



STRESS AND DEPRESSION IN THE EXCLUSION OF THE COVID-19 PANDEMIC IN GREEK UNIVERSITY STUDENTS

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Abstract:

With the advent of the new corona virus, all aspects of our daily lives have changed radically, adding great weight to the physical and psychological well-being of all of us, but even more so of students, having to deal with the stress of separation and separation. The aim of the current study was to measure the psychological impact of the new viral disease (COVID-19) on the symptoms of stress and depression in the Greek student population and to determine the possible clinical correlations. 1140 students of the University of Patras participated and 68.0% of the participants reported moderate subclinical anxiety symptoms, which means that the Covid-19 virus initially seemed to affect the stress levels of the students, while 32.3% of the students reported moderate

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depression symptoms. Student stress seems to be due to the gradually increasing distances between people resulting from quarantine.

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1. Introduction

In the city of Wuhan, Hubei province, China, a series of cases of pneumonia occurred. On January 9, 2020, the Chinese health authorities announced that it is a new corona strain (2019-nCoV). Corona viruses are a group of viruses that usually cause respiratory infections of varying severity in humans and animals. It is estimated that about one-third of upper respiratory infections in humans can be caused by corona viruses (National Public Health Organization, 2020). The National Agency for Public Health (EODY) is monitoring developments from the beginning and is in constant contact with both the European Center for Disease Control and Prevention (ECDC) and the World Health Organization (WHO). The Ministry of Health announced that the outbreak of the COVID-19 virus in Greece has suspended all educational institutions in the country on March 11, 2020 for precautionary reasons, in order to reduce the spread of coronavirus in the country. As reported in the media, the measure of universal closure of schools was deemed to have been taken early to have the maximum value (Skai News, 2020).

This sudden closure led to a crisis in education systems in Greece and worldwide and an effort was made to respond immediately to the emergency in which education could not fulfill its function (Karalis, 2020). Especially for higher education, the State responded immediately and provided the opportunity to all universities in the country to move teaching online; amending the legal framework for the exceptional circumstances (Karalis & Raikou, 2020). This immediate reaction and the adjustment described met with the students' acceptance, according to the available data (University of Patras Covid-19 Committee, 2020).

Quarantine has been used for centuries in an effort to prevent the introduction, transmission and spread of communicable diseases (Barbisch, Koenig, & Shih, 2015). Instructions have been announced for students in our country as well. Students should avoid gatherings and congestion anywhere (e.g. cafes, cinemas), avoid group extracurricular activities, not meet at friends' houses, restaurants or shopping malls, and continue their educational activities remotely (e-learning), to avoid contact with people belonging to vulnerable groups, to wash hands frequently and well with soap and water or an alcoholic solution, to avoid close contact (handshakes, hugs and kisses) and in case of symptoms, stay at home and contact a doctor or the National Agency for Public Health (EODY) (Centers for Disease Control and Prevention, 2020). Experts pointed out that the measures should be adapted for vulnerable populations, such as the elderly, immigrants, people with mental health problems (Williams, 2020). They may also not have access to

health care due to quarantine restriction (Yang et al., 2020). In emergencies or times of crisis, mental health services, or more broadly, medical systems, are deficient (Liu et al., 2020).

Students experience stress and depression during their student life, due to the pressure they face, find it difficult to organize and manage their work, set goals and set priorities, face and experience emotional difficulties. Many studies show that they may have more psychopathological issues than other people of the same age (Bayram & Bilgel, 2008; Eisenberg et al., 2007; Sawatzky, 1998). This is because, while adults, their study suspends the process of independence and confronts them with issues of identity, socialization, integration into professional life, renegotiation of relationships and conflict with ideologies and standards, i.e. they go through a period of transition (Bayram & Bilgel, 2008; Konstantopoulou & Raikou, 2020).

At the same time, studies as an educational process can be a particularly stressful event for some students, as it is a challenge to achieve goals - academic and professional - but also to manage issues of separation from the family (Papadioti-Athanasidou & Kaltsouda, 2007). Especially now that they are facing changes in their studies, an unfavorable environment of limited social contacts, incarceration, financial insecurity, psychological effects and the emergence of psychiatric illness are critical as they require immediate detection and management. In China, 24.9% of college students experience anxiety due to this COVID-19 pandemic. Living in urban areas, living with parents, and having a stable family income were protective factors for students from experienced stress during the COVID-19 epidemic. However, having a relative or acquaintance infected with COVID-19 was an independent risk factor for experiencing stress.

