



STRESS FACTORS IN IN-SERVICE TEACHER TRAINING PROGRAMS

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Abstract

In-service teacher education has an important role in facing the challenges posed by the COVID-19 pandemic, including helping teachers prepare to face new challenges arising from the pandemic, improving the quality of learning, building online teaching skills, supporting students with ideals and hopes and building communities Study. This allows students to get access to quality education even though they are at home. Understanding the impact of the transition from blended learning to online learning is critical to seeing how this change affects in-service teacher training program students, particularly in terms of their stress levels. This research aims to reveal the phenomenon of stress experienced by students while undergoing a professional teacher training program as well as the indications and causes in terms of class, age, gender and place of origin. The type of research is quantitative comparative, the population consists of 418 people and 180 people as research samples were taken using purposive sampling. The results of the research show that Madrasah and PPG PAI, there is no significant difference in stress, nor in terms of age, no significant difference, the 43–49-year age group has a higher average stress score compared to others, with the average stress score was 71.10. Judging from the place of origin, there are differences in the stress felt by students. The average stress score for students in West Sumatra is higher than in the provinces of North Sumatra, Riau, Jambi, Aceh, Central Java and South Sulawesi, as well as in terms of gender.

Keywords: In-service teacher professional training; Blended Learning; Online Learning; Stress; Indications; Causes

INTRODUCTION

In response to the covid-19 pandemic, there was a change in how to manage the in-service teachers' professional training program. The program which was previously held in blended learning is changed into full online learning. The change into a full online learning platform doesn't bring changes to learning materials and learning activities that were previously designed for a blended learning platform. These changes are considered to bring a lot of pressure and stress to the students who are taking the in-service teacher professional training.

Problems related to online learning in higher education includes problems with Mastery of lesson objective, the Readiness of the lecturers in preparing the lesson, Limited interaction between lecturer and students, internet coverage, class schedules, limited micro-teaching

classes, expenses on internet coverage, and other problems that occur during the class. There are also problems related to psychological breakdowns that students have during online classes which include stress (Prabawangi et al. 2021). Some research find discovered that there is an increase in stress levels that students have during online learning (Ibrahim, 2020; Altbach & Wit, 2020; Banu et al, 2015).

Hawari (Yusuf, 2004; Samaha, 2021; Utami et al, 2020) believes that stress is a physical reaction to problems that people have, meanwhile but stated that stress is an emotional experience accompanied by changes in biochemist, physical condition, cognitive condition, and behavior aimed at changing certain conditions or accommodating its effects. Apart from the definition of stress explain above, it can be concluded that stress creates inconveniences and a situation full of pressures that affect someone's everyday life. Moreover, stress influences someone's physical and psychological condition. Several significant indicators cause stress which includes the environment, sex, health condition, academic and private life, life's at satisfaction, and control of Locust.

On April 14th, 2021, the ministry of religious affairs issued a decree about in-service teacher professional program number B 2069. This degree is a follow-up action on the previous decree issued by the ministry of religious Affairs number 745 to 2020 related to the teacher professional program. This degree is addressed to all the heads of the original Office of the ministry of religious Affairs. One of the most important points mentioned in the decree is related to the changes in the platform use in teacher professional programs from Blended learning to 100% online learning. This change is a logical consequence of the covid-19 pandemic. Call 519 has caused enormous changes in daily life including higher education. This pandemic has forced higher education to evolve by transforming the classes into online classes. Although digital transformation is not a new phenomenon in the world of higher education, these changes still cause a lot of pressure on all parties involved (Samikshya, 2020; Kopp et al, 2019; Peggy & Thoits, 2010). Conducting an online learning class required several digital competencies which include knowledge and skill related to ICT and knowledge and skill related to learning devices used which is not possessed by everyone. Other problems related to working hours, changes in assignment, and problems related to assessment and supervision should also be taken into account. In the middle of this conflicting situation, where problems related to online learning and its limitations arouses, online learning is still responded to positively by student teachers and parents and it is also considered something new and challenging.

This research is aimed at identifying psychological problems especially stress that are faced by in-service teacher professional programs conducted on an online platform in terms of sex, age, and place of origin. This research will also describe the causes and the symptoms of stress it is expected that the result of This research will be able to give contributions to giving descriptions of psychology conditions of students in surface teachers' professional programs who are conducting online learning classes.

