, are based on the perception of consequences, i.e., people's opinion that various activities lead to certain outcomes and their appraisal of those outcomes. The subjective norm is described as a person's impression of the social pressures exerted on him or her to perform or refrain from performing a given behavior, taking into account the social evaluations of the subject's behavior and the general motive he or she has for conforming to social norms.

Regarding academic self-efficacy for Meadows (2017), self-efficacy has been researched over time based on the fundamental concept that people with high self-efficacy in certain activities can also acquire high self-efficacy in other areas. Therefore, by enhancing self-efficacy in activities such as studying, a person's confidence in his or her general abilities may increase, which translates into higher self-efficacy in other tasks. He further defines self-efficacy as the degree or strength of a person's opinions about his or her ability to perform a task effectively.

In turn, Bandura (1987) states, in reference to self-efficacy, that coping with the environment is not limited to knowing in advance how to respond correctly in a given scenario or to modify behavior. Efficacy implies a generative capacity in which it is necessary to integrate cognitive, social, and behavioral sub-competencies in order to achieve various objectives. Moreover, self-efficacy is a strong predictor of academic performance and achievement at the educational level. That is, if a student has significant academic self-efficacy, he or she will develop superior cognitive skills, such as self-regulation, that allow him or her to manage his or her time and organize effectively in his or her work. This state has a direct impact on improving academic performance (Honicke & Broadbent, 2016).

On the other hand, Alegre (2014) indicates that self-efficacy is the perception that an individual has of his or her talents and the probability of achieving academic goals, such as exam results, among others. Finally, academic self-efficacy is a psychological resource that protects and mitigates the adverse effects of academic stress on mental health. Thus, the ideas that a university student has about his or her abilities and skills have a favorable or negative impact on him or her, influencing not only academic performance but also his or her well-being (Gaeta et al., 2021a).

The associated models are the following: Bandura's Social Cognitive Theory (1977) created the concept of self-efficacy, which he defines as the set of evaluations that each subject makes of his abilities to plan and execute activities according to the demands of the academic environment. Furthermore, academic self-efficacy is one of the key dimensions of academic behavior.

Thus, according to Bandura (1977), self-efficacy originates from four primary sources of information: Performance achievement is the main reservoir of self-efficacy information because it is based on actual mastery experiences; in other words, repeated success in certain activities increases positive self-efficacy ratings; however, repeated failures decrease positive self-efficacy ratings, especially when the person has tried too hard or due to some external factors. Vicarious experience: In addition to his or her own experiences, a person's assessment of his or her abilities is also influenced by indirect or vicarious experiences. This can occur by observing or imagining similar people performing certain activities successfully so that the subject comes to believe that he or she has sufficient abilities to perform with equal success and master similar activities. Verbal persuasion is applied with the goal of stimulating the individual to believe that he or she has sufficient ability to achieve what is desired; social persuasion is inadequate to increase self-efficacy on its own but can contribute to adequate performance as long as the increase in self-efficacy is within realistic limits. Suppose individuals have the essential ability to perform a task. In that case, verbal persuasion is more likely to sustain high effort in the face of potential obstacles and problems than if subjects have doubts about their abilities. Finally, physiological status generally occurs when a judgment about a person's abilities is based in part on information about his or her physical state. Since a high level of arousal weakens performance, if the person does not feel overwhelmed by the level of somatic arousal, he or she will feel optimistic about the success he or she will achieve, unlike a person who feels tense and distressed at the physical level (Bandura, 1987).

Rotter's (1966) social learning theory states that an individual's external and internal Locus of Control (LOC) is the result of a series of stable and important factors related to his or her capabilities. Thus, with an internal LOC, individuals embrace responsibility and believe that success is achieved with effort and the perfect talents to perform a given task. However, with an external LOC, life is considered to be governed by others who attribute every success or failure to fate (Rotter, 1966).

Tinto's Retention Theory (1975), on the other hand, asserts that students enter college with a number of individual characteristics, such as family and community environment characteristics (e.g., parents' educational level, social status), individual attributes (e.g., ability, race, and gender), abilities (e.g., intellectual and social), economic resources, disposition (e.g., motivations, intellect, and political preferences), and high school educational experience (e.g., history of academic achievement). The model assumes that as a student progresses through higher education, a number of variables contribute to his or her adjustment to his or her chosen institution, given that he or she enters it with a set of characteristics that influence his or her experience in postsecondary education (Tinto, 1975).

Likewise, self-efficacy is divided into three types of expectations, as mentioned by Bandura (1986); situational expectations refer to the fact that consequences are caused by environmental events independently of the action itself; these environmental factors are crucial because the results of behavior depend on various situations or variables that are difficult to control; students believe that these expectations can enhance or diminish the results of their abilities. Academic self-efficacy considers factors associated with the environment in which academic demands are developed, such as the didactics used by teachers, the physical aspects of the institution, the infrastructure (classroom and laboratory equipment), the materials available to be used by the teacher in the teaching-learning process, the climate between teacher and student, the economic resources available to support teaching, the family environment and finally the aspects of collaborative work.

