

Status of Maritime Students' Mental Health during Pandemic: Basis for the Development of Student Enhancement Program

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ABSTRACT

This study determined the status of the mental health of students at JBLFMU-Arevalo during the second semester of the school year 2021-2022. Moreover, the study aimed to determine the predictors of students' mental health and create a program that can enhance students' mental health. Survey research design was employed in this study. A total of 583 students as respondents were taken through stratified proportional and cluster random sampling. The validated and reliability-tested standardized DASS (depression,

anxiety, and stress) questionnaire was used with a reliability index of 0.93 using Cronbach alpha. This study utilized frequency, percentage, rank, mean, standard deviation, One-way ANOVA, Duncan for Post hoc test, and stepwise multiple regression set at .05 level of significance. The results showed that the entire group has a mild level of depression, anxiety, and stress. One-way ANOVA results showed that there were significant differences in the students' depression, anxiety, and stress. Post hoc results showed that BSMT 3 students had significant differences in their depression over SHS Grades 11 and 12 students. It also showed that BSMT 3 had a significant difference in anxiety compared to BS Criminology, SHS Grade 11, and Grade 12 students. In addition, BSMT 3 had a significant difference in stress compared to BSMT 1 and SHS Grade 11 students. Furthermore, financial instability or less financial security was the leading cause of depression for all the students, while the leading reason for students' anxiety was the occurrence of the COVID-19 pandemic, and the leading reason for students' stress was the virtual or online classes. The top programs that students prefer during this pandemic would be fitness, wellness, and health, biking, skateboarding, rollerblading, other outdoor exercises, and personality enhancement. The researchers conclude that lower years are mostly affected, which might be due to adjustments in academic workloads. On the other hand, predictors are usually internal and the causes of students' depression, anxiety, and stress. The researchers recommend creating mental health programs to address students' depression, anxiety, and stress, such as self-care programs, social engagement activities, exploration activities, and community partnership programs.

INTRODUCTION

The impact of the COVID-19 pandemic is severely changing the lives of all people, as well as the lives of young people. Schools and universities have been locked, exams and events deferred, the usual health information services are imperfect, entertaining with friends and wider family is highly discouraged and, in some places, even punishable. Living in these conditions can be tough for young people for their social, physical, and mental well-being.

The COVID-19 pandemic has had a significant effect on our lives. Many of us face challenges that can be stressful, overwhelming and cause strong

emotions in adults and children. Public health actions, such as social distancing, are necessary to reduce the spread of COVID-19, but they can make us feel isolated and lonely and can increase stress and anxiety. Learning to cope with stress healthily will make you, the people you care about, and those around you become more resilient (Center for Disease Control and Prevention, Coping with Stress, 2019).

According to the American Academy of Pediatrics (2021), the current pressure, fear, grief, and ambiguity created by COVID-19 pandemic has weighed on all of us. Still, many children and teens have had an especially rough time dealing with things emotionally. Nearly two-thirds of parents say their children have lately experienced mental or emotional challenges such as anxiety, depression, and even suicidal thoughts, according to a new national survey on student welfare during the pandemic.

According to the World Health Organization (2021), the new normal of working from home, unemployment, virtual learning of children, and lack of physical interaction with other household members, friends, and social groups take time to get used to. Adjusting to lifestyle changes managing the fear of contracting the virus, and being concerned about people close to us who are particularly weak; are thought-provoking for all of us. This can be particularly tough for people, especially students with mental health conditions.

It is convincing to fix the prevalence of adverse mental health issues in society during this pandemic and alleviate its psychological dangers and costs. Until today, only limited research scrutinizes the psychological impact of the COVID-19 pandemic on the general population in the Philippines.

However, according to Tee et al. (2020), during the early stage of the pandemic in the Philippines, one-fourth of its respondents stated moderate-to-severe anxiety and one-sixth reported moderate-to-severe depression and psychological effects. The factors identified can be used to develop effective psychological care strategies.

Despite some limitations, the study of Islam, Barna, Raihan, Khan, and Hossain (2020) gives the first empirical evidence that a large percentage of Bangladeshi university students have been suffering from depression and anxiety symptoms during the ongoing pandemic. In addition to academic and professional uncertainty, financial insecurity is contributing to the rise of depression and anxiety among university students. In the United States of America, the study by Son, Hegde, Smith, Wang, and Sasangohar (2020)

shows the corresponding 195 students, 138 (71%) indicated increased stress and anxiety due to the COVID-19 outbreak. Multiple stressors were identified that contributed to the increased levels of stress, anxiety, and depressive thoughts among students. These included fear and worry about their own health and of their loved ones (177/195, 91% reported negative impacts of the pandemic), difficulty in concentrating (173/195, 89%), disruptions to sleeping patterns (168/195, 86%), decreased social interactions due to physical distancing (167/195, 86%), and increased concerns on academic performance (159/195, 82%). To cope with stress and anxiety, participants sought support from others and helped themselves by adopting either negative or positive coping mechanisms.