Stress related to COVID-19 that included financial stress affect daily life and academic delays were positively correlated with the level of stress symptoms. Students' mental health is significantly affected when dealing with public health emergencies and requires the attention, help and support of society, families and colleges (Cao et al., 2020). Students are shown to have even more stress in the middle of a pandemic, symptoms of discomfort and abandonment of their academic obligations (Grubic et al., 2020). The University of Patras, understanding the difficulties of incarceration and social isolation during the restrictive measures to prevent COVID-19, provides students with remote psychological support and counseling ([University of Patras, 2020](#)). We believe that the recording of student psychology during the COVID-19 pandemic is important in order to outline the psychology of students, which will contribute to the proper and timely preparation of psychological support centers to meet their immediate needs.

3. Objective and Methods

The aim of the study is to record the psychology of students of the University of Patras during the COVID-19 pandemic. An online survey was conducted by the Department of Education and Social Work, the Department of Preschool Education and Training of the University of Patras and the Special Office for Health Services of the University of Patras

from April 13, 2020 to March 2. The survey was approved by the Council of the Department of Education and Social Work and included a set of questions about demographic data, a questionnaire for subclinical stress symptoms SS Q-25 on the COVID19 pandemic, its impact, the Incident Scale Review Detects Symptoms of Post-Traumatic Stress Disorder (PTSD) associated with a specific event, and the BECK Depression Scale (BDI) that measures depressive symptoms.

A. SSQ-25, Subclinical Stress Symptom Questionnaire (Helms, Wetzel, & Weierstall, 2017). This self-report instrument measures psychological and physiological stress symptoms on 25 items answered on a 5-point Likert-type scale ranging from 1 (not at all) to 5 (very strong). Subjects report on this scale if and to what extent they have experienced any of the symptoms within the last four weeks. The psychological stress dimension consists of 15 items concerning inner tension, nervousness, concentration issues, and worries (e.g., "I felt lost or lonely among people"). The physiological stress dimension is assessed with 10 items targeting aches and pains, weight changes, circulatory problems, and insomnia (e.g., "I had palpitation or breathing difficulties").

B. BDI, Beck Depression Inventory (Beck, 1972), created by Aaron T. Beck, is a 21-question multiple-choice self-report inventory, one of the most widely used psychometric tests for measuring the severity of depression. Its development marked a shift among mental health professionals, who had until then, viewed depression from a psychodynamic perspective, instead of it being rooted in the patient's own thoughts. BDI consisted of twenty-one questions about how the subject has been feeling in the last week. Each question had a set of at least four possible responses, ranging in intensity. For example: (0) I do not feel sad, (1) I feel sad, (2) I am sad all the time and I can't snap out of it, (3) I am so sad or unhappy that I can't stand it.

C. IES-R, the Impact of Event Scale – Revised (McCabe, D., 2019) is a short, easily administered self-report questionnaire, has 22 questions, 5 of which were added to the original Horowitz (IES) to better capture the American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for PTSD (Weiss & Marmar, 1997). The tool, not diagnostic for PTSD, is an appropriate instrument to measure the subjective response to a specific traumatic event in the older adult population, especially in the response sets of intrusion (intrusive thoughts, nightmares, intrusive feelings and imagery, dissociative-like re-experiencing), avoidance (numbing of responsiveness, avoidance of feelings, situations, and ideas), and hyperarousal (anger, irritability, hypervigilance, difficulty concentrating, heightened startle), as well as a total subjective stress IES-R score. The IES-R is not meant to be diagnostic. While there is no specific cut-off score, scores higher than 24 are of concern the higher the score the greater the concern for PTSD and associated health and well-being consequences. The IES-R revises the original IES, recognized as one of the earliest self-report tools developed to assess for post-traumatic stress, to add a third cluster of symptoms, hyperarousal, to

intrusion and avoidance subscales. IES-R is the acronym for the test assessment purpose: I – Impact, E – of Event, S – Scale, R – Revised (Asukai et al., 2002).

