Predicting Acute Stress with Life Satisfaction and Psychological Resilience Scales during COVID-19 Pandemic in Greece

Georgios Pilafas[1,2], Georgios Lyrakos[2]

[1]Programme Leader 'BSc (Hons) Applied Psychology, University of Derby (UK) at Mediterranean College campus, Athens, Greece
[2]Accredited Lecturer, University of Derby (UK) at Mediterranean College campus, Athens, Greece

Corresponding Author: Georgios Pilafas

ABSTRACT

Background theories in positive psychology and mental health support that 'Psychological Resilience' (PR) and 'Satisfaction with Life' (SwL) are protective factors of psychological distress. On the other hand, 'Acute Stress Disorder' (ASD) is a condition related to the adaptation of sympathetic adaptation after a stressful stimulus in a period of less than a month. Regarding the stressful evident of COVID-19, little evidence is provided on the question of whether PR and SwL can predict ASD. To investigate, the present study received answers to three self-reported scales regarding ASD (Acute-Stress Disorder Scales [ASDS]; M= 38.67, SD= 15.51), PR (Nicholson-McBride Resilience Questionnaire [NMRQ]; M= 41.83, SD= 7.63) and SwL (Satisfaction-with-Life Scale [SWLS]; M= 23.3, SD= 6.31) from a sample of 1,158 Greeks from the general population during the spread of COVID-19 in the country. The results show that ASD is significantly negatively correlated to both PR [r= -.420, p< .001] and SwL [r= -.311, p< .001], while the predictive model (NMRQ and SWLS) predicted significantly ASDS [F(2, 1157) = 1155.06, p< .001, Adjusted R2 = .21]. The results of the study are overall confirmatory to previous studies although relevant literature may be limit as emphasis has been put on PTSD. Future studies may test the same research question in non-COVID conditions to the Greek or other populations.

Keywords: Acute Stress Disorder; Psychological Resilience; Satisfaction with Life; COVID-19; Greece

INTRODUCTION

The present study is part of a larger research protocol that was conducted during the first spread of Corona-Virus-2019 (COVID-19) in Greece. The study presents if self-reported scores of 'Acute Stress Disorder' (ASD) can be predicted by self-reported levels in 'Satisfaction with Life' (SwL) and psychological resilience in a sample of 1,158 participants from the general Greek population.

Considering the background of the study and COVID-19, the World Health Organization (WHO) first classified COVID-19 as an "international public health emergency" on January 30, 2020, while on March 11, 2020, the same organization classified COVID-19 as a "global pandemic." (Strongylaki et al., 2021). On February 26, 2020, the first infected patient was diagnosed in Greece. The Greek government began implementing efforts to stop the spread throughout the

nation on that day (Pilafas, Strongylaki, et al., 2021). The Greek government applied progressively mandatory measures in response to the rapidly rising number of COVID-19 infections across the state and the alarming numbers of deaths in China, Italy, and other Western European nations (Pilafas, Strongylaki, et al., 2021). At the end, from March 23 to May 4, 2020, all regions in Greece were subject to a full-scale lockdown in which school and workplaces closed, as well as all residents could not leave their houses (Strongylaki et al., 2021).

At that juncture our research team hypothesized that the Greek population was exhibiting acute stress. To elaborate, ASD is a mental disorder described in the last series of the Diagnostic and Statistical Manual of Mental Disorder (DSM) as a condition related to the sympathetic adaptation (American Psychiatric Association [APA], 2013; Bryant et al., 2011, 2014; Butler, 2000). It differentiates to Post-Traumatic Stress Disorder (PTSD) since the later disorders occurs after a month has passed from exposure to stressful stimuli and as long as the individual continues to have stress-related symptoms (American Psychiatric Association [APA], 2013; Bryant et al., 2011, 2014; Butler, 2000).