This study was conceptualized to determine the mental health status of JBLFMU-Arevalo students who are engaged, most especially in their studies virtually during this pandemic. Furthermore, this study was conducted to determine which aspects of depression, anxiety, and stressors affect mostly their mental health. If mental health is poor, then an enhancement program will be developed by the university. This will help students cope with the psychological effects of depression, anxiety, and stress they are experiencing.

This study is anchored in the Psychological Theory of Mental Health. According to Miller (2021), this theory highlights psychological aspects (psychodynamic, behavioral, cognitive-behavioral, and existential/humanistic) – mental health grows along an expected path. People try to change their environment to survive within it. Problems arise when a person learns maladaptive approaches as a response to new situations. Moreover, this study aligns with the Philippine Republic Act No. 11036 on Mental Health, where students are covered, and the school puts the main concern by making an enhancement program to help students from too much depression, anxiety, and stress, most especially in this time of COVID-19 pandemic.

OBJECTIVES OF THE STUDY

Generally, this study aimed to determine the status of mental health of students at JBLFMU-Arevalo for the school year 2021-2022. Moreover, the study aims to determine the predictors of students' mental health and create a program that can enhance students' mental health.

Specifically, the study sought to answer the following questions:

1. What are the students' levels of depression when taken as an entire group and when classified according to program?
2. What are the students' levels of anxiety when taken as an entire group and when classified according to program?
3. What are the students' levels of stress when taken as an entire group and when classified according to program?
4. Are there significant differences in the students' depression, anxiety, and stress according to program?
5. What are the predictors of students' depression, anxiety, and stress?
6. What are the situations that could lead to students' depression, anxiety, and stress?
7. What program will be made to enhance students' mental health?

METHODOLOGY

Research Design

This study employed a survey as a research design. A survey design examines a population sample to produce a quantitative or numeric description of trends, attitudes, or opinions. The researcher extrapolates or makes conclusions about the entire population based on sample results (Creswell, 2014). The survey was used because the same set of questions were given to the respondents to yield data on depression, anxiety, and stress.

Respondents

The 583 student respondents were taken through stratified proportional and cluster random sampling. These respondents came from the following programs: Bachelor of Science in Marine Transportation (BSMT), Bachelor of Science in Criminology (BS Criminology), and Senior High School (SHS) during the second semester of the school year 2021-2022. Table 1 shows the distribution of respondents.

Table 1. Distribution of Respondents

Category	N	n
Entire Group	2,590	583
Program		
BSMT 1	658	153
BSMT 2	649	113
BSMT 3	669	140
BS Crim	27	18
Grade 11	304	99
Grade 12	283	60

Instrument

The validated and reliability-tested standardized DASS (depression, anxiety, and stress) questionnaire from Lovibond and Lovibond (1995) measures students' mental health in terms of depression, anxiety, and stress was used. The reliability index of the DASS instrument was 0.93 using Cronbach's alpha. In addition, it has two questions pertaining to situations that lead to depression, anxiety, and stress and programs to enhance students' mental health.

Part 1 of the instrument includes the personal identification such as Name (optional), Name of the Program, and Year/Grade Level; Part 2 is the standardized DASS questionnaire that consists of 21 items – seven items for depression, seven items for anxiety, and seven items for stress; and Part 3 is composed of two questions asking students about their current situation that leads them to depression, anxiety, and stress as well as programs that could enhance students' mental health.

Data Collection

A letter of permission to conduct the study was made and sent to the Administrator, allowing the researchers to gather data. After that, the questionnaire was distributed online through a Google Form. The respondents were not identified by name and kept confidential, and not reflected in the final research report.

Mental health is a delicate subject matter; thus, the researchers have taken steps to ensure that the respondents are treated decently and that the information they provide is collected with the utmost discretion.

Students received all necessary information relating to the purpose of the study and the data collection process. Then, respondents were invited

to participate and fill out a Consent Form. The survey was kept anonymous, and no information was used to identify an individual. The survey contained questions regarding depression, anxiety, and stress. Also, it does not ask the respondents to provide any information regarding specific traumatic events that have caused them distress.

