



**LITERATURE REVIEW IMPACT OF THE COVID-19 PANDEMIC ON ADOLESCENT MENTAL HEALTH**

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**ABSTRACT**

The Coronavirus Disease 2019 (COVID-19) pandemic experienced by almost all countries in the world has disrupted human life both economically, socially, and health itself. The danger posed by this disease in the form of a threat of death for sufferers as well as the very rapid nature of the disease transmission has consequences for the possibility of mental health problems, including in adolescents who are an age group that is vulnerable to change. The severity of the threat of disease and various prevention protocols that are legally enforced by the government can cause problems with anxiety, stress, depression, or trauma in adolescents. This study generally aims to examine the impact of the COVID-19 pandemic on the emergence of mental health problems in adolescents. The method used in this study is a literature review. The stages that will be carried out include determining the topic or problem that is the focus of the discussion, searching for references or literature relevant to the topic of discussion, reading, reviewing and analyzing the literature in accordance with the study objectives, as well as writing and describing the results of the review in the form of a narrative equipped with a summary in the form of a narrative. appropriate table form. Searches for relevant articles or references will be carried out on the online databases of Science Direct, Springer, Wiley Library, PubMed and Google Scholar. The keywords used to search for references are pandemic, COVID-19, mental health, anxiety, trauma, stress, and adolescent. The criteria for the year of publication of the literature are limited to a maximum two years (2019-2021) as the COVID-19 pandemic occurred since December 2019.

**Keywords:** adolescent; COVID-19; mental health

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**INTRODUCTION**

COVID-19 was first reported in the Chinese city of Wuhan in late December 2019. People around the world has been rocked by the coronavirus pandemic which has created panic everywhere. The disease quickly spread around the world, so the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern (Damirchi, Mojarrad, Pireinaladin, & Grjibovski, 2020). *Coronavirus* or Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is a virus that attacks the respiratory system. The disease caused by infection with this virus is called COVID-19. Coronavirus can cause respiratory system disorders, severe lung infections, and death. Although it mostly attacks the elderly, this virus can attack anyone, from infants, children, to adults, including pregnant and breastfeeding women. (Safrizal ZA, Danang Insita Putra, Safriza Sofyan, 2020). COVID-

19 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 or SARS-CoV-2 (Setiawan, 2020).

World Health Organization data (WHO, 2021) shows that the number of confirmed positive cases of COVID-19 worldwide as of February 5, 2021 was 104,370,550 cases. In Indonesia, according to data released by the Task Force for handling COVID-19 (Covid-19 handling task force, 2021) on 5 February 2021 the number of confirmed cases positive 1,134,854, recovered 926,980 and died 31,202 cases. Day by day these numbers were increasing. This emergency situation makes people physically and psychologically unprepared (Sabir & Phil, 2016). Psychological conditions in the form of anxiety are experienced by many people due to fears of contacting the disease (Fitria, Neviyarni, Netrawati, & Karneli, 2020). A survey in China found an increase in panic disorders, anxiety and depression during the COVID-19 pandemic (Qiu J, Shen B, Zhao M, 2020). Anxiety is a form of depression plus unexplained worry (Annisa & Ifdil, 2016). Research conducted by Muyasaroh et al, regarding the types of anxiety in the Cilacap community in dealing with the COVID-19 pandemic, the results showed that people experienced general anxiety, social anxiety, panic anxiety and obsessiveness (Muyasaroh. et al., 2020).

Psychological mental conditions as mentioned above can also occur in adolescents who are an age group that is generally still psychologically unstable. The call to stay at home during the COVID-19 pandemic is one of the causes of social isolation, anxiety, stress, depression, psychological trauma and obsessive-compulsive disorder in adolescents. Although staying at home is an opportunity to be able to gather with family, teenagers who do not have good relationships with their families can further strengthen the potential for psychological problems (Moh, 2020).

