



THE EFFECTS OF SELF EFFICACY ON THE LEVEL OF PERCEIVED STRESS: A CORRELATIONAL STUDY

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Abstract

Stress is nowadays one of the most dangerous enemies, it changes our lives, affects its quality but most of all is the source of many psychosomatic disease.

The objective of this study is to reveal a correlation and a possible psychological link between the level of self-efficacy and the level of perceived stress on a sample of medicine students. The results shown a significant correlation between the two measured parameters ($r=0.8$).

Keywords: *perceived stress, self-efficacy, stress effects*

1. INTRODUCTION

The stress, which Hans Selye has defined since 1984, has become for each of us an increasingly discussed subject, due to his real and significant implications on physical and mental health, on the reverberations he produces in the social sphere, education and the economy. It is known the contribution of stress in the occurrence of cardiovascular diseases (hypertension, ischemic coronary artery disease, myocardial infarction), neurological diseases (stroke), digestive diseases (gastric or duodenal ulcers). In the psycho-emotional sphere, exposure to a intense and prolonged stress decreases attention and memory capacity, with already visible implications in the current educational process. The psychological effects of stress cause serious behavioral disorders (apathy, aggression) and mental disorders - depression, anxiety, suicide (Rizeanu, 2016).

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The stress analysis, not until recently, was aimed at the sample of the adult population, but today the concern of specialists turned to other age groups, extremely exposed to stress - children and adolescents (Bubulac, Ichim, Popescu et. al, 2017).

Stress is defined as the totality of reactions that an organism has to the action of physical (such as trauma and burns), chemical, biological (infections) and psychological causal agents, which lead to various morpho-functional changes in the body, especially in the endocrine system (affecting the hypophysis and the adrenal glands). This in turns creates the “general adaption syndrome”, which is made up of the totality of mechanisms that are capable of rallying the organism’s adaptive resources in the face of an aggression (Rizeanu, Mihăilă, 2015).

Iamandescu (1998, 2002) argues that psychological stress, caused by psychological stressors, can induce somatic changes such as: tachycardia, disturbances of muscle tone, vasomotor disturbances, secretory disturbances caused by the hyperactivity of the sympathetic-adrenergic system. These changes are tightly related to the development of mood and anxiety disorders, such as depression and social anxiety. Acute neuro-endocrine responses to a psychosocial stressor may be elevated in patients with mood and anxiety disorders (Takahashi, Ikeda, Ishikawa et al, 2005).

Elevated cortisol levels may increase resilience to environmental stressors. Some subjects may respond to cortisol “levels of stress” by becoming depressed; however, in this case, the hypersecretion of cortisol must interact with other predisposing factors (Cowen, 2005).

Identifying stress in medical school students is one way of preventing school dropout. Distress was found to be correlated with decreased empathy in medical school students, which further proves that reducing distress would contribute not only to the students’ overall well-being, but to increasing the quality of medical care they will provide. Preventing stress in medical school students and cultivating constructive, health-promoting problem-solving skills will have a direct impact on the students themselves and an indirect impact on medical training.

It is important that medical schools focus on the importance of preventing and combating stress even from freshman years, given the increased incidence of anxiety and depression with an onset before 30 years of age (Mihăilescu, Năstase, Matei, 2001).

Stress appears frequently in the general population, while its effects - depression and anxiety - appear later during one’s lifetime, in predisposed individuals. Young adults with subclinical depression symptoms have higher rates of depression, substance abuse, psychological dysfunction and functional deficiencies as adults (Aalto-Setälä, Marttunen, Tuulio-Henriksson, Poikolainen, Lönnqvist, 2002).

The Bucharest College of Physicians has put together a survey of the levels of professional stress among physicians in Bucharest. According to this study

conducted from April to August 2017 (Poiană, 2017), 55% of physicians suffer from personal stress, 52% from professional stress, 36% from stress caused by patient interaction, and 24% suffer from all three types of stress. The figures reported in this study are higher than those reported in other European countries. The burnout syndrome in France is 42.4%, in Germany - 48.7% and in the US - 45.8%. A study made in 12 European countries shows that 43% of doctors suffer from emotional exhaustion. In Great Britain, studies show that one in every three doctors reports burnout symptoms (Kumar, 2016).

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

The main objective of this study is to reveal a correlation between the level of self-efficacy and the level of perceived stress. This correlation will be the foundation of future studies that will try to find physiological effects and to propose intervention models for coping strategies.