Data Analysis

This study utilized the following statistical tools: frequency, percentage, rank, mean, standard deviation, One-way ANOVA, Duncan for Post hoc test, and stepwise multiple regression set at .05 level of significance. The frequency was used to tally the situations that could lead to students’ depression, anxiety, and stress, as well as the programs that were made to enhance students’ mental health. Percentage was used to aid in calculating the tally, while rank was used to arrange the items from highest to lowest. The mean was used to measure the students’ level of depression, anxiety, and stress, while the standard deviation measured the dispersion of students’ responses to depression, anxiety, and stress. The mean scale and descriptive rating, which are arbitrarily made, are shown in Table 2.

Table 2. Mean Scale and Descriptive Rating for Interpreting the Students’ Levels of Depression, Anxiety, and Stress

Descriptive Rating	Depression	Anxiety	Stress
Normal	0.00-0.60	0.00-0.60	0.00-0.60
Mild	0.61-1.21	0.61-1.21	0.61-1.21
Moderate	1.22-1.82	1.22-1.82	1.22-1.82
Severe	1.83-2.43	1.83-2.43	1.83-2.43
Extremely Severe	2.44-3.0	2.44-3.0	2.44-3.0

Note. Scales and descriptive rating are arbitrarily constructed.

The One-way ANOVA determined if there were significant differences in the students’ depression, anxiety, and stress according to the program set at .05 level of significance, while the Duncan test determined which program was statistically different according to depression, anxiety, and stress. Finally, the stepwise multiple regression was used to predict which factors affect students’ depression, anxiety, and stress, set at a .05 level of significance.

RESULTS AND DISCUSSION

Table 3 shows the result in general that the entire group has a mild level of depression with a mean of 1.21. The SHS Grade 11 (M=1.35), SHS Grade 12 (M=1.33), and BSMT 1 (M=1.01) showed all moderate levels of depression. While BS Criminology (M= 1.20), BSMT 2 (M= 1.16), and BSMT 3 (M= 1.01) showed a mild level of depression only.

Table 3. Students' Levels of Depression when taken as an Entire Group and when Classified According to Program

Program	Mean	Descriptive Rating	SD
Entire Group	1.21	Mild	0.95
Program			
BSMT 1	1.22	Moderate	0.94
BSMT 2	1.16	Mild	0.96
BSMT 3	1.01	Mild	0.90
BS Criminology	1.20	Mild	1.10
Grade 11	1.35	Moderate	0.92
Grade 12	1.33	Moderate	0.97

Note. Scales and descriptive rating are arbitrarily constructed.

Table 4 shows the result in general that the entire group has a mild level of anxiety with a mean of 1.10. The SHS Grade 11 (M = 1.24) showed a moderate level of anxiety. While the SHS Grade 12 (M = 1.12), BS Criminology (M = 1.15), BSMT 1 (M= 1.21), BSMT 2 (M=1.0), and BSMT 3 (M=0.86) showed a mild level of anxiety only.

Table 5 shows the result in general that the entire group has a mild level of stress with a mean of 1.00. The SHS Grade 11 (M = 1.15), SHS Grade 12 (M = 1.04), BS Criminology (M = 1.01), BSMT 1 (M= 1.07), BSMT 2 (M=0.94) and BSMT 3 (M=0.78) showed a mild level of stress only.

Table 4. Students' Levels of Anxiety when taken as an Entire Group and when Classified According to Program

Program	Mean	Descriptive Rating	SD
Entire Group	1.10	Mild	0.93
Program			
BSMT 1	1.21	Mild	0.93
BSMT 2	1.0	Mild	0.90
BSMT 3	0.86	Mild	0.88
BS Criminology	1.15	Mild	1.04
Grade 11	1.24	Moderate	0.94
Grade 12	1.14	Mild	0.88

Note. Scales and descriptive ratings are arbitrarily constructed.

Table 5. Students' Levels of Stress when taken as an Entire Group and when Classified According to Program

Program	Mean	Descriptive Rating	SD
Entire Group	1.00	Mild	0.95
Program			
BSMT 1	1.07	Mild	0.96
BSMT 2	0.94	Mild	0.92
BSMT 3	0.78	Mild	0.85
BS Criminology	1.01	Mild	1.06
Grade 11	1.15	Mild	0.97
Grade 12	1.04	Mild	0.93

Note. Scales and descriptive ratings are arbitrarily constructed.

