Self-efficacy and stress coping styles in university students

Lucía Florencia Piergiovanni
Pablo Domingo Depaula

Abstract: The present investigation analyzed the relationship between the levels of Self efficacy that students of the bachelor’s degree on Psychology have and the Coping Styles that they use to face internal or external requests. A sample of 126 students was selected. They were given the General Self Efficacy Scale, the Coping Strategies Questionnaire and a social demographic questionnaire. The results show that those students that have more Self-efficacy use the Coping Strategy focused on solving the problem and Positive reappraisal. On the other hand, students that have lower Self-efficacy levels use the Negative self-blame way of coping with stress.

Key words: self-efficacy, stress coping styles, university students, stress, locus control

Resumen: La presente investigación analizó la relación entre los niveles de Autoeficacia presentes en estudiantes universitarios y los Estilos de Afrontamiento al Estrés utilizados para hacer frente a demandas internas y externas. Se seleccionó una muestra de 126 estudiantes a quienes se les administró la Escala de Autoeficacia General, el Cuestionario de Estilos de Afrontamiento al Estrés y un cuestionario sociodemográfico. Los resultados indican que quienes presentan un mayor nivel de Autoeficacia utilizan los Estilos de Afrontamiento al Estrés Focalizado en la solución del problema y Reevaluación positiva. Por otro lado, quienes presentaron menor nivel de Autoeficacia recurren al estilo de afrontamiento Autofocalización negativa.

Palabras clave: autoeficacia, estilos de afrontamiento al estrés, estudiantes universitarios, estrés, locus de control

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Correspondence: Lucía Florencia Piergiovanni, Anchorena 1.068, Temperley (CP. 1834), Lomas de Zamora, Buenos Aires, Argentina- e-mail: luciapiergiovanni@live.com.ar Pablo Domingo Depaula, Díaz Vélez 1.058, Depto. 1, Lomas de Zamora (CP. 1832), Buenos Aires, Argentina.- e-mail: lic_pablodepaula@yahoo.com.ar
Introduction

Throughout life, human beings go through different stages and with them the scenes in which they take place get modified, i.e., the house, the neighborhood, the school, the university.

At the beginning of a university career, students present differences regarding their abilities to appropriate new knowledge, how they expect to perform their skills and adapt “effectively” to the context of learning (Schunk, 1989).

Bandura (1986) proposes the Social Cognitive Theory with the idea that people exert internal control over their thoughts, feelings, motivations and behaviors, providing references on which they will lay the foundations to perceive, regulate and evaluate their behaviors.

Self-efficacy refers to the perception that the person has about their own ability to achieve the proposed activity, in this process the students interpret the results of their activities and academic tasks (Bandura, 1986).

Self-efficacy beliefs influence the “courses of action that people decide to follow” (Bandura, 1997, p. 3), about perseverance, successive situational failures and resilience, and the way of coping with stress that a person has can be limited by them (Bandura, 1997; Farchi, Cohen, & Mosek, 2014). The perception of stressors throughout a university career is linked to unpleasant emotional states that will force the person to make a cognitive assessment of the disturbing situation of their own personal well-being (Lazarus & Folkman, 1986).

According to Pajares (2002), Self-efficacy will act as a mediating variable in the educational field based on the physiological states that individuals experience that people feel when they perform certain actions in a context of stress. The tolerance of stimuli or stressful demands of the academic environment will depend on the deployment of a series of cognitive and behavioral efforts called Stress Coping Styles (Lazarus & Folkman, 1986; Matheny, Aycock, Pugh, Curlette, & Silva-Canella, 1986).

Cognitive and behavioral processes that involve coping are related to each other and depend both on people’s assessment of the situation and on the use of behavioral strategies used to relieve the intensity of the stressor (Mok & Tam, 2001; Richardson & Poole, 2001). Once the subject perceives a stimulus as threatening, coping appears, taking the place of mediator between those specific stressful events and their emotional consequences.

