

**How to Cite:**

Azni, A. Y., Keliat, B. A., & Susanti, N. C. (2022). Differences in emotional mental disorders of junior high school students and college students during online learning. *International Journal of Health Sciences*, 6(S9), 1506–1514. <https://doi.org/10.53730/ijhs.v6nS9.12595>

# Differences in emotional mental disorders of junior high school students and college students during online learning

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**Abstract**--Online learning during the COVID-19 pandemic has an impact on junior high school students and college students; one of the impacts is increased stress, which can cause emotional mental disorders in junior high school students and college students. Purpose: This study aims to determine differences in mental and emotional disorders of junior high school students and college students during online learning. Method: This study employed a quantitative method with a cross-sectional design approach. This study involved 240 respondents, consisting of 120 college students and 120 junior high school students. The data were collected using the respondent characteristics questionnaire, the Self-Reporting-20 (SRQ-20) questionnaire for students, and the Strength and Difficulties Questionnaire (SDQ) for junior high school students. The data were analyzed using the univariate test and bivariate test with an independent t-test. Results: The results show significant differences in emotional mental disorders of junior high school students and college students during online learning ( $p = 0.000$ ). Junior high school students have a significantly higher average value of emotional mental disorder ( $p\_value < 0.05$ ) than college students do. Conclusion: Promotive and preventive efforts can be applied to prevent emotional mental disorders. This research is expected to describe emotional mental disorders in online learning during the COVID-19 pandemic to prevent emotional mental disorders in junior high school students and college students.

**Keywords**--COVID-19 pandemic, emotional mental disorder, college students, online learning, junior high school students.

## Introduction

COVID-19 is a disease that has spread globally, including in Indonesia, and caused a pandemic. COVID-19 has spread to all levels of society, including college students and junior high school students who are possibly exposed to the virus. The number of positive cases in students aged 18-30 is 5,476 people (20.7%), and the death rate is 48 people (3%) (Karyono & Wicaksana, 2020). Moreover, 48 people (7.2%) aged 17-25 years are reported to suffer from COVID-19 (Elviani et al., 2021).

In addition, the number of junior high school students who confirmed COVID-19 positive has increased, as evidenced by the global data that 13.6 million (14.5%) adolescents aged 15-24 years are confirmed COVID-19 (World Health Organization, 2021). The Research and Development Agency (Riskeddas) reports that 362,657 people (9.53%) people aged 15-24 years are confirmed COVID-19 positive in Indonesia (Badan Litbangkes et al., 2021). The increase in the number of positive cases of COVID-19 in adolescents has impacted the lives of adolescents, especially junior high school students.

COVID-19 causes biological, psychological, and sociocultural impacts. A preliminary study has found that 50% of college students are exposed to the virus with symptoms of insomnia, flu, and fever. A greater impact of COVID-19 on adolescents is associated with more anxiety, depressive symptoms, and sleep disturbances (Kuhlman et al., 2021). Another study on college graduates has found that 71.7% of students experienced anxiety (Hario, 2020). Besides causing physical health, the COVID-19 pandemic has also changed the lives of junior high school students and college students and can affect social life due to distance learning.

Distance learning can cause stress to junior high school students and college students. A study on students found that, on average, they experience moderate stress during the COVID-19 pandemic (Harahap et al., 2020) so that their grade point averages (GPA) decrease and academic help-seeking is low (Putri et al., 2018). In addition, distance learning can cause junior high school students to experience emotional mental disorders (Lindasari et al., 2021). In 2018, Riskesdas reports that the prevalence of emotional mental disorders in students aged > 15 years has increased to 9.8% compared to that in 2013, which was 6% (Riskesdas, 2018). Such a condition is probably caused by increased stress, especially during the COVID-19 pandemic. Prolonged stress can dwindle learning motivation (Sakamoto, 2015), resulting in lazy learning behavior and learning failure (Lindasari et al., 2021). The increasing cases of emotional mental disorders should be considered because they can decline the learning motivation of junior high school students and college students.

This research was conducted at the Faculty of Nursing, Universitas Indonesia (FIK UI) and Pekanbaru State Junior High School. This study referred to the results of a preliminary study on 4 students, which has revealed that online learning has increased assignments and 75% of respondents experience emotional mental disorders. The measurement of emotional mental disorders in junior high school adolescents in Pekanbaru City has obtained that 55.5% of the

respondents (15 from 27 students) experience emotional mental disorders. During the interview, the respondents explain that they have missed direct learning activities, want to meet friends, and feel tired of being at home alone because of doing daily assignments. To date, the number of COVID-19 cases, emotional mental disorders, and the effect of online learning on emotional mental disorders in junior high school students are not certainly known. Based on the aforementioned description, the researchers are interested in investigating differences in emotional mental disorders of junior high school students and college students during online learning.