METHOD

This research is comparative quantitative research, comparative quantitative research, namely a research method that involves collecting and analysing numerical data to compare two or more groups or conditions. The main aim is to find differences and similarities between these groups (Sugiyono, 2011). The population of this research is all students registered in the 2021 in-service teacher professional program at IAIN Bukittinggi, totaling 418 people. The sampling technique used is purposive sampling, meaning a

deliberate sampling technique. This means that the researcher determines the sample taken himself because there are certain considerations. So, the samples were not taken randomly, but were determined by researchers, namely students who were indicated to be prone to cheating behaviour. This technique was not carried out based on strata, random or regional. However, it is based on a specific goal, namely students who experience stress during the professional teacher training program during Covid-19 and the indications and causes in terms of class, age, gender and place of origin (Sugiyono, 2011). The research sample was taken randomly with a total of 180 people. Data collection was carried out using a Google form containing research indicators developed based on class, age, gender and place of origin, then analysed using Analysis of Variance (ANOVA): Analysis of variance is used to compare three or more groups. This involves testing the hypothesis that the means of the research variables do not differ between the groups to determine differences in student stress levels by class, gender, and place of origin.

RESULTS AND DISCUSSIONS

Result

The instrument of this research is a questionnaire distributed to 180 students of the in-service teacher professional program 2021 that consists of several groups the result of the questionnaire can be seen in table 1 below.

Table 1. Profile of the Sample

No	Aspect	Category	N	%
1	Gender	Male	78	43,33
		Female	102	56,66
2	Age	27-32 years of age	27	15
		33-37 years of age	63	35
		38-42 years of age	59	32,77
		43-49 years of age	19	10,55
		>50 years of age	12	6,66
3	PPG Group	PPG PAI	90	50%
		PPG Madrasah	90	50%
4	Place of Origin	Sumatera Barat	19	10,55
		Sumatera Utara	18	10
		Riau	66	36,66
		Jambi	11	6,11
		Aceh	16	8,88

Jawa	42	23,33
Tengah		
Sulawesi	8	4,44
Selatan		

Table 1 describes that the number of female samples exceeds the number of male samples. Table 1 also describes that most of the samples are within the range of age between 33 and 37 years old, and only some of the samples are within the age of 50 years old. Therefore, all the samples involved in this research are within the productive age. In terms of place of origin, most of the samples are originally from the real province. The profile of stress that the students have can be seen in the table.

Table2. The profile of the level of stress

Stress Level	N	%
Normal	17	9,4
Light	31	17,22
Moderate	53	29,44
Serious	57	31,66
Very serious	22	12,22

Table 2 indicated the stress level of students. There are 17 students or 9.4% have normal stress, 31 students or 17.22% have light stress, 53 students or 29.44% have moderate stress, 57 students or 31.66% have serious stress and 220 or 12.22% students have extremely serious stress. It can be concluded that the number of students who are having stress within the category of serious is more than the number of students who are having stress in another category. Besides, students who are having stress within the extremely serious category cannot be ignored since the number is exceeding the normal category. The symptoms of stress that are shown by the student can be seen in table 3.

Table 3 The profile of symptoms of stress

Stress Symptoms *	Frequent Symptoms Appear (%)				
	TP	J	KD	SR	SL
Physical symptoms					
Increased heart rate	7,9	22,9	37,2	20,9	11,1
increased blood pressure	22,1	22,5	33,2	17	5,1
headache	12,6	24,5	30,4	20,9	11,5
joint and muscle pain	17	21,3	27,7	23,7	10,3
chest pain	40,3	26,1	20,2	9,9	3,6
stomachache and indigestion Etc.	29,2	25,3	24,9	15	5,5
Cognition Symptoms					
memory loss	20,9	28,5	32	14,2	4,3
difficulty in concentrating	7,1	33,2	35,2	20,9	3,6
disorientation	12,3	29,2	45,5	10,7	2,4

difficulty in thinking, analysing and comparing	11,1	20,9	40,3	23,3	4,3
Emotional symptoms					
fear and anxiety	6,3	17,4	28,1	29,6	18,6
angry/sad	7,9	18,2	33,6	30	10,3
having a bad dream	49,8	23,7	16,6	7,1	2,8
nervous	9,9	20,2	32,4	26,1	11,5
Behavioural symptoms					
hard to rest/relax	5,5	12,6	22,9	28,1	30,8
change in eating habits	8,3	14,2	26,1	30,4	20,9
increased/decreased appetite	17,8	18,2	24,5	21,7	17,8
change in sleep habits	1,6	7,9	24,9	37,2	28,5
insomnia	17,8	17,8	26,1	21,7	16,6
Social symptom					
difficulty in listening to others	17,4	24,1	32,4	20,6	5,5
difficulty in sharing ideas with others	18,6	25,7	35,6	16,2	4
difficulty in solving problems with other people	13,8	30,4	36,8	15	4
difficulty in tolerating others	27,3	27,7	24,9	14,6	5,5
difficulty in maintaining patience with others	18,2	26,1	35,6	13,8	6,3