Two major categories of coping ways are modes are thus distinguished: based on the resolution of the objective problem, e.g., the development of cognitive and behavioral strategies, planning solution alternatives, searching for information, formulating a plan of action, etc.; directed to the people’s own emotion related to avoid or distance from the problem, the self-reproach or the re-exaltation of the positive aspects, in order to modify the way in which the person lives the stressful situation even in those cases in which those who can not do anything to modify it (Lazarus & Folkman, 1984, 1986).

Sandin (2003) develops the idea that certain situations or vital conditions in a person would be fundamental factors when assessing both the origin and the consequences of stressful situations associated with the social structure (i.e., exclusion, unsatisfactory participation or non-participation of the social system), being able to generate bad habits or inadequate lifestyles.

Under this conceptual framework, Sandin and Chorot (2003) refer to the Coping as a “feature” or personal dispositions deployed through Stress Coping Styles to which people will tend to resort to interaction between their perception of a situation and the situation in itself. Such styles are the following: (1) Problem-solving coping, (2) Negative auto-focused coping, (3) Positive reappraisal, (4) Overt emotional expression, (5) Avoidance coping, (6) Social support seeking, and (7) Religious coping (See Figure 1).

Recent studies shows that variables such as e.g. real Self-efficacy vs. the academic experience based on the study strategy, vary depending on the way of course taken (i.e., psychology, engineering and pedagogy; Borzone Valdebenito, 2017); i.e., that the Self-efficacy of university students would depend on academic, institutional and social factors, mostly situational, of the content of each career (e.g., Quintero Montelongo, Pérez Córdoba, & Correa Gutiérrez, 2009) and on subjective vocational expectations.
1. Problem-solving coping: To the causes, the subject plans and executes solutions to face the situation.

2. Negative auto-focused coping: Self-blame, feelings of helplessness and incapacity, resignation, dependence, loss of control and pessimism.

3. Positive reappraisal: Recognizes the stressful event, but focuses on the positive aspects of the situation.

4. Overt emotional expression: Unload the bad mood with others, insults, is hostile, irritable and venting with others.

5. Avoidance coping: Focuses on other things, prefer not to think about the problem.

6. Social support seeking: Identify people and support networks that can contribute to the proper management of the stressful situation.

7. Religious coping: Go to religious beliefs to face the situation, because you feel that you have lost control.

In regard to such observations, it is known that the educational climate (i.e., the system of institutional values and the attitudes of teachers towards students, in the form of external demands) influences the sense of optimistic acceptance of life, well-being physiological and psychological, and on the academic events of the students (Ruus, 2007), prioritizing these demands over internal demands (the latter, more related to the deployment of Stress Coping Styles).

However, it is worth mentioning a previous study conducted in the argentine context in a sample of 292 adult subjects from the general population residing in the Autonomous City of Buenos Aires and its surroundings (Brenlla, Vázquez, & Aranguren, 2008), which has reported high correlations between Self-efficacy measured through the General Self-Efficacy Scale (GSE, Jerusalem & Schwarzer, 1992; argentine version adapted by Brenlla et al., 2010) and some of the Coping Styles measured through the Brief Scale Coping (Brief COPE; Carver, 1997; argentine version adapted by Brenlla & Infante Geronimi, 2008), i.e., Planning ($r = .417; p < .001$), Active Coping ($r = .357; p < .001$) and, somewhat inferior, with Positivism ($r = .215; p < .001$), showing these results a “conceptual convergence of self-efficacy constructs and coping styles focused on the task” (Brenlla et al., 2010; p. 84), above self-regulation emotional.

Brenlla et al. (2010) showed that a lower perception of Self-efficacy was greater external control beliefs (i.e., External locus of control, Brenlla, Vázquez, & Aranguren, 2008; Rotter, 1966), differentiating Expectations of Self-efficacy and Expectations of Results about a action, the first being the confidence that one has in oneself when carrying out a specific action, while the second focuses on what one action is expected to produce as an effect or consequence once it has been made.

