

Coping with COVID-19 stressors: A study with university level students

Mengatasi stresor COVID-19: Studi dengan mahasiswa tingkat universitas

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Abstract: COVID-19 outbreak caused a global crisis in every possible sector. More specifically, the health, economy, and education sectors. Different initiatives have been taken to mitigate the global crisis, such as movement restriction, Movement Control Order (MCO), and social distancing for a long time. Consequently, all educational institutions across the globe had to remain closed for a long time. They limited the scope of face-to-face classes and grossly jeopardised students' social lives. Students had to face several unforeseen challenges worldwide for which they were unprepared. In this study, we mainly investigated the stressors students faced due to COVID-19 and how this has cost their coping strategies. We recruited 228 university students (Undergrad, postgrad, and PhD). Among them, 50% were undergraduate students. We found anxiety regarding family safety, timely completion of the degree and study level as the most common COVID-19-related stressors. Besides these, cognitive restructuring and social support were the two most commonly used coping strategies to handle students' stress during the pandemic. We recommend taking the initiative to accelerate positive coping strategies among students to cope with real-life crises more effectively.

Keywords: COVID 19; coping strategies; stressors; and university students

Abstrak: Wabah COVID-19 menyebabkan krisis global di segala bidang. Lebih khusus lagi, sektor kesehatan, ekonomi, dan pendidikan. Berbagai inisiatif telah diambil untuk memitigasi krisis global, seperti pembatasan pergerakan, Movement Control Order (MCO), dan jarak sosial untuk waktu yang lama. Akibatnya, semua institusi pendidikan di seluruh dunia harus ditutup untuk waktu yang lama. Mereka membatasi ruang lingkup kelas tatap muka dan sangat membahayakan kehidupan sosial siswa. Siswa harus menghadapi beberapa tantangan tidak terduga di seluruh dunia yang tidak mereka siapkan. Dalam studi ini, kami terutama menyelidiki stresor yang dihadapi siswa akibat COVID-19 dan bagaimana hal ini merugikan strategi koping mereka. Subjek penelitian ini 228 mahasiswa (Sarjana, Pascasarjana, dan PhD). Di antara mereka, 50% adalah mahasiswa sarjana. Kami menemukan kecemasan terkait keamanan keluarga, penyelesaian gelar, dan tingkat studi tepat waktu sebagai pemicu stres terkait COVID-19 yang paling umum. Selain itu, restrukturisasi kognitif dan dukungan sosial merupakan dua strategi koping yang paling banyak digunakan untuk mengatasi stres mahasiswa selama pandemi. Kami merekomendasikan mengambil inisiatif untuk mempercepat strategi koping positif di kalangan siswa untuk mengatasi krisis kehidupan nyata secara lebih efektif.

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Kata kunci: COVID 19; strategi penanggulangan; penyebab stres; dan mahasiswa



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Introduction

World health organization declared COVID 19 pandemic in March 2020 (Organization, 2020a, 2020b). It affected 108 million people and cost approximately 2.4 million of life worldwide. The COVID 19 not only places a considerable burden on physical health but also poses a significant challenge to mental health by instigating the manifestation of chronic psychological disorders, like depression, anxiety, panic disorder, and psychosomatic manifestations (Alsaman et al., 2020; Brooks et al., 2020).

Different initiatives have been taken initiatives to minimize the outbreak of COVID 19, such as movement restriction, Movement Control Order (MCO), social distancing for a long time. Consequently, all education institutions across the globe had to remain close for a long time. This limited the scope of face-to-face classes and jeopardized the social lives of students grossly. All over the world, students had to face several unforeseen challenges for which they were not prepared enough. This may cause a number of significant psychological threats and may potentially increase the likelihood of stress. In this study, we mainly investigated what type of stressors students had to face due to COVID 19 and to what extent this has cost their coping strategies.

According to Selye (1973), stress denotes the unique physical state that results from the consequence of physical or psychological demands on an individual. An optimum level of stress is important for performance, but when stress overwhelmed and demand more than the existing coping resources, it affects physical and mental health. From the beginning of COVID 19, social distance and movement control amplified the feelings of uncertainty and fear. Globally a large number of the total population is the student. The unexpected lockdown for the unpredictable amount of time imposed the feeling of uncertainty which may lead to an increase in the level of anxiety among students (Roy et al., 2020).