Table 6 shows that there are significant differences in the students' depression, $F(5, 577) = 3.958, p = 0.002$; anxiety, $F(5, 577) = 4.969, p = .000$; and stress, $F(5, 577) = 4.892, p = .000$. These observed differences may be due to a lack of balance between academic and social life, academic workload and lack of engagement in social activities. This supports the study of Lee et al. (2012) and Kitzrow (2003).

Table 6. One-way ANOVA Results of the Significant Difference in the Students' Depression, Anxiety, and Stress when Classified According to Program

Sources of Variation	SS	df	MS	F	Sig	Remarks
Depression						
Between Groups	8.689	5	1.738	3.958*	.002	Significant
Within Groups	253.306	577	.439			
Total	261.995	582				
Anxiety						
Between Groups	13.245	5	2.649	4.969*	.000	Significant
Within Groups	307.629	577	.533			
Total	320.874	582				
Stress						
Between Groups	12.298	5	2.460	4.892*	.000	Significant
Within Groups	290.099	577	.503			
Total	302.397	582				

Note. Asterisk (*) means significant at .05 level of probability.

Table 7 shows that BSMT 3 students' depression is significantly different from that of SHS Grades 11 and 12 students.

Table 7. Post Hoc Result for the Comparison of Means on Depression according to Program

Program	Depression Mean Score
BSMT 1	1.22 ^{ab}
BSMT 2	1.16 ^{ab}
BSMT 3	1.01 ^a
BS Criminology	1.21 ^{ab}
Grade 11	1.35 ^b
Grade 12	1.35 ^b

Note. Same superscript letters denote not significant while significant if otherwise.

Table 8 shows that BSMT 3 students' anxiety is significantly different from that of BS Criminology, SHS Grade 11, and Grade 12 students.

Table 8. Post Hoc Result for the Comparison of Means on Anxiety according to Program

Program	Anxiety Mean Score
BSMT 1	1.2 ^b
BSMT 2	1.0 ^{ab}
BSMT 3	0.86 ^a
BS Criminology	1.15 ^b
Grade 11	1.25 ^b
Grade 12	1.14 ^b

Note. Same superscript letters denote not significant while significant if otherwise.

Table 9 shows that BSMT 3 students’ stress is significantly different from that of BSMT 1 and SHS Grade 11 students.

Table 9. Post Hoc Result for the Comparison of Means on the Stress according to Program

Program	Stress Mean Score
BSMT 1	1.07 ^b
BSMT 2	0.94 ^{ab}
BSMT 3	0.74 ^a
BS Criminology	1.01 ^{ab}
Grade 11	1.15 ^b
Grade 12	1.02 ^{ab}

Table 10 shows the predictors of students’ depression, anxiety, and stress. One of the items is a significant predictor of depression, $F(1, 581) = 791.513, p = .000$. The item “I found it difficult to work up the initiative to do things,” is a significant predictor of depression, $t = 528.134, p = .000$. This finding is similar to the study of Bisson (2017). However, it was found to be the least predictor of students’ depression.

Furthermore, one of the items is a significant predictor of anxiety, $F(1, 581) = 1142.740, p = .000$. The item “I found myself getting agitated” is a significant predictor of anxiety, $t = 38.545, p = .000$. This finding is similar to the study of Bisson (2017); however, it was the second predictor of students’ anxiety.

Lastly, one of the items is a significant predictor of stress, $F(1, 581) = 1142.621, p = .000$. The item “I felt I was close to panic” is a significant predictor of stress, $t = 33.803, p = .000$.

Table 10. Predictors of Students' Depression, Anxiety, and Stress

Sources of Variation	SS	df	MS	F	Sig	Remarks
Depression						
Regression		1			.000	
Residual	151.089	581				
Total	110.905	582	151.089	791.513*		Significant
	261.995		.191			
Anxiety						
Regression	230.670	1			.000	
Residual	90.204	581	230.670	1745.198*	.000	Significant
Total	320.874	582	.155			
Stress						
Regression	200.465	1			.000	
Residual	101.932	581	200.465	1142.621*	.000	Significant
Total	302.397	582	.175			

Note. Asterisk (*) means significant at .05 level of probability.

Table 11 shows that financial instability or less financial security is the leading cause of depression among all students. The next cause of depression is the occurrence of the COVID-19 pandemic. Moreover, the main reason for students having depression would be life events such as sickness, hospitalization, accidents, or death in the family.