Considering the background presented so far, the research problem of this study has as question whether there are relationships between Self-efficacy and Stress Coping Styles used by argentine university students. It is interesting to know to what extent the way in which students perceive their own abilities linked to academic achievement or failure is related to some type of coping.

In sum: The levels of Self-efficacy of university students, Are they associated with any particular Coping Style? Next, the research methodology selected to answer the research problem raised will be detailed.

**Materials and method**

**Research design**

A cross-sectional, correlational study was carried out in order to identify if there were relationships between certain variables at any given time (Hernández Sampieri, Fernández-Collado, & Baptista Lucio, 2006); i.e., the existence of some degree of association between the following variables was tested: General Self-Efficacy and Stress Coping Styles.

**Participants**

A sample of non-probabilistic and intentional type was selected, composed by 126 students of a degree in Psychology taught at a private Argentine university. With respect to age, the mean was 27.91 years ($SD = 8.68$). The 19.8% ($n = 25$) were men and the 80.2 ($n = 101$) were women who were studying any of the five years in which the respective curriculum is developed.
To carry out the research, the inclusion criterion was to select those students of the Degree in Psychology whose ages ranged between 18 and 60 years.

**Instruments**

In order to evaluate the main variables of the study, a psychometric battery composed of the following instruments was elaborated:

- **Socio-demographic Questionnaire**: Survey aimed at investigating specific data of the students evaluated, i.e., their age, sex, marital status, cohabiting group, number of children, place of residence, employment, year of course in which they were in the bachelor’s framework when responding to the survey, etc.

- **General Self-Efficacy Scale (GSE)** (Jerusalem & Schwarzer, 1992; argentine version adapted by Brenlla, Aranguren, Rossaro, & Vázquez, 2010): The EAG corresponds to a scale that evaluates the beliefs that the examinee has regarding his own Self-efficacy. It consists of 10 response items with a Likert-scale format arranged in 4 points whose gradients are the following: Never, Seldom, Manytimes and Always, to which a score of 1, 2, 3 and 4 points respectively is awarded, indicating, the higher values, a greater perception of Self-efficacy. The reliability of this instrument is adequate (Cronbach’s α = .76).

- **Coping Strategies Questionnaire (CAE)** (Sandín & Chorot, 2003): The CAE is a self-report instrument consisting of 42 items and 7 subscales to evaluate seven basic coping styles: Finally, the reliability coefficients for the 7 subscales varied between .64 and .92 (with an average of .79).

**Procedure**

Having obtained the authorization from the respective university institution, the Socio-demographic, EAG and CAE questionnaires were administered in the form of pencil and paper, assuring the students that the data would be used for exclusively investigative purposes (anonymously, by signing a consent informed; in line with ethical principles in psychological research; American Psychological Association, 1992; Richaud, 2007).

**Data analysis**

The data collected in the test battery were analyzed using the statistical package SPSS (version 22.0), using the Kolmogorov-Smirnov test to analyze the sample distribution and Spearman’s Rho coefficient to analyze correlations between the variables mentioned.

**Results**

Firstly, in order to verify if the samples responded to a normal distribution, the normality test was carried out through the Kolmogorov-Smirnov test, evidencing an asymmetric distribution of the variables to be analyzed (p < .05). With these statistical parameters, analyzes of nonparametric type were carried out.

**Relationships between the levels of Self-efficacy and Stress Coping Styles**

The Spearman’s Rho coefficient was calculated, finding a significant positive association between the level of Self-efficacy of the participants and the Stress Coping Style called Problem-solving coping (ρ = .347; p = .000). This result indicates that the better and more appropriate are the judgments about one’s own subjective abilities, the students will apply a Coping Style that involves the analysis of the causes of the problem and the planning and execution of solutions to face stressful situations.