On the other hand, SwL and psychological resilience are opposite phenomena, and as a result it may be easily hypothesized that the higher their level the lower the stress-related conditions can be found. According to theory, self-reported SwL shows the perception of individuals upon their judgment on personal satisfaction with their life from a general point of view at that particular moment (Hoseini-Esfidarjani et al., 2022; Osmanli et al., 2021; Schütz et al., 2013). The literature supports that during the spread of COVID-19 SwL was found to be negatively related to psychological distress (Karataş et al., 2021; Rogowska et al., 2021; Satici et al., 2021; Tamarit et al., 2023; Xiao et al., 2022). As in the case of SwL, psychological resilience may be considered again a protective factor in

psychological health. Psychological resilience is the ability of people to bounce back to normal after a stressful event -or various stimuli from the environment-, as well as to accept the situation as being part of their reality and try to deal with that situation as much as possible from their perspective (Pilafas et al., 2020). As far as evidence from COVID-19 is concerned, psychological resilience was found to be indeed a protective factor against psychological distress (Ye et al., 2020). However, most studies (e.g. Alshehri et al., 2020; Cockerham et al., 2022; Cui & Chi, 2021; Liu et al., 2023; Vinkers et al., 2020; Wang et al., 2022) emphasized on the relationship between psychological resilience and PTSD. A possible explanation may be that there is a one-month time limit for ASD, and after the month passes instead of ASD the condition meets the criteria for PTSD (American Psychiatric Association [APA], 2013; Bryant et al., 2011, 2014; Butler, 2000). Therefore, researchers that started data collection close to the end of this one month after COVID was spread, probably considered that PTSD-related measures are more suitable to their research investigations.

To proceed with the current study, based on the findings from the background review, it was reflected that evidence is needed on the question of whether ASD can be predicted by SwL and psychological resilience for the general Greek population during the first lockdown in the country. Furthermore, it was expected that the outcome of this study would be that both SwL and psychological resilience are negatively correlated with ASD, and that ASD can be predicted by a predictive model that would consist of SwL and psychological resilience in return. Consequently, this study is to provide evidence for the general Greek population upon ASD, and to become one of the limited titles in the field that investigated ASD during the COVID-19 pandemic as most studies investigated PTSD instead.

MATERIALS & METHODS

Participants

The study consists of a convenient sample, and the recruitment was achieved through the snowball strategy. 1,158 participants eventually participated to this research. All of them were Greek adults with no severe mental and/or neurological conditions. The average age of the sample was found at 40.51 (SD= 12.83) with a range between 18 and 78. More details on the sample are provided in Table 1.

Table 1. Demographic details of the participants of the study.					
Main Variable	**Variable's Subcategories**	**Total (%)** $N = 1,158^a$	**Males (%)** n = 280, (24.2%)	**Females (%)** n = 876, (75.6%)	**Missing**
Education					-
	School Level, (%)	399, (34.5%)	110, (39.3%)	289, (33%)	
	Undergraduate Degree, (%)	402, (34.7%)	85, (30.35%)	316, (36.1%)	
	Postgraduate Degree, (%)	357, (30.9%)	85, (30.35%)	271, (30.9%)	
Marital Status					-
	Single, (%)	299, (25.8%)	111, (39.6%)	188, (21.5%)	
	In relationship, <5 years, (%)	123, (10.6%)	21, (7.5%)	101, (11.5%)	
	In relationship, >5 years, (%)	74, (6.4%)	17, (6.1%)	56, (6.4%)	
	Married, (%)	508, (43.9%)	101, (36.1%)	407, (46.5%)	
	Separated, (%)	25, (2.2%)	2, (0.7%)	23, (2.6%)	
	Divorced, (%)	113, (9.8%)	27, (9.6%)	86, (9.8%)	
	Widowed, (%)	16, (1.4%)	1, (0.4%)	15, (1.7%)	
Children					-
	None, (%)	527, (45.5%)	157, (56.1%)	368, (42%)	
	1, (%)	201, (17.4%)	44, (15.7%)	157, (17.9%)	
	2, (%)	348, (30.1%)	67, (23.9%)	281, (32.1%)	
	3, (%)	69, (6%)	9, (3.2%)	60, (6.8%)	
	≥ 4, (%)	13, (1.1%)	3, (1.1%)	10, (1.1%)	
Occupation					-
	Unemployed, (%)	84 (7.3%)	13, (4.6%)	71, (8.1%)	
	School & University Student, (%)	163 (14.1%)	48, (17.6%)	114, (13%)	
	Self-Employed/Freelancer, (%)	142 (12.3%)	35 (12.5%)	107, (12.2%)	
	Public Servant, (%)	214 (18.5%)	57, (20.4%)	157, (17.9%)	
	Employee at the private sector, (%)	315 (27.2%)	73, (26.1%)	242, (27.6%)	
	Health Professional, (%)	133 (11.5%)	29, (10.4%)	103, (11.8%)	
	Security & Armed Forces, (%)	9 (0.8%)	5, (1.8%)	4, (0.5%)	
	Rentier/Landlord, (%)	13 (1.1%)	1, (0.4%)	12, (1.4%)	
	Retired, (%)	76 (6.6%)	16, (5.7%)	60, (6.8%)	
	Disability Pension, (%)	9 (0.8%)	3, (1.1%)	6, (0.7%)	
Income^b					1^c
	$\leq 10,000$ €, (%)	379, (32.8%)	67, (24%)	310, (35.4%)	
	10,001 – 20,000 €, (%)	401, (34.7%)	118, (42.1%)	283, (32.3%)	
	20,001 – 30,000 €, (%)	174, (15%)	44, (15.7%)	130, (14.8%)	
	$\geq 30,001$ €, (%)	203, (17.5%)	50, (17.9%)	153, (17.5%)	-
Residence					-
	Athens, (%)	934, (80.7%)	237, (84.6%)	695, (79.3%)	
	Thessaloniki, (%)	24, (2.1%)	3, (1.1%)	21, (2.4%)	
	Rest Mainland Greece, (%)	118, (10.2%)	27, (9.6%)	91, (10.4%)	
	Greek Islands, (%)	66, (5.7%)	11, (3.9%)	55, (6.3%)	
	Other, non specified, (%)	16, (1.4%)	2, (0.8%)	14, (1.6%)	