## **METHODS**

This study used literature review method. Stages in conducting this study using the method of Cronin, Ryan and Coughlan (2008) which consists of four steps. The first step is to find a topic or problem that we want to focus on. Second, find and collect research articles that will be used as references for literature reviews. Third, reading, summarizing and analyzing the literature according to the purpose of the study. The fourth stage is to describe the results of the review in tabular form and narrated in the discussion section (Prasetian, 2020). The criteria of articles reviewed are as follows: 1) Inclusion criteria for articles/published papers: population of study: adolescent, intervention or exposure: COVID-19 pandemic; outcome: mental health (anxiety, trauma, stress); using English or Indonesian; published 2019-2021. 2) Exclusion criteria: not primary research (literature/narrative review); journal articles in the form of opinions or editorials; full text not available

By searching for articles or reference sources that become references, they were accessed through databases such as Springer, Wiley Library, PubMed, Science Direct, Proquest, Ebsco Host and Google Scholar. The keywords used to explore the articles are COVID-19 pandemic, mental health, anxiety, trauma, stress, depression, obsessive compulsive disorder, adolescent. The literature search process was also carried out by combining keywords using the boolean operators "OR", "AND" and "NOT". After obtaining articles that match the inclusion criteria that have been previously set, then a review and analysis was carried out. Literature was analyzed using the narrative review method which is the simplest form of review. Narrative review is an analytical method of narration, text narration, pictures, events which are grouped into data according to the purpose of the research. Published articles that have met the criteria are then grouped and summarized. After the summary of the published

articles is made, then an analysis of the contents of the published articles is carried out which mainly includes aspects of the objectives and results of the research.

## RESULTS

Table 1.

The summary of the articles reviewed can be seen in the matrix below:

No	Writer	Research Title	Method	Research result
1	(Andiarna & Kusumawati, 2020)	The Effect of Online Learning on Student Academic Stress During the COVID-19 Pandemic	This research is an analytic observational with a cross sectional approach	The results of the logistical analysis test show that online learning can affect academic stress during the COVID-19 pandemic. Giving assignments in large numbers, ineffective learning and obstacles in the implementation of learning can cause feelings of anxiety worry that there will be academic stress.
2	(Fauziyyah, Awinda, & Besral, 2021)	Impact of Distance Learning on Student Stress and Anxiety Levels during the COVID-19 Pandemic	The study used a descriptive method with a quantitative approach.	The method used is a literature review from national and international journals that examines the effect of the COVID-19 pandemic on stress and anxiety experienced by students. This journal search uses Google Scholar, ResearchGate, and Pubmed . databases
3	(Novitasari, Kurniawan, & Kanita, 2020)	Description of Stress Levels of Nurse Profession Students at Kusuma Husada University Surakarta During Study From Home (SFH) during the COVID-19 Pandemic	The research conducted is descriptive quantitative with descriptive survey research method	The results showed that 60 respondents (48.4%) did not experience stress, 50 respondents (40.4%) experienced mild stress, 6 respondents (6.5%) experienced moderate stress and 8 respondents (8%) experienced severe stress.
4	(Yarington et al., 2021)	Impact of the COVID-19 pandemic on Mental Health	The researcher used data from a mental health application	The results showed that during the COVID-19 pandemic feelings of sadness, depression

No	Writer	Research Title	Method	Research result
		among 157.213 Americans	(youper).	increased but anxiety and stress decreased
5	(Tee et al., 2020)	Psychological mpact of COVID-19 pandemic in the Philippines	Quantitative research, respondents were collected using the snowball method, data analysis was carried out using SPSS	The results showed that on a scale of mild stress (26.4%), moderate stress (9.5%) and severe stress (3.9%)
6	(Kujawa, Green, Compass, Dickey, & Pegg, 2020)	Exposure to COVID-19 pandemic Stress : Associations with Depression and Anxiety in Emerging Adults in The United States	Respondents were collected through the online platform CloudResearch using the Mechanical Turk (Mturk) Toolki. Data analysis using independent t-test and Levene test on SPSS	The results showed that stressful events in adolescents were very common in May, especially in women, and blacks. Symptoms of depression and anxiety were high overall, but decreased on follow-up assessments
7	(Murata et al., 2021)	The Psychiatric Sequelae of The COVID-19 Pandemic in Adolescents, Adults, and Health Care Workers	Respondents were collected through an online survey on social media Facebook and Instagram from 27 April through July 1 Recruitment also takes place through the University of Pittsburgh, University of Pittsburgh Medical Center, and other healthcare systems around Pittsburgh	The results showed that the clinically significant increase in psychiatric symptoms was due to the impact of the COVID-19 pandemic. Loneliness can be a factor in increasing mental disorders in adolescents
8	(Simin, Sa'ari, Muhsin, Joli, & Abidin, 2020)	Depression Anxiety Stress Among Gifted and Talented Students in Malaysia During The Movement Control Order	Quantitative research, data analysis using SPSS with independent samples t-test	The results showed that (11.6%) experienced mild stress, (15.2%) moderate stress, (15.1%) severe stress and (7.1%) very severe stress.