*Each respondent can choose more than one symptom

Table 3 shows the symptoms of stress by students. There are at least 5 (five) symptoms, namely physical, emotional, cognitive, behavioural, and social. One of the most common physical symptoms shown by students is a headache. The most common cognition symptoms are memory loss and difficulty in thinking, analysing, and comparing. The most common emotional symptoms are fear and anxiety. The most common behavioural symptoms are difficulty in resting or relaxing. The most common social symptom shown is difficulty in maintaining patience with others. Generally, the most common stress symptoms shown by students are behavioural symptoms. Meanwhile, the causes of stress felt by students are in table 4 below.

Table 4. Profile of Causes of Stress

No	Causes of Stress*	N	%
1	Task load	173	68,4
2	Worries about value	96	37,9
3	Financial	19	7,5

4	Problem Internet Network	111	43,9
5	Concerns about graduation	151	59,7
6	Dividing time between PPG activities, work and family	155	61,3
7	Difficult to adjust to the online class system	29	11,5
8	Etc	1	0,4

*Each respondent can choose more than one symptom

Table 4 shows an overview of the causes of stress experienced by students. The most common cause of stress is related to the workload, as stated by 68.4% of students. Then, other causes of stress are difficulties in dividing time between PPG activities, work, and family and worries about graduation. Meanwhile, 11.5% of students state that adjusting to the online class system was a cause of stress. In other words, relatively few students agree that the online class system was the cause of the stress they experienced. The difference in student stress between PPG Madrasah and PPG PAI can be seen in table 5.

Table 5. Differences in Student Stress of PPG Madrasah and PPG PAI

SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
MAD	90	6289	69,87778	334,9624		
PAI	90	5983	66,47778	291,7579		

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	520,2	1	520,2	1,660071	0,199266	3,894232
Within Groups	55778,11	178	313,3602			
Total	56298,31	179				

Table 5 shows that there is no difference between the students' stress experienced by PPG Madrasah and PPG PAI. Referring to the data in Table 2, PPG students, both Madrasah and PAI was experienced stress. The differences in stress based on gender, age, and regional origin can be seen in tables 6, 7, and 8 below:

Table 6. Differences in PPG Student Stress by Gender

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
MAN	78	5051	64,75641	309,9529
WOMAN	102	7221	70,79412	305,1552

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1611,263	1	1611,263	5,244474	0,02319	3,894232
Within Groups	54687,05	178	307,2306			
Total	56298,31	179				

Table 6 shows that the average stress score shown by female students is higher than the average score shown by male students. The different test shows that the stress experienced by female and male students is not the same.

Table 7. Differences in PPG Student Stress by Age

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
AGE 27-32	27	1860	68,88889	320,1026
AGE 33-37	63	4284	68	307,7742
AGE 38-42	59	3940	66,77966	302,8644
AGE 43-49	19	1351	71,10526	317,8772
AGE 50-54	12	837	69,75	480,2045

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	323,4694	4	80,86734	0,252824	0,907646	2,423286
Within Groups	55974,84	175	319,8562			
Total	56298,31	179				

Table 7 shows that of the 5 (five) age groups, the 43-49 year age group shows the highest average stress score compared to other age groups. Meanwhile, the 38-42 year age group shows the lowest average stress score. There is relatively no significant difference between the average scores indicated by the other 3 (three) age groups. Subsequent different tests show there is no difference in the stress felt by each age group.

Table 8. Differences in PPG Student Stress Based on Place of Origin

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
SUMBAR	19	1486	78,21053	266,731
SUMUT	18	1233	68,5	353,9118
RIAU	66	4488	68	300,6769
ACEH	16	1213	75,8125	143,0958
JAWA	42	2628	62,57143	364,446

SULAWESI	8	518	64,75	299,9286
JAMBI	11	706	64,18182	230,9636

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	4438,794	6	739,7989	2,467921	0,025762	2,151323
Within Groups	51859,52	173	299,766			
Total	56298,31	179				

Table 8 shows the average students' stress score based on their place of origin. PPG students in 2021 were from seven provinces. Of the seven provinces, students from West Sumatra Province got the highest average stress. PPG students from South Sulawesi Province got the lowest average stress score. The different test shows that the students from different regions have different stress.