Most of the school, college and university activity were shut down for a long time and had to continue over online. This new situation was not easy to accept effortlessly. Physical classroom, communication and socialization with peer group, extra curriculum activities, group studies also boost students' motivation which is not really possible online. Researchers from different corner of the world studied student mental health during the lock down period. Baloran, (2020) found that Pilipino high school and college student were not willing to accept the online learning approach. Among the Belgian students, some COVID related stressors such as 'perceived academic stress' and 'institutional dissatisfaction' were found to be correlated with severe depressive symptoms (De Man et al., 2021). An increased amount stress and changes in overall mental health was found among the Saudi Arabian female student after the four weeks of declaring the first lockdown (Aamir & Winkel, 2021). Learning stress, isolation or online approach are not only the reason which may affect students. John, (2020)

found that American students who lived in the dormitory, lost the part-time job, and stay away from home had some other shortcoming related to economic crisis and homelessness also suffered from severe anxiety and mental health issues. Wang et al., (2020) found, this depression stayed in long term basis even after lifting the lock down and social distancing to some extent. So, there can be some interaction between the social changes and restrictions cost extra demand to individual, the stress of unforeseen and unpredictable future, lack of control over it and type of coping strategies people are following to handle this stress effectively (Labrague et al., 2017). These studies focused mainly on high school or college students which may fall in a same cohort. Students having higher education should be more properly investigated to understand the stressor they are facing and how successfully they are coping with those stressors.

To deal with a stressful situation and mitigate its effect on a person, conscious or unconscious effort is required, which is often known as a coping strategy (Chou et al., 2011). Coping strategy involves any behaviour or thought process that a person uses to modify one's response or reaction to a stressful situation. There are many different types of coping strategies, such as adaptive versus maladaptive, engagement versus disengagement, and problem-focused coping versus emotion-focused coping (Abouammoh et al., 2020; Cheng et al., 2012; Heffer & Willoughby, 2017). Broadly all the coping strategies can be classified in two key dimensions: positive and negative (Cheng et al., 2012). For example, problem-focused and emotion-focused are two opposite responses toward stressors. The first one is a relatively positive and practical way of dealing with the problem than the latter.

Mental health concern of university students has been studying recently with concern (Milojevich & Lukowski, 2016). Studies found mental health issues associated with this stage of students (Blanco et al., 2008). Among those stress and adjustment are two prevalent factors which cost extra coping mechanism this stage (Chou et al., 2011; Turner et al., 2015). A healthy coping mechanism is connected to many positive outcomes for students, such as improving academic achievement, developing resilience and self-efficacy (Freire et al., 2020).

In this study, we investigated the type and the intensity of stressors that students faced and got affected during the COVID 19. Besides that, the coping strategies they mostly followed during this pandemic situation to handle the stress. We occupied participants from undergraduate students to PhD students to know if there is a difference in perceived stressors and coping strategies followed by different levels of students.

The research set out to explore the stressors among students due to COVID-19 and the coping strategies employed by them. To achieve the aforementioned aim, the current study is guided by the following research questions: 1) What is the prevalence of stressors among students due to COVID-19? 2) What are the effects of demographic variables (if any) on different stressors due to COVID-19? 3) What do the students employ coping strategies to manage stress related to COVID-19? 4) What are the effects of demographic variables (if any) on different coping strategies employed by the students?

Method

The study followed a cross-sectional survey method. The survey was carried out online via Qualtrics between May and June 2020. The participants comprised an international sample of tertiary level students studying at different study levels (e.g., Bachelors, Masters, and PhD) in different countries across the globe. Participants were mainly from Australia, Bangladesh, China, Malaysia, India, Pakistan, UK and the US.

Table 1
Demographic Profile of Participants

Demographic characteristics	Mean (SD)	Frequency (n)	Percentage (%)
Age	24 (1.96)	228	--
Gender	--		
Female		135	59
Male		93	41
Level of Study	--		
Undergraduate		114	50
Masters		69	30
PhD		45	20
Studentship Status	--		
Local student		136	60
International student		92	40

Material and procedure

The web-based survey was shared online through HDR newsletter and emails designated by their respective universities. It was composed of three sections. In the first section, the participant's demographic information was included. The second section contained the sources of stressors scale, and the third section included Coping Strategy Inventory (CSI).