Notes:
^{a} *Out of the 1,158 participants 2 of them (0.2%) did not declare their gender*
^{b} *This variable shows the amount of the total annual income in the household after the contribution of all members*
^{c} *The single missing case was located in the men's group*

Design & Statistical Analysis

The design of this study follows the guidelines of a multiple linear regression (Field, 2017; Maydeu-Olivares & Millsap, 2009), as all assumptions are met. The statistical analysis was performed using SPSS software (IBM Corp., 2021).

PROCEDURE

After ethical approval was obtained, the survey was built in Google forms. Prospective participants were recruited from social media. After data were collected, answers were downloaded from Google Forms and transferred to SPSS software.

Answers were coded accordingly, and statistical analysis took place. The results of the analysis were reflected and submitted for publication.

Materials

Acute stress was measured through the Greek version of Acute Stress Disorder Scale (ASDS; Pilafas, Prouzou, et al., 2021). The scale is self-reported and consists of 19 items that measure only one factor: acute stress. Answers to the items are given in a Likert scale from 0= 'not at all' to 4= 'very much'. The questionnaire is considered reliable and valid in the Greek population with a Cronbach's alpha score of .925 (Pilafas, Prouzou, et al., 2021).

Psychological resilience was measured via the Greek version of Nicholson-McBride Resilience Questionnaire (NMRQ; Pilafas et al., 2020). The questionnaire has 12 items related to psychological resilience and measures them in a self-reported fashion through a Likert scale of between 1= 'strongly disagree' and 5= 'strongly agree'. The scale was reported valid and reliable to the Greek population with a Cronbach's alpha score of .800 (Pilafas et al., 2020).

SwL was measured through the Greek version of 'Satisfaction with Life Scale' (SWLS; Lyrakos et al., 2013). The questionnaire contains 5 items which are measured through a self-reported Likert scale, as 1= 'strongly disagree' to 7 'strongly agree'. The Greek version of SWLS has been reported valid and reliable to the Greek population with SWLS having a Cronbach's alpha score of .831 in Lyrakos and colleagues' study (2013).

RESULT

The multiple linear regression analysis took place using SWLS (M= 23.3, SD= 6.31) and NMRQ (M= 41.83, SD= 7.63) as predictors of ASDS (M= 38.67, SD= 15.51). In the regression analysis all 1,158 participants' answers were included.