Discussion

The study of psychological phenomena is always interesting, and the study of stress is no exception. Everyone can experience stress. Its existence has become a mandatory attribute in the life of modern society. Although anyone can experience stress, they have a different view of stress. What is considered a stressful situation for one person may be common for another, and vice versa.

Historically, word stress began to appear in the 14th century when English developed from a mixture of French and Anglo-Saxon. Furthermore, in the 16th century, it was used and defined as tension, overwork, and fatigue. Then, in the 19th century, it was objected that have the potential to stretch (Swarjana, 2022; Khan, 2013; Nambiar, 2020).

The Covid-19 pandemic, as previously mentioned, has forced various changes in all sectors of life, including the education sector. During the pandemic, online classes are enforced to keep the education process running (Sifat, 2020; Putra et al. 2020). Relating to its implementation, various evaluations through various studies have been done. Then, various assessments of the implementing online class were found. Generally, some are satisfied (Abdullah et al, 2022; Kamil et al, 2022; Hasanah et al, 2020), but few are unsatisfied with implementing online classes, including psychological disorders, one of which is stress.

This study found that PPG students in positions who participated in PPG online were proven to have experienced stress disorders at various levels, ranging from normal to extreme levels, most students experienced stress at severe levels, and the number was 31.66% of 180 students. Of course, it is not immediately interfering with the effectiveness of a person's daily life.

Many studies have found long-term effects of unresolved stress. It affects the main physiological functions of humans such as memory, cognition, immune function, cardiovascular system function, and so on (Yaribeygi, 2017; Mridul et al, 2021). In learning settings, stress can affect performance (Struthers, 2000). Although it tends to be unrelated to various negative effects, it also has positive effects. Research has found that stress in the moderate category leads to high achievement motivation (Ramaprabou & Dash, 2018; Leszczyński et al, 2018).

There are many factors of stress. This study reveals that the workload is the main factor for 68.4% of respondents. Several previous research results have found various other main factors that cause stress. Among these factors are interpersonal and environmental factors (Bulo & Sanchez 2014), academic expectations (Tan & Yates, 2011), academic workload, exams, subjects difficult lectures, grades and lecturer characteristics (Ong & Cheong, 2009), and important decisions to be made about education, respect from others, too many tasks to do at one time, many responsibilities, and financial burdens (Lindsey, 2011; Rahim et al, 2022), self-esteem, social support, locus of control, and coping strategies (Helmbrecht & Ayars, 2021 ; Michie et al, 2001).

Apart from being caused by various factors as described previously, stress also has specific symptoms. These symptoms can be physical, emotional, cognitive, or behavioural (Keady. 1999; Husky et al, 2020; Putri et al, 2020). This study found that the most symptoms of stress are behavioural symptoms, especially difficulty in relaxing and resting.

In terms of gender, this study found a difference between the stress shown by male and female students. It was found that female students tended to have a higher average stress score than male students. The average stress score of women is 70.79. Although not absolute, many previous studies have also found relatively the same results.

(Misra et al, 2000; Harahap et al, 2020) found that women are better able to manage time than men, but women experience more anxiety and academic stress than men. (Mehmet, 2019) found that female students had higher academic stress than male students. Furthermore, (Mehmet, 2019; Kupriyanov, 2014) found that locus of control and gender were significant predictors of academic stress. (Chen et al, 2020; Matud, 2004; Kohler et al, 2009) and (Banu, 2015; Mishra et al, 2020) found that more women experience stress than men. (Saxena, 2014) found the opposite, that men had a higher average stress score than women. Meanwhile, (Gao et al, 2020; Lauri et al, 2005) found no significant difference in stress between men and women.

Based on the age, there was no significant difference. The 43-49 year age group had a higher average stress score when compared to other age groups, with an average stress score of 71.10. From a psychological perspective, (Hurlock, 2017) classifies human age into 10 age groups, namely prenatal, neonatal, infant, early childhood, late childhood, early adolescence, adolescence, early adulthood, middle adulthood, and old age. Referring to the psychological perspective, the age group of 43-49 years is in the middle adulthood category. It is often referred to as a period of stress (Hurlock, 2017; Khawar et al, 2021). In addition, middle adulthoods who work and at the same time continue their studies have challenges and problems (Berker & Horn, 2003; Kohler et al, 2009).