Stressors due to COVID-19

Anything (e.g., life events/circumstances, activity, and environmental condition) that causes stress can be termed as stressors. In this study, the authors have created an inventory for different life circumstances/events due to COVID 19 that has happened to an individual and caused him/her stress during the past six months. The inventory was composed of 18 life stressors due to COVID 19, ranging from academic, professional, social, psychological and health-related issues. Each life stressor is rated on a 6-point Likert type scale. The anchors of the scale ranged from 1 (not at all stressed) to 6 (very much stressed). The higher the score, the higher the intensity of that stressor in causing stress to an individual. This stressor scale has high reliability with a Cronbach's alpha of (α) .88.

Coping strategies inventory (CSI)

The coping strategies inventory (CSI) is a widely used, psychometrically stable, 72-item scale for measuring cognitive and behavioural responses for coping with a specific stressor (Tobin et al., 1984).

Each item is rated on a 5-point Likert type scale with anchors ranging from 1 (not at all) to 5 (very much), where higher scores indicating more frequent use of that particular strategy. The scale items are divided into eight subscales, i.e., Problem Solving, Cognitive Restructuring, Express Emotion, Social Support, Problem Avoidance, Wishful Thinking, Self Criticism, and Social Withdrawal. The CSI is highly reliable, with a Cronbach's alpha (α) ranging from .79 to .94.

Result

The present study comprises 238 tertiary level students. These students were recruited through an online survey. Table 1 shows the frequency and percentages of the study participants regarding the demographic variables.

Prevalence of different stressors due to COVID-19 reported by the students

To answer the first research question in this study on the prevalence of different stressors due to COVID19 descriptive statistics (Mean and Standard deviation) was conducted on the scores obtained from the stressors inventory due to COVID 19. Figure 1 shows the prevalence of different stressors as reported by the students.

Here family health concern ($M = 4.88$), timely completion of the degree ($M = 4.47$) and uncertain period of isolation ($M = 4.39$) were found to be the most prevalent stressors among respondents. In contrast, compromised immunity ($M = 2.59$), loss of job ($M=3.22$) and health insurance coverage ($M = 3.23$) were the least prevalent stressors. See table 2.

To determine if there exist any effect of demographic variables (i.e., gender, level of study, and studentship status) on the stressors, the researchers conducted 2 (gender) \times 3 (level of study) \times 2 (studentship status) factorial ANOVA on the stressors aroused due to COVID 19.

Main effect: We did not find any significant effect of gender on any stressor. There was significant main effect of study level on Online Assessment system, $F(2,228) = 12.931$, $P = .001$, Changes in research design, $F(2,228) = 3.41$, $P = .035$, Dropping out of study, $F(2,228) = 9.17$, $P = .001$, Difficulty in online class, $F(2,228) = 12.458$, $P = .001$, and No opportunity for group study, $F(2,228) = 7.39$, $P = .001$. There was also significant main effect of studentship status on timely completion of degree, $F(2,228) = 5.54$, $P = .02$, $\eta_p^2 = .03$ and no opportunity for group study $F(2,228) = 4.05$, $P = .04$, $\eta_p^2 = .02$. See table 2.

Interaction effect: Among the interactions, only 2 potential two-way interactions were significant. Those are Gender \times student status on delay in lab/fieldwork $F(2,228) = 3.88$, $P = .05$, $\eta_p^2 = .02$ and Gender \times student status on change in research design $F(2,228) = 7.24$, $P = .008$, $\eta_p^2 = .04$. Beside these interactions we did not find any other reliable interaction.

Table 2*Mean proportion of stressors by study level and studentship status*

Study level	Undergraduate	Masters	PhD
Stressors			
Online Assessment system	4.22	3.41	2.85
Changes in research design	3.26	3.43	3.81
Dropping out of study	4.20	3.75	2.42
Difficulty in online class	4.72	3.73	2.92
No opportunity for group study	4.45	3.96	2.81
Studentship status	Local Student	International student	
Stressors			
Timely completion of degree	3.76	3.80	
Work from home	4.22	3.47	
No opportunity for group study	4.11	4.16	

Prevalence of Coping strategies used by the students

When the different coping domains of CSI were compared with each other, by calculating the mean weighted score, Cognitive restructuring emerged to have the highest weighted mean score ($M = 32.38$), which is followed by the social support ($M = 31.53$) and problem-solving (30.55), respectively. On the other hand, self-criticism ($M = 23.21$), wishful thinking ($M = 24.25$) and social withdrawal ($M = 25.38$) were found to have the least weighted mean score.