2.2. HYPOTHESES

We presume that there is a significant correlation between the level of the perceived stress and efficacy.

3. METHOD

To investigate this correlation we have performed a series of psychological testing on a significant sample formed of 107 students.

3.1. Participants

The experimental sample was selected from the population of Carol Davila University of Medicine and Pharmacy, it was consisted of 107 students (80 males and 27 females) who accepted to be a part of this study motivated by the results of the study and being worried of the effects of stressing situations for their lives.

3.2. Questionnaire

We have conducted a pilot study before the current study. For the purposes of this study, the researchers interviewed 107 students and asked them to fill in two questionnaires: one to observe the level of the perceived stress - Perceived Stress Scale – PSS (Cohen, Kamarck and Mermelstein, 1983) and another one to measure self-efficacy: Self Efficacy Scale – SES (Schwarzer & Jerusalem, 1995).

3.3. Procedure

We assumed the study hypothesis in the context of the stressful stimuli of the social reality. The data were collected in personal interviews, conducted in groups of students participating at different types of academic activities. The interviewer remained with the participant the entire time they completed the questionnaires in order to answer and clarify any questions regarding the study. The participants were given general information about the purposes of this study. Participants rights were protected, they were assured of anonymity and confidentiality. The consent of completing the questionnaires was requested and given by all the participants mentioned in this study.

4. RESULTS

Details about the socio-demographic characteristics are shown below. We had a sample of 107 subjects, 80 men and 27 women, with the same level of educations. The average age was 21.5 years old (range between 18 and 25).

After the results were collected we performed a Pearson correlation procedure using SPSS software.

The descriptive statistics showing the results for Self-efficacy Scale for our sample are shown below:

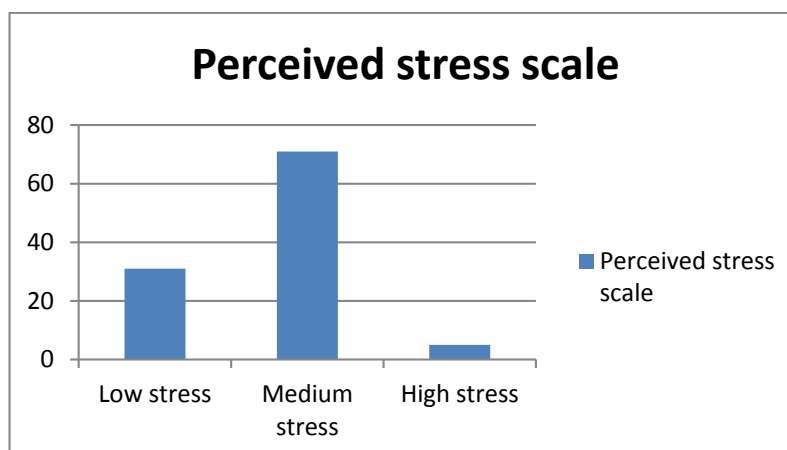
Figure 1. Self-efficacy level



The quotation for this instrument can be described on five levels: 10-26- Very low, 27-29- Low, 30-33 Medium self-efficacy, 34-37 High self-efficacy, 38-40 Very high self-efficacy

For the Perceived Stress Scale(PSS), descriptive results are shown as following (figure 2):

Figure 2. Perceived stress scale



As we can observe the medium stress level has the most important part in our sample, this type of stress could very easy turn into a dangerous way in a high level stress.

The next step in our experiment was to correlate the results using a Pearson correlation procedure which was performed using the SPSS software. The “r” coefficient has shown a correlation between the self-efficacy level and the perceived stress.

Table 1. Correlation between the two measured parameters

Correlations			
		SES	PSS
SES	Pearson Correlation	1	.816**
	Sig. (2-tailed)		.000
	N	107	107
PSS	Pearson Correlation	.816**	1
	Sig. (2-tailed)	.000	
	N	107	107

** . Correlation is significant at the 0.01 level (2-tailed).

Considering the table above we can assume the fact that the hypothesis of this research is confirmed. The “r” coefficient having a value of 0.8 is considered a strong correlation between the two measured parameters. The results shown a significant correlation between the two measured parameters, considering that highly stress determines a low level of self-efficacy ($r= 0.8$).

5. CONCLUSIONS

Considering the results of this study and the work done by other researchers we can assume that a high level of stress could determine a low level of self-efficacy that has dangerous consequences on student life and individual functionality.

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