No	Writer	Research Title (Mco)	Method	Research result
9	(Amendola, Spensieri, Hengartner, & Cerutti, 2021)	Mental health of Italian Adults During COVID-19 Pandemic	<i>Hierarchical multiple regressions</i> used to examine various psychosocial contextual factors and stress associated with psychopathological symptoms	The results showed that mental health disorders were more experienced by women than men. Age, ability to adapt to new situations and attitudes to coping with illness are associated with mental health symptoms.
10	(Banna et al., 2020)	The impact of the COVID-19 Pandemic on The Mental Health of The Adult Population in Bangladesh: a Nationwide cross-sectional Study	Research with Cross Sectional design, sample recruitment is done online on social media	The results of the study show that the COVID-19 pandemic has a negative impact on life activities and can affect mental health, work, economy and education
12	(Adrian, Putri, & Suri, 2021)	The Relationship of Online Learning in the Covid-19 Pandemic Period with the Stress Level of S1 Nursing Students STIKes Baiturrahim Jambi	The research conducted is a quantitative research with a cross-sectional approach	The results of the research conducted on the Jambi students showed that online learning was associated with the occurrence of stress in students.
13	(Zhang et al., 2020)	The Psychological Impact of the COVID-19 Pandemic on Teenagers in China	The study used a cross-sectional online survey	The results showed that during the COVID-19 pandemic in China, more than a fifth of middle and high school students experienced mental health problems. The results show that inappropriate stress coping is a risk factor for stress
14	(Meiling Qi, Li, Moyle, Weeks, & Jones,	Physical Activity, Health-Related Quality of Life, and Stress among the	The study used a cross-sectional online survey	The results show that the COVID-19 pandemic is associated with physical activity and stress in adolescents in China

No	Writer	Research Title	Method	Research result
	2020)	Chinese Adult Population during the COVID-19 Pandemic		
15	(Hidayah, Muhammad Ikram, Sutria, & UIN Alauddin Makassar, 2020)	Stress Levels and Coping Strategies for Nursing Students during the Covid19 Pandemic	This research is a quantitative research with analytical descriptive approach. The technique used in data collection uses purposive sampling and sampling techniques consecutive sampling	The results showed that 27% of students had moderate stress levels and about 5% of students experienced severe stress during the COVID-19 pandemic
16	(Kujawa et al., 2020)	Exposure to COVID-19 Pandemic Stress : Associations with Depression and Anxiety in Emerging Adults in The United States	Respondents were collected through the online platform CloudResearch using the Mechanical Turk (Mturk) Toolki. Data analysis using independent t-test and Levene test on SPSS	The results showed that stressful events in adolescents were very common in May, especially in women, and blacks. Symptoms of depression and anxiety were high overall, but decreased on follow-up assessments
17	(Benjamin et al., 2020)	Adolescent psychiatric disorders during the Covid-19 pandemic and lockdown	A narrative literature review	The results of this study suggest that preliminary studies on adolescent mental health during the COVID-19 outbreak support the risk of PTSD symptoms, depression, and anxiety during the pandemic.
18	(Loades et al., 2020)	Impact of Covid-19 on Mental Health in Adolescents: A Systematic Review	This study follows the PRISMA guidelines for systematic reviews of 16 quantitative studies conducted in 2019–2021 with 40,076 participants.	Many participants with physical health problems met the screening criteria for internalizing disorders, which were significantly higher than the levels found among participants without physical health conditions. Much greater