Coping strategies across different demographic variables

To determine if there exist any effect of demographic variables (i.e., gender, level of study, and studentship status) on the coping strategies, the researchers conducted 2 (gender) \times 3 (level of study) \times 2 (studentship status) factorial ANOVA on the coping strategies.

Main effect: The result shows, we have found only the main effect of study level on social withdrawal coping strategy $F(2,228) = 3.29, P = .039$. Which indicates PhD students use significantly least social withdrawal coping strategy ($M = 24.17, SD = 6.85$) than masters ($M = 27.35, SD = 8.32$) and undergraduate ($M = 28.64, SD = 7.99$) students. There is no main effect of gender and studentship status on coping strategies.

Interaction effect: Researchers did not find any interaction effect among Gender, study level and studentship status.

Figure 1

Prevalence of different stressors due to COVID-19 reported by the students

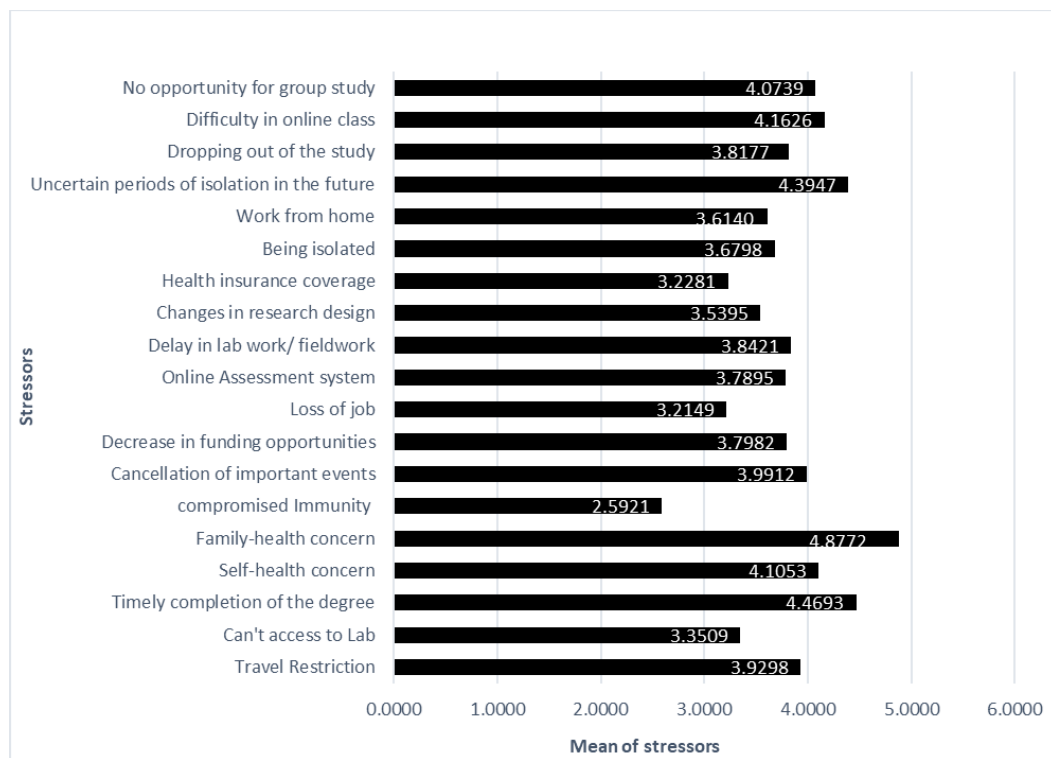
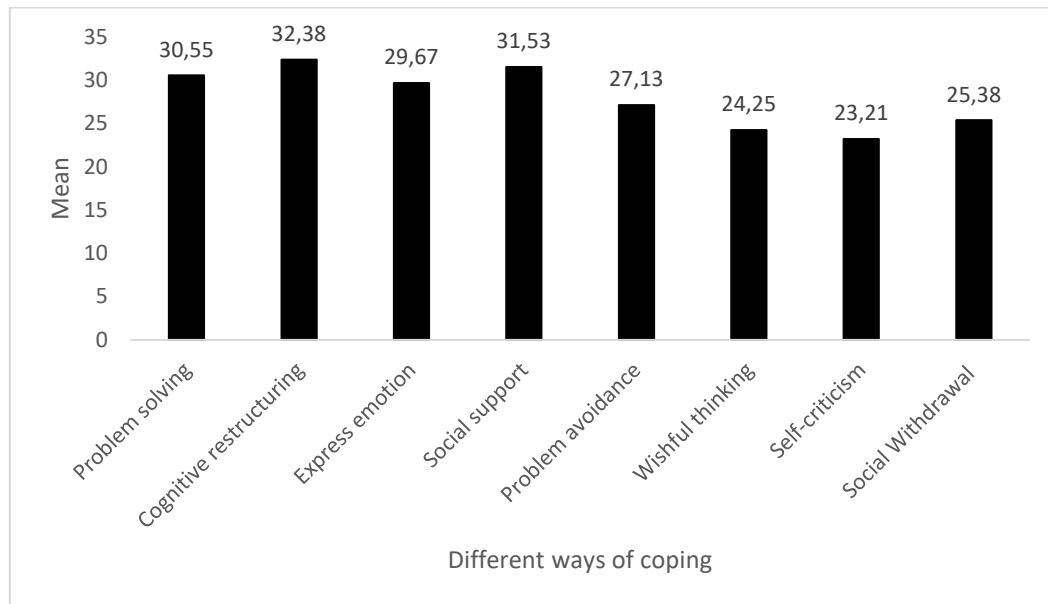