The results of the Pearson's r correlation analysis shows that the criterion (ASDS) is negatively correlated to NMRQ [r= -.420, p< .001] and again, negatively correlated to SWLS [r= -.311, p< .001]. Between the variables that created the predictive model, NMRQ and SWLS were found positively correlated, as r= .316, p< .001.

Furthermore, the ANOVA analysis shows that the predictive model indeed predicts the criterion, as $F(2, 1157) = 1155.06$, p< .001, Adjusted R^2 = .21. The regression analysis shows that the predictive model predicts 21% of the variance in the levels of ASDS in this study. The later amount of prediction is considered good, since in psychology a desirable ratio starts from 20 to 26% of prediction, while a percentage above 70% indicates that the predictive model is likely to measure the same condition with the criterion (Miles, 2014).

Moreover, the Durbin-Watson statistic autocorrelation is shown at 1.94. A score between 1.5 and 2.5 support that the scores are likely to be normal, while values closely below and up to 2 may suggest that the observed values may be correlated with future values and thus the values of this study are likely to have an impact and provide a meaning to similar future research designs (Chatterjee & Simonoff, 2013).

In addition, regression coefficients analysis shows that none of the variables in the predictive model can be deleted from the overall model as both were found significant (NMRQ, β= -.357, p< .001; SWLS, β= -.198, p< .001).

DISCUSSION

The present study was conducted to show if SwL and psychological resilience can predict ASD in a sample of 1,158 Greeks from the general population during the COVID-19 outbreak in the country. The results of the study illustrate that psychological resilience and SwL were found positively correlated to each other, and both negatively correlated to ASD as expected from the background theories in psychological distress and positive psychology. Furthermore, SwL and psychological resilience predict self-reported measures of ASD in this sample

with a relatively high amount of prediction considering that the study is related to behavioral sciences.

As far as previous studies are concerned, the overall findings of the present are confirmatory to previous related studies. More specifically, in this study ASD was negatively correlated with psychological resilience and predicted by NMRQ. The results are consistent with evidence which derive from other studies. For instance, a large study in China recruited 7,800 college students during the spread of COVID-19 in the country (Ye et al., 2020). The authors reported that the relationship between COVID-19-related stressful experiences and ASD could be mediated by resilience (Ye et al., 2020). Another large study was performed online in the USA. The sample consists of 3,042 participants and the researchers of that study concluded that higher resilience was associated with lower COVID-19 related worries (Barzilay et al., 2020). In this case, although the American study investigated COVID-19 related worries, it is worth mentioning that the term is not clinical, nor standardized in any commonly accepted self-reported measure. In our study the stress-related conditions that was chosen is limited to ASD as a commonly accepted condition on public panic and catastrophes. For example, in a study of 30 burn patients in the Formosa Fun Coast Explosion in Taiwan, it was found that resilience was mainly predicted by perceived stress in a stepwise regression analysis (Chen et al., 2020).

Considering SwL, the results of the current study are likely to be consistent to findings that were provided by other similar designs. To elaborate, a large study in Poland during the spread of COVID-19 in the country recruited 914 university students (Rogowska et al., 2020). One of the outcomes of that study is that there are significant statistical differences between the levels of SwL when perceived stress was the dependent variable (Rogowska et al., 2020). Although perceived stress lays between PTSD and ASD -especially if data are collected close

to the one month from exposure to the stressful event that differentiates ASD from PTSD-, the results may show a clear and strong link between a stress-related condition and SwL. Another European study in Portugal reported that SwL mediated the association between stress and personal burnout, depression and work-related burnout in a sample of 379 nurses during the COVID-19 pandemic in the country (Martins et al., 2022). Although this design and population are not identical to the ones of the present study, it is worth mentioning that SwL again was likely to work as a protective factor against stress-related condition in COVID-19. Apart from Europe, a Brazilian study of 1,224 undergraduate students at the Western Parana State University found that SwL was negatively related to stress-related conditions, and as a result it was suggested the delivery of interventions in favor of increasing SwL with a view to decrease stress-related condition in a future pandemic (Lopes & Nihei, 2021). Moreover, a Filipino study found that increases in COVID-related stress levels decrease SwL and psychological well-being in a sample of 301 student nurses (Labrague, 2021).