No	Writer	Research Title	Method	Research result
				declines in self-reported mental health were observed during the COVID-19 period compared to the previous 3 months among adolescents who reported physical health problems compared to those without physical health problems. Substance use does not appear to be affected.
19	(Liang et al., 2020)	The Effect of Covid-19 on Youth Mental Health Leilei	A cross-sectional study was conducted two weeks after the occurrence of COVID-19 in China.	The results of this study indicate that almost 40.4% of the adolescent group has a tendency to experience psychological disorders. So, this is overwhelming evidence that infectious diseases, such as COVID-19, may have a profound effect on adolescents' mental health.
20	(Hawke et al., 2020)	Impacts of the COVID-19 pandemic on youth health among youth with physical health challenges	A cross-sectional survey of 622 youth aged 14 to 28 was conducted.	Many participants with physical health problems met the screening criteria for internalizing disorders, which were significantly higher than the levels found among participants without physical health conditions. Much greater declines in self-reported mental health were observed during the COVID-19 period compared to the previous 3 months among adolescents who reported physical health problems compared to those without physical health problems. Substance use does not appear to be affected.
21	(Zheng, Xiao, Xie, Wang, & Wang,	Prevalence and Characteristics of Obsessive-Compulsive	Is a qualitative Research subjects	29.2% prevalence for students. Students have 2,169 times the risk of developing OCD compared

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No	Writer	Research Title	Method	Research result
	2020)	Disorder Among Urban Residents in Wuhan During the Stage of Regular Control of Coronavirus Disease-19 Epidemic	are 15-24	to health workers

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## DISCUSSION

### **The impact of the Covid-19 pandemic on stress in adolescents**

Research conducted in Indonesia showed that the COVID-19 pandemic, which has a negative impact on education, can be a stressor for adolescents. Changes in the learning process carried out online were one of the academic stressors for students in Indonesia. There were several obstacles experienced by students, especially students who live in areas with limited internet signal. Distance learning was considered less effective in its implementation, in addition to giving a large number of tasks with a short working time can strengthen the potential for stress. This was in line with the previous study by Andiarna (2020) which in their research results show that online learning has an effect on stress in adolescents. The results of this study are also in line with research conducted by Harahap et al. (2020), Adrian et al. (2021) Kusuma et al. (2020) and Hidayah et al. (2020), in their research conducted on students, they found that students experienced stress during changes in the learning process. In addition, research conducted by Nasrudin & Umi Azizah (2020) explains that the stressors faced by adolescents in addition to changes in learning methods include feeling lonely, worrying about the future, changes in daily activities to worries about the health of family members and themselves. In addition, research conducted by Nasrudin & Umi Azizah (2020) explained that the stressors faced by adolescents in addition to changes in learning methods include feeling lonely, worrying about the future, changes in daily activities to worries about the health of family members and themselves.

Not only in Indonesia, in other developing countries, online learning that occurred during the COVID-19 pandemic had an impact on student boredom. Research conducted by Simin et al. (2020) of adolescents in Malaysia showed that students experienced stress during the COVID-19 pandemic. Not different from the research results conducted in Indonesia and other developing countries, research conducted in the Philippines showed similar results, feelings of boredom, worry and anxiety became the stressors in adolescents in the Philippines (Tee et al., 2020). Research conducted by Banna et al (2020) in India which is a country with a high positive case showed that the negative impact generated by the COVID-19 pandemic does not only have an impact on life, work, economic activities but also on mental health, especially stress on teenager. Research conducted in China showed that inappropriate stress coping strategies are a risk factor for stress in adolescents during the pandemic (Zhang et al., 2020).

Study conducted in developed countries displays a variety of stressors in adolescents. Boredom, worry and anxiety about contracting COVID-19 are stressors for adolescents (Murata et al., 2021). Research conducted by Yarrington et al. (2021) and Kujawa et al. (2020) explained that stress that occurs in adolescents in America only occurs in the first week. This can happen by several factors, including the groups most affected by COVID-19 are parents and health workers, on the other hand, teenagers are not the group most affected by the COVID-19 pandemic. In addition, teenagers are likely to underestimate the risks that occur



due to the pandemic. In other developed countries, research conducted by Amendola et al. (2021) stated that attitudes and knowledge related to coping with stress can affect the occurrence of stress, his research conducted on Italian adolescents stated that the ability to adapt to new situations and attitudes to cope with illness were related to mental health symptoms.