Figure 2

Prevalence of different coping strategies



Discussion

In this study, we intended to find out the stressors due to COVID 19 pandemic and contributing demographic factors of those stressors. In addition, we also focused on coping strategies students used to cope with the stressors. Moreover, we intended to find out the effects of demographic variables on different coping strategies employed by the students. In the following sections, we will discuss our study findings.

Stressors due to COVID 19 Pandemic

From the result, it seems that the respondents are most concerned about their family health during the pandemic. The result may be rooted to the respondents' basic human need to feel belong. Family is the place where usually people have their supportive and secure relationship. This relationship satisfies the need for belongingness. This is why they identified their wellbeing with their family wellbeing and consequently felt more stress regarding their family health due to pandemic (Cusinato et al., 2020). Another concern is related to the academic area i.e., timely completion of degree. Due to the pandemic the academic life of students suffered grossly irrespective of their study level (Al-Zayyat, 2014a, 2014b, 2014c). Particularly to those who required lab access and hands-on experience. In this study, the respondents were tertiary level students for whom timely completion of the degree is also related to further study, job access and become financially independent. In this study, a portion of respondents were international students to whom timely completion is also related to their stipend, living allowance and returning home. This may trigger their level of stress. Additionally, students also reported feeling stressed about the uncertain period of isolation. Here, uncertainty and isolation both affect together (Bam et al., 2015). Uncertainty is related to insecurity, and isolation is related to loneliness both threatens the basic human needs of security and belongingness (Blomberg et al., 2014).

In this study, we found students study level and studentship status significantly contributed to stressors due to COVID 19 pandemic. We found undergrad students are most stressed in terms of online assessment, dropping out of study, no opportunity for group study and difficulty in online class. In undergrad study attending regular classes regularly and maintaining performance optimally are two important factors for progression. Both of these factors are being affected due to the changes in mode of classroom and assessment brought by COVID 19. The shift of physical classroom and traditional assessment into online may affect the students in many areas (Hamaideh et al., 2017; Khater et al., 2014). For instance, study concentration, performance and individual learning style. For many undergrad students group studies not only satisfy their individual learning need but also a source of community feeling. The changes brought by the COVID also limit the scope of group studies. All of the afore mentioned factors may affect a student's study motivation and performance; consequently, they may afraid of being dropped out. Therefore, undergrad students feel more stressed than that of postgrad students. On the other hand, PhD students are mostly stressed due to change in research design. Due to the pandemic many PhD students have to compromise with their study design in terms of rewriting the study proposal study location and recruitment of samples. Such changes in their study design perhaps led the students to feel more stressed than the other two groups.