On the other hand, the results obtained reflect a moderate significant negative association between the students’ Self-Efficacy and the Stress Coping Style called Negative auto-focused coping (ρ = -.412; p = .000), which indicates that in front of the manifestation or elaboration of precarious judgments about the own capacities that a person has, a Coping Style will be applied that implies self-blame ideas, defenselessness feelings, dependence and pessimism in front stressful situations. At the same time, there is a scarce significant positive correlation between Self-efficacy and the Stress Coping Style Positive reappraisal (ρ = .202; p = .023), which suggests that increasing the level of positive judgments about one’s abilities will facilitate the recognition of an event as stressful, focusing the subject, for its resolution, on the positive aspects of the situation.
Table 1. Relationships between Self-efficacy and Stress Coping Styles

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<tr>
<th>Stress Coping Styles</th>
<th>Self-efficacy</th>
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<tr>
<td></td>
<td>Correlation coefficient</td>
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<tr>
<td>Problem-solving coping</td>
<td>.347</td>
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<tr>
<td>Negative auto-focused coping</td>
<td>-.412</td>
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<tr>
<td>Positive reappraisal</td>
<td>.202</td>
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<tr>
<td>Overt emotional expression</td>
<td>-.085</td>
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<tr>
<td>Avoidance coping</td>
<td>-.076</td>
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<tr>
<td>Social support seeking</td>
<td>.052</td>
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<tr>
<td>Religious coping</td>
<td>-.081</td>
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**Discussion and conclusions**

According to what was observed in the present investigation, the increase of Self-efficacy in the students of a degree in Psychology could be associated or lead to the choice of a Coping Style as is the case of the Problem-solving coping. When resorting to this type of style, faced with a certain stressful situation, the person develops cognitive and behavioral strategies by planning alternative solutions to adequately overcome the source of stress; in this case, the positive evaluations that the person makes about their own abilities will be the main cognitive processing that will make them choose to face situations orienting their actions to solve the problems that cause stress. Thus, people whose Self-efficacy beliefs are high, will be able to sustain and apply timely and effectively the Coping Style used to achieve the proposed goal; the emphasis will be placed on the resolution of the problem and due to its high level of Self-efficacy, the person may spend the time that is necessary and use their energies to find the most effective solution.

On the other hand, considering the significant negative association found between Self-efficacy and the Negative auto-focused coping, it is estimated that those students who tend to negatively assess their own abilities to carry out a certain action, when deciding how to cope in a situation that generates stress, they will opt for a resource that will lead them to self-blame for the situation, generating a feeling of helplessness or disability, or the person may resign themselves to the problem. In this case, the function of cognitive mediator presented by the Self-efficacy will be insufficient for the person to achieve a proposed goal, since due to the negative assessment he makes of his own abilities, he will not be able to deploy other strategies to get as little damage as possible of such a stressful situation.

Another of the results obtained is linked to the fact that people who perceive themselves with the greatest capacity to carry out an action when choosing a resource to face stressful situations, choose to recognize the event that generates stress but focusing on the aspects positive of the situation, i.e., through the Coping Style Positive reappraisal. The latter is expected due to considering Self-efficacy as a cognitive mediator between the person and the tasks proposed; in cases like this, the person manages to recognize a positive part within a situation that he considers exceeds his demands or resources, mainly thanks to that belief he has about his abilities, i.e., his Self-efficacy. Unlike what was mentioned in the previous paragraph, high levels of Self-efficacy product of repeated academic achievements, make it possible to reassess stress situations as a challenge to increase personal effectiveness (Bandura, 1999, 2002) by optimally re-evaluating stress situations. It is worth clarifying that although the correlation found between the Self-Efficacy and the Coping Style Positive reappraisal was moderate tending to be low, i.e., reaching a coefficient value \( \rho = .202 \) (\( p = .023 \),
it is acceptable, meanwhile, it is close to the “median” according to Cohen’s classification of effect size (1992; Meyer et al., 2001).