Based on the place of origin, there are differences in the stress felt by students. The average stress score of students from West Sumatra is higher than the average score of students from the provinces of North Sumatra, Riau, Jambi, Aceh, Central Java, and South Sulawesi.

CONCLUSION

The results of the research show that based on class, namely Madrasah and PPG PAI, there is no significant difference in stress, nor in terms of age, there is no significant difference, the 43-49 year age group has a higher average stress score compared to other age groups, with the average stress score was 71.10. Judging from the place of origin, there are differences in the stress felt by students. The average stress score for students in West Sumatra is higher than the average stress score for students in the provinces of

North Sumatra, Riau, Jambi, Aceh, Central Java and South Sulawesi, as well as in terms of gender there are significant differences in stress. Research on stress in online teacher training programs can provide valuable insights for addressing stress issues in the context of online teacher training programs in more depth. This includes developing training programs that are more flexible and adaptive to individual needs, as well as providing emotional and social support to teachers throughout the training process. By using this research as a basis, we can design online teacher training programs that are more effective and supportive for educators in facing stressful challenges during the digital teaching and learning process.

REFERENCES

- Abdullah, M. H. T., Roslim, N & Salleh, M. I. M. (2022). Open and Distance Learning during the COVID-19 Pandemic: University Students' Learning Experiences and Academic Achievements. *Asian Journal of University Education (AJUE)* Volume 18, Number 1, January 2022
- Altbach, P., de Wit, H. (2020). Postpandemic outlook for higher education in bleakest for the poorest. *Higher Education in Southeast Asia and Beyond (HESB)*, 8, 5–8.
- Banu, P., Deb, S. V. V. & Rao, T. (2015). Perceived academic stress of university students across gender, academic streams, semesters, and academic performance. *Indian Journal of Health and Wellbeing* 2015, 6(3), 412-416
- Berker, A., & Horn, L. (2003). *Work first, study second: Adult undergraduates who combine employment and postsecondary enrollment* (NCES No. 2003-167). Washington, DC: U.S. Government Printing Office
- Bulo, J.G. & Sanchez, M. G. (2014). Sources of stress among college students. *CVCITC Research Journal*, 1 (1), pp 16 – 25
- Chen, Y., Liu, X & Yan, N. (2020). Higher Academic Stress Was Associated with Increased Risk of Overweight and Obesity among College Students in China. *Int. J. Environ. Res. Public Health* 2020, 17(15), 5559; <https://doi.org/10.3390/ijerph17155559>
- Gao, W., Ping, S & Liu, X. (2020). Gender differences in depression, anxiety, and stress among college students: A longitudinal study from China, *Journal of Affective Disorders*, Volume 263,2020,Pages 292-300,ISSN 0165 0327,<https://doi.org/10.1016/j.jad.2019.11.121>.(<https://www.sciencedirect.com/science/article/pii/S0165032719320385>)
- Harahap, A. C. P., Harahap, D. P., & Harahap, S. R., (2020). Analisis Tingkat Stres Akademik Pada Mahasiswa Selama Pembelajaran Jarak Jauh Dimasa Covid-19. *Biblio Couns: Jurnal Kajian Konseling dan Pendidikan*, 3(1), 10-14
- Hasanah, U., Ludiana, L & Immawati, P. L. (2020). Gambaran psikologis mahasiswa dalam proses pembelajaran selama pandemi COVID-19. *Jurnal Keperawatan Jiwa*. 2020;8(3):299–306.
- Helmbrecht, B & Ayars, C. (2021) Predictors of Stress in First-Generation College Students, *Journal of Student Affairs Research and Practice*, 58:2, 214-226, DOI: 10.1080/19496591.2020.1853552