Regarding the limitations to the present study, data collection was performed through the spread of COVID-19 in Greece. Therefore, any outcomes are likely to reflect only the case of the pandemic for the Greek general population. As a result, future studies may test the same research question under everyday-life conditions.

CONCLUSION

In conclusion, the present study investigated whether psychological resilience and SwL can predict ASD in a sample of 1,158 Greeks from the general population during the domestic lockdown which was enforced by the local government in an effort of eliminating the spread of the deadly virus in the country. The results of this study show that SwL and psychological resilience are positively correlated to each other, and that ASD is negatively correlated to both SwL

and psychological resilience respectively. Further, SwL and psychological resilience as a predictive model predict significantly ASD. The prediction ratio was reflected as satisfactory. The study finds itself limited to COVID-19 conditions and thus further research is needed in everyday life conditions in the Greek population. Lastly, it is highlighted that the study may be one the few titles that provides quantitative evidence on ASD for the general population during the first COVID-19 spread in Greece.

REFERENCES

1. Alshehri, F. S., Alatawi, Y., Alghamdi, B. S., Alhifany, A. A., & Alharbi, A. (2020). Prevalence of post-traumatic stress disorder during the COVID-19 pandemic in Saudi Arabia. *Saudi Pharmaceutical Journal*, *28*(12), 1666–1673. https://doi.org/10.1016/j.jsps.2020.10.013

2. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890 425596

3. Barzilay, R., Moore, T. M., Greenberg, D. M., DiDomenico, G. E., Brown, L. A., White, L. K., Gur, R. C., & Gur, R. E. (2020). Resilience, COVID-19-related stress, anxiety and depression during the pandemic in a large population enriched for healthcare providers. *Translational Psychiatry*, *10*(1), 1–8. https://doi.org/10.1038/s41398-020-00982-4

4. Bryant, R. A., Creamer, M., O'Donnell, M., Silove, D., McFarlane, A. C., & Forbes, D. (2014). A Comparison of the Capacity of DSM-IV and DSM-5 Acute Stress Disorder Definitions to Predict Posttraumatic Stress Disorder and Related Disorders. *The Journal of Clinical Psychiatry*, *76*(4), 3467. https://doi.org/10.4088/JCP.13m08731

5. Bryant, R. A., Friedman, M. J., Spiegel, D., Ursano, R., & Strain, J. (2011). A Review of Acute Stress Disorder in DSM-5. *Focus*, *9*(3), 335–350. https://doi.org/10.1176/foc.9.3.foc335

6. Butler, L. D. (2000). New DSM-IV Diagnosis of Acute Stress Disorder. *American Journal of Psychiatry*, *157*(11), 1884–c. https://doi.org/10.1176/appi.ajp.157.11.1884 -c

7. Chatterjee, S., & Simonoff, J. S. (2013). *Handbook of Regression Analysis*. John Wiley & Sons.

8. Chen, Y.-L., Lu, M.-H., Weng, L.-T., Lin, C., Huang, P.-W., Wang, C.-H., & Pan, H.-H. (2020). A Correlational Study of Acute Stress and Resilience Among Hospitalized Burn Victims Following the Taiwan Formosa Fun Coast Explosion. *Clinical Nursing Research*, *29*(8), 523–529. https://doi.org/10.1177/1054773818793599

9. Cockerham, M., Beier, M. E., Branson, S., & Boss, L. (2022). Nurse Adaptability and Post-traumatic Stress Disorder Symptoms During the COVID-19 Pandemic: The Effects of Family and Perceived Organizational Support. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.749763

10. Cui, X., & Chi, X. (2021). The Relationship Between Social Support and Internet Addiction Among Chinese Adolescents During the COVID-19 Pandemic: A Multiple Mediation Model of Resilience and Post-Traumatic Stress Disorder Symptoms. *Psychology Research and Behavior Management*, *14*, 1665–1674. https://doi.org/10.2147/PRBM.S305510