On the other hand, in response to the health containment measures adopted by national and state governments, and with the suspension of all types of face-to-face educational activity, a completely Internet-centered education was implemented; consequently, students were forced to make this abrupt and unplanned transition to continue their academic training. Then, many young people found it difficult to quickly and effectively execute skills such as self-regulation (Gaeta et al., 2021b), good time management, and others related to ICT (Aristovnik et al., 2020); in addition to the absence of favorable contact with their teachers and classmates (Talsma et al., 2021).

METHOD

Research Design

Of non-experimental descriptive correlational design, due to the fact that the development of the study comprises non-intrusive or environmental control procedures, in this sense, the interest is aimed at describing the presence of a variable in one or more subjects to establish the relationships between the constructs that drove the interest of the study (Hernández-Sampieri & Mendoza, 2018).

Likewise, the quantitative approach presents an explanatory scope and is aimed at indicating the causes of social phenomena and revealing why they occur and in what contexts the phenomena are manifested or the causes by which the variables are related to each other (Hernández-Sampieri & Mendoza, 2018).

Sample

The sample consisted of 187 students belonging to the first cycle of the School of Psychology at the Universidad Autónoma del Perú. In this regard, Hernández-Sampieri and Mendoza (2018) suggest that having a population of fewer than 500 individuals, a collection over the entire universe is feasible because of its implication in the generalization of results.

Instruments

Questionnaire of attitudes towards the COVID19-CAPC 19 pandemic (Vicuña et al., 2021).

Aims to assess attitudes towards the Covid-19 pandemic in adolescents and adults aged 16 years and older. It consists of 54 items divided into three dimensions: Emotive-affective, Volitional-behavioral, and Cognitive-beliefs, with Likert-type responses on a scale from 1 to 6. It presents six categories: Very positive, Positive, Adequate, Inadequate, Negative, and Very negative.

Regarding its psychometric properties, it presents an adequate reliability α=.880, which indicates that it is a reliable instrument. Even as for the dimensions, it presents the following values: Emotive-affective α=.738, Volitional-behavioral α=.638, Cognitive-beliefs α=.788. Taking into account that the second dimension

presents a reliability value lower than the minimum expected, however, it does not alter the total reliability of said instrument.

Likewise, exploratory factor analysis was carried out using the Kariser-Mayer-Olkin (KMO) test, which resulted in .888, indicating that the use of this analysis is pertinent. Likewise, a significance value was obtained by Bartlett's test (Bartlett = .000), which indicates that there are significant correlations.

Perceived Self-Efficacy Scale specific to academic situations - EAPESA (abbreviated version of García-Fernández et al., 2010).

The purpose of this scale is to measure self-efficacy expectations in the academic context aimed at adolescent and university students. It has 10 items, which are answered with a Likert-type scale from 1 to 4 (0=Never, 1=Sometimes, 2=Almost always, and 3=Always). With three categories: Good=33 to 40, Fair=18 to 32, and Poor=10 to 17.

Regarding its psychometric properties, it presents an adequate reliability value by means of Cronbach's Alpha (α = .88). Within the item-by-item analysis, the values range from .85 to .87, which indicates an adequate level of reliability.

Likewise, a binary logistic regression was performed, where odd ratio values greater than 1 were obtained, ranging between 1.05 and 1.18, which indicates that the level of self-efficacy increases between 7% and 18% of the probability of presenting greater self-efficacy, related to motivation, time management, concentration, among others.

Procedure

In order to obtain authorization to carry out the study in the chosen university educational institution, a meeting was requested with the Dean of the Faculty of Human Sciences to socialize the objective of the research.

Subsequently, the data collection process was organized with the support of the school director of the psychology academic program, the coordinator of pedagogical development, and the teachers in charge of the classrooms selected according to the inclusion criteria. The classification of the classrooms that participated in the research was carried out, taking into account the inclusion criteria, then the lists of students in the assigned classrooms were requested. Likewise, the dates for the application of the instruments were planned considering the scheduling of a base course, the General Psychology course. For this purpose, a meeting was called with the teachers in charge of the course, and the corresponding training was carried out for the accompaniment of the evaluation. The teachers of the basic course are also psychologists by profession, so the application process of the three instruments applied by means of the Google form was effective.

It should be noted that, when applying the instruments, the objective of the research was previously explained to them, and they were also notified that in the first view of the form, they would enter the informed consent in order to begin the development of the instruments. The data were collected and processed confidentially and could not be used for any other purpose not contemplated in the present investigation. Finally, a report was prepared for the educational institution of higher education.

Data analysis

The data obtained in the research work were processed using linear regression, which is a multivariate analysis that allows predicting the behavior of one or more variables (dependent or predicted) from another (independent or predictor) (Dagnino, 2014).

RESULTS

Table 1
Kolmogorov-Smirnov normality tests for academic self-efficacy.

Academic self-efficacy	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistician	gl	Sig.	Statistician	gl	Sig.
	.051	187	.200*	.989	187	.144

Note: *. This is a lower limit of true significance.

In table 1, the analysis of the normality of the sample in the academic self-efficacy variable is presented, where the coefficient indicates a value of .051 and the significance value p=.200*; therefore, it is inferred that the data behave according to the normal distribution.