Data were analyzed with SPSS Edition 22.0. and analyzed the descriptive statistics conducted to illustrate the demographic and other selected characteristics of the respondents, such as symptoms of subclinical stress, symptoms of post-traumatic stress disorder (PTSD) associated with COVID-19, and symptoms of depression.

4. Results

1140 people entered the research site and agreed to answer the questionnaire. 73.2% of the participants were women, 34.2% were 22 years old while the Department of Education and Social Work has the largest percentage of participants (22%). It is followed by the Department of Preschool Education and Education (16.3%), while several students are driven by the Department of Medicine (8.9%). 68.0% of participants reported moderate subclinical stress symptoms, which means that the Covid-19 virus initially appeared to affect students' stress levels. 28.2% and 32.3% of the participants reported mild and moderate symptoms of depression, respectively, while 25.0% reported severe symptoms of depression as indicated by their BDI scores. The highest incidence of moderate depression symptoms is found at the age of 24, while the highest incidence of severe depressive symptoms is at the age of 25 years. 83.1% of the participants showed clinically significant PTSD symptoms associated with COVID-19. At a 5% significance level, gender appears to have a statistically significant effect on depression, as $p = 0.048$ (<0.05) and $r = 0.062$. In contrast, there does not appear to be a statistically significant association between gender and subclinical symptoms of stress and psychotraumatic stress, since $p = 0.190$ (> 0.05), $r = 0.041$ and $p = 0.474$ (> 0.05), $r = 0.022$ respectively. While it is observed that there is no moderate or high correlation between subclinical symptoms, depression and psychotraumatic stress symptoms (Table 1).

Table 1: A correlation matrix showing intercorellations between the total scores of the three variables (subclinical symptoms, depression and psychotraumatic stress symptoms)

		SSQ-25	BDI	IES-R
SSQ-25	Pearson Correlation	1	-,024	,020
	Sig. (2-tailed)		,445	,516
	N	1040	1040	1040
BDI	Pearson Correlation	-,024	1	,006
	Sig. (2-tailed)	,445		,847
	N	1040	1040	1040
IES-R	Pearson Correlation	,020	,006	1
	Sig. (2-tailed)	,516	,847	
	N	1040	1040	1040

5. Discussion

Studies have suggested that public health emergencies can have many psychological effects on university students, which can be expressed as anxiety, fear, and worry, depression, among others (Mei et al., 2011; Konstantopoulou & Raikou, 2020; Kaparounaki et al., 2020). The aim of this study was to assess the psychological state of college students during an epidemic. This study showed that 68.0% of students reported moderate subclinical anxiety symptoms, meaning that the COVID-19 virus initially appeared to affect students' stress levels. 28.2% and 32.3% of students reported mild to moderate symptoms of depression, respectively. Student anxiety may be due to the gradually increasing distances between people resulting from quarantine. It is known whether anxiety disorders are more likely to occur and worsen in the absence of interpersonal communication (Xiao, 2020; Kmietowicz et al., 2020). Very important of the findings is that 83.1% of the students experienced clinically significant PTSD symptoms that appear to be related to COVID-19. Gender does not seem to have a statistically significant effect on depression, while there does not appear to be a statistically significant relationship between gender and subclinical symptoms of anxiety and traumatic stress.

6. Conclusion

Quarantine and social distance, in combination with the continuing threat posed by the pandemic, provoke negative emotions. Especially for the university students, who are going through a period of transition associated with developmental challenges, increased levels of psychological distress are expected.

As mentioned above, we believe that the recording of student psychology during the COVID-19 pandemic is important in order to outline the psychology of students, which will contribute to the proper and timely preparation of psychological support centers to meet their immediate needs.

Overall, it should be noted that in our study even though there were no signs of significant correlation between the three variables, the student population was affected psychologically by the pandemic outburst of COVID-19, since tendencies of subclinical anxiety and depression were reported. Future studies should address the issue of reevaluating these tendencies, soon after the spread of the disease has been taken under control.

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