11. Field, A. (2017). *Discovering Statistics Using IBM SPSS Statistics*. SAGE.

12. Hoseini-Esfidarjani, S.-S., Tanha, K., & Negarandeh, R. (2022). Satisfaction with life, depression, anxiety, and stress among adolescent girls in Tehran: A cross sectional study. *BMC Psychiatry*, *22*(1), 109. https://doi.org/10.1186/s12888-022-03757-x

13. IBM Corp. (2021). IBM SPSS Statistics for Windows (Version 28.0) [Computer software]. IBM Corp.

14. Karataş, Z., Uzun, K., & Tagay, Ö. (2021). Relationships Between the Life Satisfaction, Meaning in Life, Hope and COVID-19 Fear

for Turkish Adults During the COVID-19 Outbreak. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.633384

15. Labrague, L. J. (2021). Resilience as a mediator in the relationship between stress-associated with the Covid-19 pandemic, life satisfaction, and psychological well-being in student nurses: A cross-sectional study. *Nurse Education in Practice*, *56*, 103182. https://doi.org/10.1016/j.nepr.2021.103182

16. Liu, Y., Zou, L., Yan, S., Zhang, P., Zhang, J., Wen, J., Mao, J., Li, L., Wang, Y., & Fu, W. (2023). Burnout and post-traumatic stress disorder symptoms among medical staff two years after the COVID-19 pandemic in Wuhan, China: Social support and resilience as mediators. *Journal of Affective Disorders*, *321*, 126–133. https://doi.org/10.1016/j.jad.2022.10.027

17. Lopes, A. R., & Nihei, O. K. (2021). Depression, anxiety and stress symptoms in Brazilian university students during the COVID-19 pandemic: Predictors and association with life satisfaction, psychological well-being and coping strategies. *PLOS ONE*, *16*(10), e0258493. https://doi.org/10.1371/journal.pone.0258493

18. Lyrakos, G. N., Xatziagelaki, E., Papazafiropoulou, A. K., Batistaki, C., Damigos, D., Mathianakis, G., Bousboulas, S., & Spinaris, V. (2013). 1439 – Translation And Validation Study Of The Satisfaction With Life Scale (swls) In Greek General Population, Diabetes Mellitus And Patients With Emotional Disorders. *European Psychiatry*, *28*(S1), 28. https://doi.org/10.1016/S0924-9338(13)76471-X

19. Martins, V., Serrão, C., Teixeira, A., Castro, L., & Duarte, I. (2022). The mediating role of life satisfaction in the relationship between depression, anxiety, stress and burnout among Portuguese nurses during COVID-19 pandemic. *BMC Nursing*, *21*(1), 188. https://doi.org/10.1186/s12912-022-00958-3

20. Maydeu-Olivares, A., & Millsap, R. E. (2009). *The SAGE Handbook of Quantitative Methods in Psychology*. 1–800.

21. Miles, J. (2014). R Squared, Adjusted R Squared. In *Wiley StatsRef: Statistics Reference Online*. John Wiley & Sons, Ltd.

22. Osmanli, N., Babayev, A., Rustamov, I., & Munir, K. M. (2021). Psychometric Evaluation of the Satisfaction With Life Scale (SWLS) in Azerbaijan. *Journal of Education and Training Studies*, *9*(3), 28. https://doi.org/10.11114/jets.v9i3.5103

23. Pilafas, G., Prouzou, A., & Strongylaki, N. P. (2021). Predictors of Psychosomatic Health during the first COVID-19 Outbreak in Greece. A Multiple Linear Regression Analysis in an Epidemiological Sample of 1,156 Individuals. *International Journal of Health Sciences and Research*, *11*(6), 274–289. https://doi.org/10.52403/ijhsr.20210641

24. Pilafas, G., Strongylaki, N. P., Menti, D., & Lyrakos, G. (2021). Introducing the Greek adaptation of acute stress disorder scale' (ASDS). High reliabil-ity and validity in an epidemiological sample. *Health & Research Journal*, *7*(2), Article 2. https://doi.org/10.12681/healthresj.26789