## Method

This research was conducted using a cross-sectional approach with an unpaired comparative analytic research design. Moreover, this research involved 120 junior high school students aged 14-16 years and 120 college students aged >18 years who had conducted online learning for the last six months. This research was conducted online using the Google Form while still applying research ethics. Differences in emotional mental disorders of junior high school students and college students during online learning were measured using the Self-Reporting Questionnaire (SRQ)-20 for college students and the Strength and Difficulties Questionnaire (SDQ) for junior high school students. Normally distributed data were analyzed using the univariate test and bivariate test. Meanwhile, not normally distributed data were analyzed using the Mann-Whitney test.

## Results and Discussion

This study obtained data on emotional mental disorders in junior high school students and college students as well as biological, psychological, and sociocultural stressors. Data on biological, psychological, and sociocultural stressors experienced by junior high school students and college students are presented in Table 1.

Table 1. Biological, psychological, and sociocultural stressors experienced by junior high school students and college students during online learning (n = 240)

No	Stressor	Junior high school students				College students			
		Have		Do not have		Have		Do not have	
		n	%	n	%	n	%	n	%
1	Biological								
	History of COVID-19 positive	6	5	114	95	42	35	78	65
	History of travel abroad or within the country and infected with COVID-19	4	3.3	116	96.7	4	3.3	116	96.7
	Close contact with COVID-19 patients without personal protective equipment	10	8.3	110	91.7	40	33.3	80	66.7

	Close contact with hospital workers who provide direct care to COVID-19 patients	10	8.3	110	91.7	15	12.5	105	87.5
	Symptom history of acute respiratory infection (ARI), fever, cough, flu, or blown after 14 days of close contact or travel	8	6.7	112	93.3	23	19.2	97	80.8
	History of severe respiratory distress	6	5	114	95	4	3.3	116	96.7
	History of PCR test	8	6.7	56	93.3	58	48.3	62	51.7
2	Psychological								
	Worried about the COVID-19 pandemic	74	61.7	46	38.3	94	78.3	26	21.7
	Feeling bored with online learning	80	66.7	40	33.3	98	81.7	22	18.3
3	Sociocultural								
	Limited interaction	76	63.3	44	36.7	105	87.5	15	12.5

Differences in emotional mental disorders of junior high school students and college students when having online learning during the COVID-19 pandemic are analyzed using the Mann-Whitney test because the data are not normally distributed (Table 2).

Table 2. Differences in mental-emotional disorders of junior high school students and college students during online learning (n = 240)

Variable	Group	n	Mean	Mean diff	SD	SE	95% CI	P-value
Emotional mental disorders	College students	120	8.31	4,92	4.974	0.454	10.04-1.49	0.000
	Junior high school students	120	13.23		5.363	0.490		

Table 2 shows that the average value of emotional mental disorders in junior high school students is 13.23 (33.07%). Meanwhile, the average value of emotional mental disorders in college students is 8.31 (41.55%). Thus, junior high school students have a significantly higher score of emotional mental disorder (p\_value < 0.05) than university students do.

Table 3. The distribution of emotional mental disorders in junior high school students and college students during online learning (n = 240)

Category	No GME		GME		Total		P-Value
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	
College	38	31.7	82	68.3	120	50%	0,000

students						
Junior high school students	73	60.8	47	39.2	120	50%
Total	111	46.3	129	53.8	240	100%

Table 3 denotes that 82 college students (68.3%) experience mental disorders, and 47 junior high school students (39.2%) experience emotional mental disorders.

Emotional mental disorders refer to a condition when an individual experiences an emotional change that can develop into a pathological condition (Prasetio & Rahman, 2019). Disorders are often known as "psychological distress" or "mental distress." Emotional mental disorders can occur in children and adolescents in the form of sadness, crying, slow growth, and different development from peers. Children and adolescents get physical complaints, such as dizziness, nausea, stomach pain, and chronic diarrhea, but the medical examination shows no disturbances or pain in any part of their bodies. Emotional mental disorders frequently occur in the form of attention deficit, hyperactivity disorders, depression, and behavior disorders (Setiawati, 2017).