Coping Strategies used by students

Here we found cognitive restructuring, social support and problem-solving are emerged to be three mostly implied coping strategies. Among them, social support is emotion-focused, whereas the other two are problem-focused. It appears that respondents are more likely to use problem-focused coping strategies. All of them require an individual's engagement in terms of coping with the stress s/he may encounter. On the other hand, self-criticism, wishful thinking and social withdrawal are the least employed coping strategies among the respondents. Here wishful thinking is problem-focused, whereas self-criticism and social withdrawal are emotion-focused. It seems that respondents are more likely to employ problem-focused and least prefer to use emotion-focused coping strategies. The challenges caused by the global pandemic with which the respondents tried to cope are relatively unanimous and required more informed and problem-focused actions than that of emotion-focused responses. This may perhaps influence the respondent's choice of coping strategies in this study (Hanjarvelianti & Kurniasih, 2020)

We did not find any significant contribution of demographic factors to coping strategies except the study levels. Undergrad students were found to be the most vulnerable compared to masters and PhD level students. Cao et al., (2020) also found college-level students are more likely to suffer from severe anxiety. Also, the opposite finding was reported where higher education was found to link with anxiety and depression (Islam et al., 2020). We found undergrad students use social withdrawal to cope with the challenges caused by the global pandemic than that of postgraduate students (Talidong & Toquero, 2020). In this study, we also found that undergraduate students encountered many stressors that affected them not only academically but also socially and emotionally (Alsalman et al., 2020).

Conclusions

We intended to find out the stressors due to COVID-19 pandemic and contributing demographic factors of those stressors. In addition, we also focused on coping strategies students used to cope with the stressors. Moreover, we intended to find out the effects of demographic variables on different coping strategies employed by the students.

References

- Aamir, S., & Winkel, C. (2021). The impact of Covid-19 on Saudi Arabian female students: an application of the CES-D depression scale. *Journal of Educational and Social Research*, 11(1), 23–31. <https://doi.org/10.36941/jesr-2021-0003>
- Abouammoh, N., Irfan, F., & Alfaris, E. (2020). Stress coping strategies among medical students and trainees in Saudi Arabia: A qualitative study. *BMC Medical Education*, 20(1), 124. <https://doi.org/10.1186/s12909-020-02039-y>
- Alsalmán, A., Mubarak, H., Aljabal, M., Abdulnabi, M., Ishaq, A., Yusuf, A., Bragazzi, N., & Jahrami, H. (2020). The psychological impact of covid-19 pandemic on the population of bahrain. *Acta Biomedica*, 91(4), 1–7. <https://doi.org/10.23750/abm.v91i4.10336>
- Baloran, E. T. (2020). Knowledge, Attitudes, Anxiety, and Coping Strategies of Students during COVID-19 Pandemic. *Journal of Loss and Trauma*, 25(8), 635–642. <https://doi.org/10.1080/15325024.2020.1769300>
- Bam, V., Oppong, G., & Ibitoye, M. (2015). Stress and coping mechanisms of nursing students during clinical practice in Ghana. *Journal of Science and Technology (Ghana)*, 34(2), 50. <https://doi.org/10.4314/just.v34i2.6>
- Blanco, C., Okuda, M., Wright, C., Hasin, D. S., Grant, B. F., Liu, S. M., & Olfson, M. (2008). Mental health of college students and their non-college-attending peers: Results from the national epidemiologic study on alcohol and related conditions. *Archives of General Psychiatry*, 65(12), 1429–1437. <https://doi.org/10.1001/archpsyc.65.12.1429>
- Blomberg, K., Bisholt, B., Kullén Engström, A., Ohlsson, U., Sundler Johansson, A., & Gustafsson, M. (2014). Swedish nursing students' experience of stress during clinical practice in relation to clinical setting characteristics and the organisation of the clinical education. *Journal of Clinical Nursing*, 23(15–16), 2264–2271. <https://doi.org/10.1111/jocn.12506>
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287, 112934. <https://doi.org/10.1016/j.psychres.2020.112934>
- Cheng, C., Kogan, A., & Chio, J. H. man. (2012). The effectiveness of a new, coping flexibility intervention as compared with a cognitive-behavioural intervention in managing work stress. *Work and Stress*, 26(3), 272–288. <https://doi.org/10.1080/02678373.2012.710369>
- Chou, P. C., Chao, Y. M. Y., Yang, H. J., Yeh, G. L., & Lee, T. S. H. (2011). Relationships between stress, coping and depressive symptoms among overseas university preparatory Chinese students: A cross-sectional study. *BMC Public Health*, 11(1), 1–7. <https://doi.org/10.1186/1471-2458-11-352>