Table 11. Situations Leading to Students' Depression

Situation	f	%	rank
Financial instability or less financial security	290	49.74	1
The occurrence of the COVID-19 pandemic	271	46.8	2
Life events as sickness, hospitalization, accidents, or death in the family	231	39.62	3
Insufficient or lack of internet connection	203	34.82	4
Lack of communication with friends, classmates, and loved ones	201	34.48	5
The virtual or online classes	199	34.13	6
Inability to travel or less opportunity to travel	151	25.90	7
Absence of physical contact with other people	141	24.19	8
Absence of physical contact with other people	138	23.67	9
The strict health protocols being observed	100	17.15	10
Pressure on academics	5	0.86	11

Situation	f	%	rank
I don't feel any depression	2	0.34	13
Family problems	2	0.34	13
Low grade	2	0.34	13
Thinking I'm not enough	1	0.17	18.5
Relationship things	1	0.17	18.5
Failing the board exam	1	0.17	18.5
Loneliness	1	0.17	18.5
Personal problems	1	0.17	18.5
Anxiety	1	0.17	18.5
Bad decisions	1	0.17	18.5
Existential crisis	1	0.17	18.5

Table 12 shows that the leading reason for students' anxiety is the occurrence of the COVID-19 pandemic. The next significant cause that indicates students' anxiety would be financial instability or less financial security. Meanwhile, the last reasons for students' anxiety would be the virtual or online classes and lack of communication with friends, classmates, and loved ones.

Table 12. Situations Leading to Students' Anxiety

Situation	f	%	rank
The occurrence of the COVID-19 pandemic	275	47.17	1
Financial instability or less financial security	252	43.22	2
The virtual or online classes	211	36.19	3.5
Lack of communication with friends, classmates, and loved ones	211	36.19	3.5
Insufficient or lack of internet connection	199	34.13	5
Life events as sickness, hospitalization, accidents, or death in the family	200	34.31	5
Loss of parents' job or lack of employment opportunities	144	24.70	6
Absence of physical contact with other people	141	24.19	7
Inability to travel or less opportunity to travel	125	21.44	8
The strict health protocols being observed	99	16.98	9
School works overload	3	0.51	10
Overthinking about things	2	0.34	11
Not graduating and losing opportunities	1	0.17	13.5

Situation	f	%	rank
Lack of sleep or rest	1	0.17	13.5
Meeting people virtually	1	0.17	13.5
People around me	1	0.17	13.5

Table 13 shows that the leading reason for students' stress is virtual or online classes. The next prominent reason would be the occurrence of the COVID-19 pandemic, and the last leading indicator for stress is financial instability or less financial security.

Table 13. Situations Leading to Students' Stress

Situation	f	%	rank
The virtual or online classes	322	55.23	1
The occurrence of the COVID-19 pandemic	280	48.03	2
Financial instability or less financial security	264	45.28	3
Insufficient or lack of internet connection	256	43.91	4
Life events as sickness, hospitalization, accidents, or death in the family	195	33.45	5
Inability to travel or less opportunity to travel	165	28.30	6
Lack of communication with friends, classmates, and loved ones	160	27.44	7
The strict health protocols being observed	149	25.56	8
The strict health protocols being observed	149	25.56	8
Absence of physical contact with other people	133	22.81	9
Loss of parents' job or lack of employment opportunities	126	21.61	10
Academic overload	6	1.03	11
Not finishing the needs I want to finish	1	0.17	16
Overthinking	1	0.17	16
Losing a lover	1	0.17	16
No internet	1	0.17	16
School activities	1	0.17	16
School tasks	1	0.17	16
Swimming lessons	1	0.17	16
People around me	1	0.17	16
Lack of sleep	1	0.1	16

Table 14 shows that the top programs students preferred during this pandemic would be fitness, wellness, and health, biking, skateboarding, rollerblading, other outdoor exercises, and personality enhancement.