- Hurlock. (2017). Psikologi Perkembangan Edisi Kelima: Suatu Pendekatan Sepanjang Rentang Kehidupan. Erlangga: Jakarta
- Husky, M.M., Kovess-Masfety, V & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*. 2020 Oct; 102:152191. DOI: 10.1016/j.comppsy.2020.152191. PMID: 32688023; PMCID: PMC7354849.
- Kamil, A. I. M., Ismail, N. A. A., Hassan, A. A., Rooshdi, R. R. R. M & Marhani, M. A. (2022). Satisfaction of Quantity Surveying Students towards Online Distance Learning (ODL) during Covid-19 Pandemic. *Asian Journal of University Education (AJUE)* Volume 18, Number 2, April 2022
- Keady, D. A. (1999). "Student Stress: An Analysis of Stress Levels Associated with Higher Education in the Social Sciences" (1999). All Graduate Theses and Dissertations. 2598
- Khan, M. J. (2013). Effect of Perceived Academic Stress of Students' Performance. *FWU Journal of Social Sciences*, Winter 2013, Vol. 7, No. 2, 146-151
- Khawar, M. B., Abbasi, M. H., Hussain, S., Riaz, M., Rafiq, M., Mehmood, R., Sheikh, N., Amaan, H. N., Fatima, S., Jabeen, F., Ahmad, Z & Farooq, A. (2021). Psychological impacts of COVID-19 and satisfaction from online classes: disturbance in daily routine and prevalence of depression, stress, and anxiety among students of Pakistan, *Heliyon*, Volume 7, Issue 5, 2021, e07030, ISSN.2405-8440, <https://doi.org/10.1016/j.heliyon.2021.e07030>.
- Kohler, G. J., Grawitch, M.J & Borchert, D. (2009). Dealing With the Stress of College: A Model for Adult Students. *Adult Education Quarterly*. 2009;59(3):246-263. doi:10.1177/0741713609331479
- Kopp, M., Gröblinger, O., & Adams, S. (2019). *Five common assumptions that prevent digital transformation at higher education institutions*. *INTED 2019 Proceedings* (pp.1448-1457). <https://doi.org/10.21125/inted.2019> [Google Scholar]
- Kupriyanov, R. (2014). The Eustress Concept: Problems and Outlooks. *World Journal of Medical Sciences*, 11, 179–185. <https://doi.org/10.5829/idosi.wjms.2014.11.2.8433>
- Lauri, D. M., Brian, D. M., Yongyi, W. M., Mack C. S & Donald, F. W. (2005). Personal, Health, Academic, and Environmental Predictors of Stress for Residence Hall Students, *Journal of American College Health*, 54:1, 15-24, DOI: 10.3200/JACH.54.1.15-24
- Leszczyński, P., Charuta, A., Łaziuk, B., Gałązkowski, R., Wejnarski, A., Roszak, M., & Kołodziejczak, B. (2018). Multimedia and interactivity in distance learning of resuscitation guidelines: A randomised controlled trial. *Interactive Learning Environments*, 26(2), 151-162. <https://doi.org/10.1080/10494820.2017.1337035> [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
- Lindsey, R. R. (2011). Sources Of Stress Among Gender and Classification for African American College Students. *College Student Journal*. Dec2011, Vol. 45 Issue 4, p749-757. 9p.
- Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences*, 37(7), 1401–1415. <https://doi.org/10.1016/j.paid.2004.01.010>