25. Pilafas, G., Strongylaki, N. P., Papaioannou, D., Menti, D., & Lyrakos, G. (2020). Adaptation of 'Nicholson McBride Resilience Questionnaire' (NMRQ) in Greek. A reliability and validity study in an epidemiological Greek sample. *Health & Research Journal*, *6*(4), Article 4. https://doi.org/10.12681/healthresj.25629

26. Rogowska, A. M., Kuśnierz, C., & Bokszczanin, A. (2020). Examining Anxiety, Life Satisfaction, General Health, Stress and Coping Styles During COVID-19 Pandemic in Polish Sample of University Students. *Psychology Research and Behavior Management*, *13*, 797–811. https://doi.org/10.2147/PRBM.S266511

27. Rogowska, A. M., Ochnik, D., Kuśnierz, C., Jakubiak, M., Schütz, A., Held, M. J., Arzenšek, A., Benatov, J., Berger, R., Korchagina, E. V., Pavlova, I., Blažková, I., Konečná, Z., Aslan, I., Çınar, O., & Cuero-Acosta, Y. A. (2021). Satisfaction with life among university students from nine countries: Cross-national study during the first wave of COVID-19 pandemic. *BMC Public Health*, *21*(1), 2262. https://doi.org/10.1186/s12889-021-12288-1

28. Satici, B., Gocet-Tekin, E., Deniz, M. E., & Satici, S. A. (2021). Adaptation of the Fear of COVID-19 Scale: Its Association with Psychological Distress and Life Satisfaction in Turkey. *International Journal of Mental Health and Addiction*, *19*(6), 1980–1988. https://doi.org/10.1007/s11469-020-00294-0

29. Schütz, E., Sailer, U., Nima, A. A., Rosenberg, P., Arntén, A.-C. A., Archer, T., & Garcia, D. (2013). The affective profiles in the USA: Happiness, depression, life satisfaction, and happiness-increasing strategies. *PeerJ*, *1*, e156. https://doi.org/10.7717/peerj.156
30. Strongylaki, N. P., Pilafas, G., Dermati, A., Menti, D., & Lyrakos, G. (2021). Effect of coping strategies on acute stress during the COVID–19 pandemic in Greece. *Health & Research Journal*, *7*(3), Article 3. https://doi.org/10.12681/healthresj.27473
31. Tamarit, A., De la Barrera, U., Schoeps, K., Castro-Calvo, J., & Montoya-Castilla, I. (2023). Analyzing the role of resilience and life satisfaction as mediators of the impact of COVID-19 worries on mental health. *Journal of Community Psychology*, *51*(1), 234–250. https://doi.org/10.1002/jcop.22900
32. Vinkers, C. H., van Amelsvoort, T., Bisson, J. I., Branchi, I., Cryan, J. F., Domschke, K., Howes, O. D., Manchia, M., Pinto, L., de Quervain, D., Schmidt, M. V., & van der Wee, N. J. A. (2020). Stress resilience during the coronavirus pandemic. *European Neuropsychopharmacology*, *35*, 12–16. https://doi.org/10.1016/j.euroneuro.2020.05.003
33. Wang, B., Yang, X., Fu, L., Hu, Y., Luo, D., Xiao, X., Ju, N., Zheng, W., Xu, H., Fang, Y., Chan, P. S. F., Xu, Z., Chen, P., He, J., Zhu, H., Tang, H., Huang, D., Hong, Z., Ma, X., … Zou, H. (2022). Post-traumatic Stress Disorder Symptoms in COVID-19 Survivors 6 Months After Hospital Discharge: An Application of the Conservation of Resource Theory. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.773106
34. Xiao, P., Chen, L., Dong, X., Zhao, Z., Yu, J., Wang, D., & Li, W. (2022). Anxiety, Depression, and Satisfaction With Life Among College Students in China: Nine Months After Initiation of the Outbreak of COVID-19. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.777190
35. Ye, Z., Yang, X., Zeng, C., Wang, Y., Shen, Z., Li, X., & Lin, D. (2020). Resilience, Social Support, and Coping as Mediators between COVID-19-related Stressful Experiences and Acute Stress Disorder among College Students in China. *Applied Psychology: Health and Well-Being*, *12*(4), 1074–1094. https://doi.org/10.1111/aphw.12211

******