Table 14. Programs to Enhance Students’ Mental Health

Program	f	%	rank
Fitness, wellness, and health	433	74.27	1
Biking, skateboarding, rollerblading, and other outdoor exercises	329	56.43	2
Personality enhancement	305	52.32	3
Yoga, exercise, and meditation	206	35.33	4
Seminars, team building, and socialization programs	198	33.96	5
Psychological counseling	190	32.59	6
Dance, painting, photography and other creative endeavors	185	31.73	7
Group guidance or coaching	157	26.93	8
Vlogging and other technology programs	103	17.67	9
Gaming	2	0.34	10.5
Reading	2	0.34	10.5
Sports program	6	1.03	12
Minimum activities	1	0.17	18.5
Deep talks	1	0.17	18.5
Indoor activities	1	0.17	18.5
Going with friends	1	0.17	18.5
Passing the assessments	1	0.17	18.5
Lowering the chances of failure	1	0.17	18.5
Health break	1	0.17	18.5
Youth movement	1	0.17	18.5
Environment engagement	1	0.17	18.5
Wellness break	1	0.17	18.5
Money	1	0.17	18.5
E-sports	1	1.17	18.5

Program to Enhance Students’ Mental Health

The document entitled “Students’ Mental Health Support Program” consists of the Background, Objectives of the Program, Program Management and Implementation, Evaluation, and Participants as target beneficiaries.

The program matrix consists of the concerned area (depression, anxiety, and stress), program/activities, time frame, and the person responsible. The program aims to address the students' depression, anxiety, and stress that may affect their mental health. Please see the Appendices.

CONCLUSIONS

The researchers conclude that students' depression, anxiety, and stress are mild. Lower years are mostly affected, which might be due to adjustments in academic workloads. Overall, there were significant differences in the students' depression, anxiety, and stress because behavioral disorders are more common among younger adolescents than older adolescents (World Health Organization, 2021b). On the other hand, predictors are usually internal and the causes of students' depression, anxiety, and stress. Researchers also conclude that financial instability or less financial security cause students depression, the occurrence of the COVID-19 pandemic causes students' anxiety, and the virtual or online classes cause students' stress.

RECOMMENDATIONS

The researchers recommend creating mental health programs to address students' depression, anxiety, and stress, such as self-care programs, social engagement activities, exploration activities, and community partnership programs. This will be implemented in the next school year 2022-2021 for students' mental health enhancement.

LITERATURE CITED

- American Academy of Pediatrics. (2021). Mental Health during COVID-19: Signs Your Child May Need More Support. Retrieved from <https://www.healthychildren.org/English/health-issues/conditions/COVID-19/Pages/Signs-your-Teen-May-Need-More-Support.aspx>
- Bisson, K. H. (2017). The effect of anxiety and depression on college students' academic performance: Exploring social support as a moderator (Paper 51) [Master's thesis, Abilene Christian University]. Digital Commons @ ACU, Electronic Theses and Dissertations.

- Center for Disease Control and Prevention, Coping with Stress. (2019). Retrieved from https://www.cdc.gov/mentalhealth/stress-coping/cope-with-stress/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fdaily-life-coping%2Fmanaging-stress-anxiety.html
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. 4th ed. USA: Sage Publications.
- Islam, A., Barna, S. D., Raihan, H., Khan, N. A., & Hossain, T. (2020). Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLoS ONE*, 15 (8), 1-12.
- Kitzrow, M. A. (2003). The Mental Health Needs of Today's College Students: Challenges and Recommendations. *NASPA Journal*, 41(1), 165–180.
- Lee, K. H., Ko, Y., Kang, K. H., Lee, H. K., Kang, J., & Hur, Y. (2012). Mental health and coping strategies among medical students. *Korean Journal of Medical Education*, 24(1), 55–63.
- Lovibond, S.H., & Lovibond, P. F. (1995). *Manual for the depression anxiety & stress scales*. 2nd Ed. Sydney: Psychology Foundation.
- Miller, K. (2021). What are Mental Health Theories? Retrieved from <https://positivepsychology.com/mental-health-theories/>
- Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22 (9), 1-24.
- Tee, M., Lee, C., Anlacan, J., Aligam, K., Reyes, P. W., Kuruchittham, V., & Ho, R. (2020). Psychological Impact of COVID-19 Pandemic in the Philippines. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/32861839/>
- World Health Organization. (2021a). Looking After our Mental Health. Retrieved from <https://www.who.int/campaigns/connecting-the-world-to-combatcoronavirus/healthyathome/healthyathome--->

mentalhealth?gclid=CjoKC Q jw7MGJBhD-ARIsAMZoeetJT9wt6mb_
MVW9_xLyibss9oY7tkkuZkVI8y1aqGoTN9ZbIJiKQaAgLpEALw_wcB

World Health Organization. (2021b). Adolescent Mental Health. Retrieved
from [https://www.who.int/news-room/fact-sheets/detail/adolescent-
mental-health](https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health)

Gunning Fog Index:	10.16
Flesch Reading Ease:	57.16
Grammar Checking:	95/100
Plagiarism:	5%