The above results signify that the number of college students experiencing emotional mental disorders is bigger than that of junior high school students, as seen in biological, psychological, and sociocultural stressors that cause emotional mental disorders. Meanwhile, the number of junior high school students experiencing biological stressors is more than that of college students; 42 students have a history of COVID-19 positive. These results from the Indonesian context are equal to the global figures—997,348 global cases (WHO, 2022) and 5,831 new cases in Indonesia (Satuan Tugas Penanganan COVID-19, 2022). A large number of positive COVID-19 can cause problems for students, such as worry and anxiety due to the stress of being exposed to the COVID-19; such a condition can cause stress and emotional mental disorders (Bhattacharjee & Acharya, 2020; Mayo Clinic, 2021). The history of COVID-19 positive can also cause stress and emotional mental disorders.

The most common psychological stressor is feeling bored with online learning, as found in 98 students (81.7%). A study conducted in Pasar Rebo, Jakarta has revealed that 48 nursing students (92.31%) feel bored during online learning (Krishna, 2022). The boredom occurs because the students are still not accustomed to a new learning method, namely online learning (Hambali et al., 2022; Nurchita & Susantiningsih, 2020). Online learning using monotonous methods and applications can cause boredom, laziness in participating in the class, overwhelming tasks and materials, lack of explanations, and fatigue (Pawicara & Conilie, 2020). The feeling of boredom can cause changes in mental health and stress in students. The perceived stress can be in the form of academic stress; consequently, the academic performance of the students is affected, they become afraid of and apathetic about tasks, and they only imitate the work of their friends (Jahring et al., 2021). Moreover, stress can lead to insomnia, psychosomatic complaints, and emotional distress (Chandra, 2020).

Saturation during online learning in students can cause stress and emotional distress that can affect academic performance.

Furthermore, 80 (66.7 %) junior high school students experience psychological stressors because they feel bored with online learning and face several difficulties, such as technological problems, inability to understand learning, inability to ask questions to teachers, and lack of motivation (Magson et al., 2021a). This learning can also cause students to feel restless because the teacher gives overloaded tasks (Rahmi et al., 2020). In addition, online learning disables students to interact with friends or teachers directly and play with peers at school, and forces them to study alone at home with their parents; finally, they become bored (Purwanto et al., 2020).

Furthermore, 105 (87.5 %) students suffer from social stressors in the form of limited interaction. This finding is comparable to research in Mataram, which has discovered that students have neither met their classmates nor carried out joint activities outside of campus (Sutisna & Widodo, 2021). Meanwhile, research in Norway states that 80% of students experience limited social interactions (Almendingen et al., 2021) because they are accustomed to messages (chat) but not accustomed to online learning so that the communication process does not go well (Sutisna & Widodo, 2021). The communication process that does not go well can increase depression, anxiety, loneliness (Ellis et al., 2020), and tension in friendly relationships (Rogers et al., 2021). Prolonged increases can cause emotional mental disorders. Meanwhile, limited interaction can lead to emotional mental disorders.

Schools that shift to virtual or online schools create mental and emotional tension in adolescents. The inability to complete tasks and participate in important activities at school (sports, choir, and school plays) can lead to mental disorders in adolescents (Rogers et al., 2021). Hertz et al. (2021) have discovered that students who attend an online school have worse mental health problems than students who attend an offline school. Meanwhile, adolescents who receive virtual school have more mentally unhealthy days, show more persistently depressive symptoms, and were more likely to attempt to suicide than students using other learning models. Negative mental health consequences of online learning in students can include increased anxiety and absenteeism. This could stem from the increasing demand for new technology skills, productivity, and overloaded information (Alibudbud, 2021). Therefore, the internal environment (family and peers) and the external environment (online schools) will affect the mental health of adolescents.

## **Conclusion**

Emotional mental disorders can occur in junior high school students and college students during online learning. However, the disorders are more commonly found in college students than in junior high school students because they commonly experience biological stressors, especially the history of COVID-19 positive. In addition, psychological stressors (feeling bored with online learning) and social stressors (limited interaction) are equally experienced by junior high school students and college students.

## Acknowledgments

The researcher thanks Prof. Dr. Budi Anna Keliat, S.Kp., M.App.Sc., and Ns. Ice Yulia Wardani, SKp., M.Kep., Sp.Kep.J. as the thesis supervisors. Moreover, the researcher thanks the Ministry of Research, Technology, and Higher Education Indonesia for funding this research.

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