### **The impact of the Covid-19 pandemic on trauma in adolescents**

The negative impact of the COVID-19 pandemic on the world of education is one of the sources of trauma for teenagers. Changes in the learning process carried out online have become one of the traumas in the world of education for students. There were found several obstacles experienced by students, especially students who live in areas with limited internet signal. Online learning was considered less effective in implementation, therefore giving homework or school assignments in large quantities with a very short processing time can result in the potential for trauma. This was in line with previous research (Andiarna, 2020) which stated that online learning is very influential on stress and trauma among adolescents. This is also based on research conducted by Harahap (2020).

Research conducted by Nasrudin & Umi Azizah (2020) explained that the trauma faced by adolescents in addition to changes in learning methods including feeling lonely, feeling afraid, worried about the future, changes in daily activities to worries about the health of family members and themselves. These were in contrast to studies conducted on adolescents in America, Yarrington et al. (2021) and Kujawa et al. (2020) in their research stated that trauma that occurs in adolescents in America only occurs in the first week. This happened due to several factors, including the groups most affected by COVID-19 were parents and health workers, on the other hand, teenagers were not the group most affected by the COVID-19 pandemic. In addition, teenagers are likely to underestimate the risks that occur due to the pandemic. Vibrianti (2020) stated that several universities in Indonesia felt they were not ready to use learning technology with online or distance systems.

### **The impact of the pandemic on anxiety in adolescents**

The negative impact of the Covid-19 pandemic on adolescent mental health was very influential. Fear and anxiety were main symptoms found according to Utami et al. (2020). The results of the literature review showed that there was a relationship between the Covid-19 pandemic and the mental health of adolescents. Fear, worry and stress are normal responses to perceived or real threats and when faced with uncertainty or the unknown. In line with the previous study (Benjamin et al., 2020) which suggested that preliminary studies on adolescent mental health during the COVID-19 outbreak support the risk of PTSD symptoms, depression, and anxiety during the pandemic. The other study (Loades et al., 2020) explained that there was an increase in anxiety in adolescents during the Covid-19 pandemic. Liang et al. (2020) showed that almost 40.4% of the sample adolescents were found to be vulnerable to psychological problems and 14.4% of the sample of adolescents with symptoms of Post Traumatic Stress Disorder (PTSD). Univariate logistic regression revealed that adolescent mental health was significantly associated with low education. In addition, teenagers who have physical health diseases have also been in the spotlight since the Covid-19 pandemic.

The other relevant study (Hawke et al., 2020) explained that many participants with physical health problems met the screening criteria for internalizing disorders, which was

significantly higher than the levels found among participants without physical health conditions. Much greater declines in self-reported mental health were observed during the COVID-19 period compared to the previous 3 months among adolescents who reported physical health problems compared to those without physical health problems. So there must be social support from people around for mental health in adolescents. According to what is in the previous study by Qi et al. (2020), only 24.6% of adolescents reported a high level of social support, most adolescents (70%) reported moderate levels of support, and 5.4% reported low support.

## **CONCLUSIONS**

From the results of analysis of the contents of published articles, which mainly include aspects of the objectives and study results, it was obtained an overview about the impact of the COVID-19 pandemic on the emergence of mental health problems in adolescents.