Table 2
Attitudinal factor as a predictor of academic self-efficacy in psychology undergraduates.

Model	r	r²	R^2_{ajust}	σx	DW
1	,227	,051	,046	5,51487	2,081

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Desv. Error	Beta			Tolerancia	VIF
1	(Constant)	18,427	3,275		5,627	,000		
	Attitudinal factors	,097	,031	,227	3,163	,002	1,000	1,000

Note: r: Pearson correlation coefficient, r²: coefficient of determination, R^2_{adjust}: coefficient of determination, σx: standard error of estimation, DW: Durbin-Watson.

Table 2 shows a Pearson correlation coefficient (r) of .227 (Sig <.01), showing a significant positive relationship, which indicates that the better the attitudinal factors, the better the academic self-efficacy. From the coefficient of determination (R-squared = .051), it is concluded that attitudinal factors influence 5.1% in the variation of academic self-efficacy. Likewise, according to the regression model, a prediction model of academic self-efficacy was established with Y1= 18.427 + .097 (attitudinal factors).

DISCUSSION

The research was carried out with the purpose of establishing the relationship between attitudinal factors as predictors of academic self-efficacy in Psychology undergraduates. To meet this objective, the necessary instruments were used to measure the variables established as attitudinal factors towards COVID-19 and academic self-efficacy.

In view of the above, this research is important since it shows how attitudinal factors do not significantly predict academic self-efficacy. Therefore, as determined in the regression model, this could be due to the presence of other variables not contemplated in the present study. However, there is a significant positive relationship between attitudinal factors and academic self-efficacy.

Attitudinal factors influence 5.1% of the variation in academic self-efficacy. Similarly, according to the regression model, a prediction model of academic self-efficacy was established with Y1= 18.427 + .97 (attitudinal factors). However, the prediction model is not significant. Based on these results, we have been able to determine that attitudinal factors influence the variance of academic self-efficacy.

In general, we have been able to demonstrate that attitudinal factors can predict academic self-efficacy but not significantly predict a regression model. The results determined in the results encourage us to take into account other variables to be considered in future research.

Given the innumerable news that occurred around our independent variable, attitudinal factors towards COVID-19, being one of the most vulnerable populations the university students, given that their face-to-face teaching was interrupted by the pandemic, which encouraged online learning, in order not to lose academic semester (Gaur et al., 2020), is that we were interested in determining the relationship between attitudinal factors as predictors of academic self-efficacy in Psychology entrants, which we have been able to demonstrate through the present research.

Considering that if there is a significantly positive relationship between attitudinal factors and academic self-efficacy, we can corroborate that if a person has a stronger conviction that performing an activity will bring him/her favorable results, his/her attitude will not only be positive, but proportionally more positive the stronger his/her belief is (Ajzen & Fishbein,1980). Thus, the ART expectancy-value model explains the link between a set of beliefs and an attitude. Specifically, it describes how different beliefs and their related attribute evaluations merge and are included in the evaluation of the object (Ajzen & Fishbein,1980).

According to Ajzen and Fishbein (1980), attitude is determined according to the intention to perform, which is a function of two factors: attitude and subjective norm, which we were able to corroborate in the present study.

In addition, self-efficacy is a strong predictor of academic performance and educational achievement. That is, if a student has strong academic self-efficacy, he or she develops higher cognitive skills, such as self-regulation, that enable him or her to manage his or her time and organize effectively in his or her work, a state that has a direct impact on improving academic performance (Honicke & Broadbent, 2016); which can be inferred in the present research.

In response to the health containment measures adopted by national and state governments, and with the suspension of all types of face-to-face educational activity, an education completely centered on a virtual environment was implemented; consequently, students were forced to make this abrupt and unplanned transition to continue their academic training. Due to this, many young people found it difficult to quickly and effectively execute skills such as self-regulation (Gaeta et al., 2021b), good time management, and other ICT-related abilities (Aristovnik et al., 2020); in addition to the absence of favorable contact with their teachers and classmates (Talsma et al., 2021); which was a reason for conducting the present study.

Based on everything described above and taking into account that the purpose of the research was to predict a regression model, we must conclude that although there is a significant relationship between the independent variable and the dependent variable, it has not been possible to determine a regression model; which encourages us to continue investigating other variables that may be related and allow us to generate a regression model that drives the creation of scientific knowledge.

Finally, the results obtained in the present study promote the future study and analysis of the variables established for future research, with the purpose of identifying influential elements in the academic population studied.

As for the limitations of the study, the main difficulty was the low number of previous studies on the proposed variables. However, the antecedents found were accompanied by suitable theoretical support.

CONCLUSIONS

Firstly, it is concluded that the attitudinal factors influence 5.1% of the variation of academic self-efficacy. Also, according to the regression model, a model was established to predict academic self-efficacy with Y1= 18.427 + .97 (Attitudinal factors).

In summary, it is determined that the Attitudinal factors do not significantly predict academic self-efficacy, as determined in the regression model, which could be due to the presence of other variables not involved in the present study.

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COMPETING INTERESTS

The author declares under oath that she has no conflict of interest in conducting this research.

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