- Cusinato, M., Iannattone, S., Spoto, A., Poli, M., Moretti, C., Gatta, M., & Miscioscia, M. (n.d.). Stress, Resilience, and Well-Being in Italian Children and Their Parents during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 17(22), 8297.
- De Man, J., Buffel, V., van de Velde, S., Bracke, P., Van Hal, G. F., Wouters, E., Gadeyne, S., Kindermans, H. P. J., Joos, M., Vanmaercke, S., van Studenten, V. V., Nyssen, A. S., Puttaert, N., Vervecken, D., & Van Guyse, M. (2021). Disentangling depression in Belgian higher education students amidst the first COVID-19 lockdown (April-May 2020). *Archives of Public Health*, 79(1), 1–10. <https://doi.org/10.1186/s13690-020-00522-y>
- Freire, C., Ferradás, M. del M., Regueiro, B., Rodríguez, S., Valle, A., & Núñez, J. C. (2020). Coping Strategies and Self-Efficacy in University Students: A Person-Centered Approach. *Frontiers in Psychology*, 11(841). <https://doi.org/10.3389/fpsyg.2020.00841>
- Hamaideh, S. H., Al-Omari, H., & Al-Modallal, H. (2017). Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia. *Journal of Mental Health*, 26(3), 197–203. <https://doi.org/10.3109/09638237.2016.1139067>
- Hanjarvelianti, S., & Kurniasih, D. (2020). Pemanfaatan Minyak Jelantah dan Sosialisasi Pembuatan Sabun Dari Minyak Jelantah Pada Masyarakat Desa Sungai Limau Kecamatan Sungai Kunyit-Mempawah. *Jurnal Buletin Al-Ribaath*, 15(2), 26. <https://doi.org/10.29406/br.v17i1.1878>
- Heffer, T., & Willoughby, T. (2017). A count of coping strategies: A longitudinal study investigating an alternative method to understanding coping and adjustment. *PLoS ONE*, 12(10), 0186057–0186057. <https://doi.org/10.1371/journal.pone.0186057>
- Islam, M. S., Ferdous, M. Z., & Potenza, M. N. (2020). Panic and generalized anxiety during the COVID-19 pandemic among Bangladeshi people: An online pilot survey early in the outbreak. *Journal of Affective Disorders*, 276, 30–37. <https://doi.org/10.1016/j.jad.2020.06.049>
- John, A. (2020). Increased anxiety and depression top college students' concerns in coronavirus survey. In *Los Angeles Times*. Los Angeles Times.
- Khater, W. a, Akhu-zaheya, L. M., & Shaban, I. a. (2014). Sources of Stress and Coping Behaviours in Clinical Practice among Baccalaureate Nursing Students Wejdan A. Khater, RN, PhD Jordan University of Science and Technology Jordan University of Science and Technology. *International Journal of Humanities and Social Science*, 4(6), 194–202. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=a03ee600f177437e65676652f893a4f4910e17ba>
- Labrague, L. J., McEnroe-Petitte, D. M., Gloe, D., Thomas, L., Papathanasiou, I. V., & Tsaras, K. (2017). A literature review on stress and coping strategies in nursing students. *Journal of Mental Health*, 26(5), 471–480. <https://doi.org/10.1080/09638237.2016.1244721>
- Milojevich, H. M., & Lukowski, A. F. (2016). Sleep and mental health in undergraduate students with generally healthy sleep habits. *PLoS ONE*, 11(6), 156372. <https://doi.org/10.1371/journal.pone.0156372>
- Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*, 51. <https://doi.org/10.1016/j.ajp.2020.102083>
- Talidong, K. J. B., & Toquero, C. M. D. (2020). Philippine Teachers' Practices to Deal with Anxiety amid COVID-19. *Journal of Loss and Trauma*, 25(6–7), 573–579. <https://doi.org/10.1080/15325024.2020.1759225>

- Turner, J., Bartlett, D., Andiappan, M., & Cabot, L. (2015). Students' perceived stress and perception of barriers to effective study: Impact on academic performance in examinations. *British Dental Journal*, 219(9), 453–458. <https://doi.org/10.1038/sj.bdj.2015.850>
- Wang, Z. H., Yang, H. L., Yang, Y. Q., Liu, D., Li, Z. H., Zhang, X. R., Zhang, Y. J., Shen, D., Chen, P. L., Song, W. Q., Wang, X. M., Wu, X. B., Yang, X. F., & Mao, C. (2020). Prevalence of anxiety and depression symptom, and the demands for psychological knowledge and interventions in college students during COVID-19 epidemic: A large cross-sectional study. *Journal of Affective Disorders*, 275, 188–193. <https://doi.org/10.1016/j.jad.2020.06.034>

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