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## **REFERENCES**

- Adrian, FA, Putri, VS, & Suri, M. (2021). The Relationship of Online Learning in the Covid-19 Pandemic Period with the Stress Level of S1 Nursing Students STIKes Baiturrahim Jambi. *Baiturrahim Jambi Academic Journal*, 10(1), 66. <https://doi.org/10.36565/jab.v10i1.276>
- Amendola, S., Spensieri, V., Hengartner, MP, & Cerutti, R. (2021). Mental health of Italian adults during the COVID-19 pandemic. *British Journal of Health Psychology*, 26(2), 644–656. <https://doi.org/10.1111/bjhp.12502>
- Andiarna, F., & Kusumawati, E. (2020). The Effect of Online Learning on Student Academic Stress During the Covid-19 Pandemic *Journal of Psychology*, 16(2), 139. <https://doi.org/10.24014/jp.v16i2.10395>
- Annisa, DF, & Ifdil, I. (2016). Concept of Anxiety (Anxiety) in the Elderly (Elderly). *Counselor*, 5(2), 93. <https://doi.org/10.24036/02016526480-0-00>
- Banna, MH Al, Sayeed, A., Kundu, S., Christopher, E., Hasan, MT, Begum, MR, ... Khan, MSI (2020). The impact of the COVID-19 pandemic on the mental health of the adult population in Bangladesh: a nationwide cross-sectional study. *International Journal of Environmental Health Research*, ( ), 1–12. <https://doi.org/10.1080/09603123.2020.1802409>
- Benjamin, S., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Rose, M. (2020). Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. *Psychiatry Research*, 291(June), 113264. <https://doi.org/10.1016/j.psychres.2020.113264>
- Damirchi, ES, Mojarrad, A., Pireinaladin, S., & Grijbovski, AMM (2020). The Role of Self-Talk in Predicting Death Anxiety, Obsessive-Compulsive Disorder, and Coping Strategies in the Face of Coronavirus Disease (COVID-19). *Iranian Journal of Psychiatry*. <https://doi.org/10.18502/ijps.v15i3.3810>

- Fauziyyah, R., Awinda, RC, & Besral, B. (2021). The Impact of Distance Learning on Students' Stress and Anxiety Levels during the COVID-19 Pandemic *Journal of Biostatistics, Population, and Health Informatics*, 1(2), 113. <https://doi.org/10.51181/bikfokes.v1i2.4656>
- Fitria, L., Neviyarni, Netrawati, & Karneli, Y. (2020). Cognitive Behavior Therapy Counseling to Overcome Anxiety During the Covid-19 Pandemic. *Al-Irsyad: Journal of Education and Counseling*, 10(1), 23–29.
- Hawke, LD, Monga, S., Korczak, D., Hayes, E., Relihan, J., Darnay, K., ... Henderson, J. (2020). Impacts of the COVID-19 pandemic on youth mental health among youth with physical health challenges. 2020(August), 1–8. <https://doi.org/10.1111/eip.13052>
- Hidayah, N., Muhammad Ikram, R., Sutria, E., Studi, PS, & UIN Alauddin Makassar, F. (2020). Stress Levels and Coping Strategies for Nursing Students during the Covid-19 Pandemic. *Variance*, 184–192. Retrieved from <https://ojs.unm.ac.id/variansistatistika/article/view/19505>
- Kujawa, A., Green, H., Compas, BE, Dickey, L., & Pegg, S. (2020). Exposure to COVID-19 pandemic stress: Associations with depression and anxiety in emerging adults in the United States. *Depression and Anxiety*, 37(12), 1280–1288. <https://doi.org/10.1002/da.23109>
- Liang, L., Ren, H., Cao, R., Hu, Y., Qin, Z., & Li, C. (2020). The Effect of COVID-19 on Youth Mental Health. (1163).
- Loades, ME, Chatburn, E., Higson-sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... Crawley, E. (2020). Rapid Systematic Review : The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry*. <https://doi.org/10.1016/j.jaac.2020.05.009>
- Moh, M. (2020). Moh. Muslim: Stress Management during the Covid-19 Pandemic ” 193. *Journal of Business Management*, 23(2), 192–201.
- Murata, S., Rezeppa, T., Thoma, B., Marengo, L., Krancevich, K., Chiyka, E., ... Melhem, NM (2021). The psychiatric sequelae of the COVID-19 pandemic in adolescents, adults, and health care workers. *Depression and Anxiety*, 38(2), 233–246. <https://doi.org/10.1002/da.23120>
- muyasaroh. et al. (2020). A Study of the Types of Anxiety in the Cilacap Community in Facing the Covid-19 Pandemic. Institute for Research and Community Service (LP2M) Nahdlatul Ulama Al Ghazali University (Unugha) Cilacap.
- Novitasari, I., Kurniawan, ST, & Kanita, MW (2020). Description of Stress Levels of Nurse Profession Students at Kusuma Husada University Surakarta During Study From Home (Sfh) During the Covid-19 Pandemic. Description of Stress Levels of Nurse Profession Students at Kusuma Husada University Surakarta During Study From Home (SFH) Dd During the COVID-19 Pandemic, 46, 1–12.
- Presetian. (2020). Health Literacy of Non-Communicable Diseases: Literature Review. *Journal of NERS Lantern*, 1(8), 2020.