- Mehmet, A. K. (2019). Predictors of Academic Stress Among College Students. *Journal of College Counseling*. Volume 22 Issues 1. 2019. Pages 41-55
<https://doi.org/10.1002/jocc.12113>
- Michie, F., Glachan, M & Bray, D. (2001). An Evaluation of Factors Influencing the Academic Self-concept, Self-esteem and Academic Stress for Direct and Re-entry Students in Higher Education, *Educational Psychology*, 21:4, 455-472, DOI: 10.1080/01443410120090830
- Mishra, L., Gupta, T & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic, *International Journal of Educational Research Open*, Volume 1, 2020,100012, ISSN 2666-3740, <https://doi.org/10.1016/j.ijedro.2020.100012>.
- Misra, M., Ranjita, R., McKean, M & Michelle, M. 2000. College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*; Silver Spring Vol. 16, Iss. 1, (2000): 41-51.
- Mridul, M., Bandana, B., Dhariti, S & Navdeep, K. (2021). Online Classes during COVID-19 Pandemic: Anxiety, Stress & Depression among University Students. *Indian Journal of Forensic Medicine & Toxicology*. Jan-Mar 2021, Vol. 15 Issue 1, p186-189. 4p
- Nambiar, D. (2020). The impact of online learning during COVID-19: students' and teachers' perspective. *The International Journal of Indian Psychology* ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print) Volume 8, Issue 2, April- June 2020 DIP: 18.01.094/20200802, DOI:10.25215/0802.094
- Ong, B & Cheong, K. C. (2009). Sources of stress among college students-the case of a credit transfer program. *College Student Journal*, vol. 43, no. 4, Dec. 2009, pp. 1279+.
- Peggy A. & Thoits. (2010). Stress and Health: Major Findings and Policy Implications *Journal of Health and Social Behavior* 51(S) S41–S53 © American Sociological Association 2010 DOI: 10.1177/0022146510383499, <http://jhsb.sagepub.com>
- Prabawangi, R., Prita, M. N. F & Ananda. K. S. (2021). After a Year of Online Learning Amid the COVID-19 Pandemic: A Survey of Indonesian Undergraduate Students' Opinions and Behaviors. *Asian Journal of University Education (AJUE)* Volume 17, Number 4, October 2021
- Putra, C., Hegde, S., Smith, A., Wang, X & Sasangohar F. (2020). Dampak COVID-19 terhadap Kesehatan Mental Mahasiswa di Amerika Serikat: Studi Survei Wawancara *J Med Internet Res* 2020;22(9): e21279 doi:10.2196/21279
- Putri, R. M., Oktaviani, A. D., Utami, A. S. F., Latif, N., Addiina, H. A & Nisa, H. (2020) Hubungan Pembelajaran Jarak Jauh dan Gangguan Somatoform dengan Tingkat Stres Mahasiswa UIN Syarif Hidayatullah Jakarta. *Indonesian Journal of Health Promotion and Behavior*. 2020;2(1):38.
- Rahim, N. N. A., Humaidi, N., Aziz, S. R. A & Zain, N. H. M. (2022). Moderating Effect of Technology Readiness Towards Open and Distance Learning (ODL) Technology Acceptance During COVID-19 Pandemic. *Asian Journal of University Education (AJUE)* Volume 18, Number 2, April 2022

- Ramaprabou, V & Dash, S. K. (2018). Effect of Academic Stress on Achievement Motivation among College Students. *Journal on Educational Psychology*, v11 n4 p32-36 Feb-Apr 2018
- Samaha, F. (2021). E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Nursing Forum*. Volume 56, Issue 1. <https://doi.org/10.1111/nuf.12521>
- Samikshya, A. (2020). Stress in the Students after Lockdown due to Outbreak of Corona Virus (COVID-19) (May 15, 2020). Available at SSRN: <https://ssrn.com/abstract=3627022> or <http://dx.doi.org/10.2139/ssrn.3627022>
- Saxena, Y., Shrivastava, A & Singhi, P. (2014). Gender correlation of stress levels and sources of stress among first year students in a medical college. *Indian Journal of Physiology and Pharmacology* 58: 147–151.
- Sifat. RI, (2020). COVID-19 pandemic: Mental stress, depression, anxiety among the university students in Bangladesh. *International Journal of Social Psychiatry* 1–2. DOI:10.1177/0020764020965995, journals.sagepub.com/home/isp
- Struthers, C.W., Perry, R.P. & Menec, V.H. (2000). An Examination of the Relationship Among Academic Stress, Coping, Motivation, and Performance in College. *Research in Higher Education* 41, 581–592(2000). <https://doi.org/10.1023/A:1007094931292>
- Sugiyono. (2011). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta
- Swarjana. I Ketut. (2022). *Konsep pengetahuan, Sikap, Perilaku, Persepsi, Stres, Kecemasan, Nyeri, Dukungan Sosial, Kepatuhan, Motivasi, Kepuasan, Pandemi Covid 19, Akses Layanan Kesehatan*. Yogyakarta: Andi Offset
- Tan, J. B & Yates, S. (2011). Academic expectations as sources of stress in Asian students. *Soc Psychol Educ* 14, 389–407 (2011). <https://doi.org/10.1007/s11218-010-9146-7>
- Utami, S., Rufaidah, A., & Nisa, A. (2020). Kontribusi self-efficacy terhadap stres akademik mahasiswa selama pandemi Covid-19 periode April-Mei 2020. *TERAPUTIK Jurnal Bimbingan Dan Konseling*, 4(1), 8.
- Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCLI journal*, 16,1057–1072. <https://doi.org/10.17179/excli2017-480>
- Yusuf, L. S. (2004). *Mental Hygiene Pengembangan Kesehatan Mental dalam Kajian Psikologi dan Agama*. Bandung: Pustaka Bani Quraisy