The variable Self-efficacy has been analyzed in previous studies together with the construct called Locus of control, the latter defined as a cognitive variable that refers to the belief that a person has regarding the relationship between their behavior and the consequences of it (Visdómine-Lozano & Luciano, 2006). This concept has two aspects, on one hand the Internal locus of control, which involves the belief that the result of the person’s behavior is directly related to their individual behavior; and the External locus of control, which involves the belief that factors outsider and external to the person would explain or control the actions. The relationship between the aforementioned variable and Self-efficacy refers to the influence of both with respect to the subjective experience of people, alluding that both one and the other in interaction with the environment would determine the initiation and persistence of some of the individual behaviors, by which the ability to regulate individual functioning is attributed to both cognitive factors (Moretti, Medrano, & Basler, 2015).

In relation to the results obtained in the present study, it is timely and coherent to establish a hypothetical relationship between those and the Internal Locus control construct recently defined. The students of the analyzed sample presented significant relationships in terms of their levels of Self-efficacy and the Stress Coping Styles that they use in situations they consider extreme or that exceed their abilities. If one considers the level of Self-efficacy present in a subject as a potential cognitive mediator intervening in the planning of responses to internal or environmental demands, it is legitimate to conclude that in cases in which the subjects use the Stress Coping Styles at Problem-solving coping, Negative auto-focused coping and Positive reappraisal would eventually be carrying out a cognitive processing in which the subject himself is recognized as responsible for his own acts or for “luck” and the consequences thereof, striving for solve the conflictive situation, self-blaming for what happened, or extracting a positive part of unpleasant experiences.

In line with what was inferred in the previous paragraph, this study coincides with the findings of Brenlla et al. (2010), as subjects respond to stress based on some of their individual coping styles, subjectively modifying their internal beliefs, overcoming such cognitive processes targeting situational factors (i.e., external demands), in which other studies already commented on (e.g., Borzone Valdebenito, 2017; Quintero Montelongo et al., 2009; Ruus, 2007). This line of argument based on the results of the present investigation would be consistent with the findings of Brenlla et al. (2010), meanwhile, the authors concluded that as the level of Self-efficacy increases, the beliefs related to the of External locus control decrease, and the behaviors centered on emotion (i.e., the application of Stress Coping Styles of affective prevalence, e.g., Overt emotional expression, Avoidance coping, Social support seeking, and therefore differ to the styles Problem-solving coping, Negative auto-focused coping and Positive reappraisal, purely cognitive).

With regard to the limitations of the study, it is recognized that the correlation coefficients obtained were medium-low or moderate, beyond the high levels of significance reached ($p = .000$); especially, the lowest correlation coefficient was represented by the association found between the Self-efficacy and the Stress Coping Style Positive reevaluation ($\rho = .202$; $p = .023$), but this result is considered acceptable due to classificatory issues of effect size (Cohen, 1992; Meyer et al., 2001) already discussed above. Likewise, there were certain limitations of the psychometric instruments used, recognizing low reliability values in some sub-indexes of the CAE, although globally, this instrument and the EAG yielded values of Cronbach’s $\alpha$ close to .80. For future studies, it could be considered the realization of new factorial analyzes (i.e., exploratory and confirmatory) trying to re-test in different samples the validity and reliability of both tests.

Finally, the university environment can be considered a hostile and threatening environment for people who enter to it or who pass it. Therefore, knowing the levels of Self-efficacy present in students and establishing relationships
between this cognitive aspect and Stress Coping Styles, is of great importance in institutional academic life, since usually new or extremely demanding situations will be sources of stress for the student body, and from whose instrumental coping strategies the subsequent academic success will depend. However, future research should consider resources to promote or improve academic strategies aimed at increasing the levels of Self-efficacy and thus reduce the level of desertion throughout the career. From another perspective, the knowledge about Stress Coping Styles that are used in the university environment can be considered a predictor of future behaviors; the students must be reinforced and encouraged to use the resources they have available to make the university journey a positive experience and achieve the proposed goal.

References