- Qi, Meiling, Li, P., Moyle, W., Weeks, B., & Jones, C. (2020). Physical Activity, Health-Related Quality of Life, and Stress among the Chinese Adult Population during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 17(18). <https://doi.org/10.3390/ijerph17186494>
- Qi, Meng, S, M., Zhou, S., S, M., Guo, Z., Zhang, L., & Min, H. (2020). The Effect of Social Support on Mental Health in Chinese Adolescents During the Outbreak of COVID-19. (January).
- Qiu J, Shen B, Zhao M, et al. (2020). A nationwide Among, survey of psychological distress Epidemic: Chinese people in the COVID-19 Recommendations., Implications and policy 100213., *General Psychiatry* 33:
- Sabir, A., & Phil, M. (2016). Overview of Public Perceptions of Disasters in Indonesia. *Journal of Economics and Social Sciences*, 5(3), 304–326.
- Safrizal ZA, Ms., Danang Insita Putra, P., Safriza Sofyan, SE, AK, MC, & MPH, DB (2020). General Guidelines for Facing the Covid-19 Pandemic for Local Governments: Prevention, Control, Diagnosis and Management. In the Ministry of Home Affairs. <https://doi.org/10.1017/CBO9781107415324.004>
- Covid-19 task force. (2021). The situation of the COVID-19 virus in Indonesia.
- Setiawan, AR (2020). Scientific Literacy Activity Sheet for Distance Learning on the Topic of Coronavirus Disease 2019 (COVID-19).
- Simin, N., Sa'ari, CZ, Muhsin, SBS, Joli, NS, & Abidin, MHZ (2020). Depression anxiety stress among gifted and talented students in Malaysia during the Movement Control Order (MCO). *Journal of Critical Reviews*, 7(11), 743–745. <https://doi.org/10.31838/jcr.07.11.132>
- Tee, ML, Tee, CA, Anlacan, JP, Aligam, KJG, Reyes, PWC, Kuruchittham, V., & Ho, RC (2020). Psychological impact of COVID-19 pandemic in the Philippines. *Journal of Affective Disorders*, 277, 379–391. <https://doi.org/10.1016/j.jad.2020.08.043>
- Utami, RA, Mose, RE, & Martini, M. (2020). Community Knowledge, Attitudes and Skills in COVID-19 Prevention in DKI Jakarta. *Journal of Holistic Health*, 4(2), 68–77. <https://doi.org/10.33377/jkh.v4i2.85>
- WHO. (2021). Coronavirus disease (COVID-19) pandemic.
- Yarrington, JS, Lasser, J., Garcia, D., Vargas, JH, Couto, DD, Marafon, T., ... Niles, AN (2021). Impact of the COVID-19 Pandemic on Mental Health among 157.213 Americans. *Journal of Affective Disorders*, 286, 64–70. <https://doi.org/10.1016/j.jad.2021.02.056>
- Zhang, C., D, M., Ye, M., Ph, D., Fu, Y., D, M., ... D, M. (2020). The Psychological Impact of the COVID-19 Pandemic on Teenagers in China. (January).
- Zheng, Y., Xiao, L., Xie, Y., Wang, H., & Wang, G. (2020). Prevalence and Characteristics of Obsessive-Compulsive Disorder Among Urban Residents in Wuhan During the Stage of Regular Control of Coronavirus Disease-19 Epidemic. 11(December), 1–7. <https://doi.org/10.3389/fpsyt.2020.594167>