

Impact of The Covid-19 Pandemic on The Psychological Response of Adolescents: A Literature Review

Ahmad Zainuri¹, R Endro Sulistyono^{2*}, Arista Maisyarah³, Primasari Mahardhika Rahmawati⁴

¹Nursing Student, Faculty of Nursing, University of Jember, Indonesia

^{2,3,4}Vocational Nursing Program, Faculty of Nursing, University of Jember, Indonesia;
radendro1988@unej.ac.id (Corresponding Author)

Article Info:

Submitted:

29-12-2021

Revised:

29-03-2022

Accepted:

29-03-2022

DOI:

<https://doi.org/10.53713/nhs.v2i2.81>



This work is licensed
under CC BY-SA License.

ABSTRACT

The COVID-19 pandemic has had a tremendous impact on all aspects of life at all ages, especially adolescents, that require appropriate resolution. This virus causes panic and restrictions imposed by public health authorities in many countries, including travel bans, limiting social gatherings, and closing public schools. This limitation impacts the psychology of adolescents that are prone to emotional and behavioral development. This literature review aims to explore the impact of the covid-19 pandemic on adolescent psychological responses. This study uses a literature review method with article searches conducted on the Pubmed, ScienceDirect, and Scopus electronic databases. There were 686 articles in the search databases Pubmed, ScienceDirect, and Scopus, but only ten articles met all the inclusion criteria and were reviewed. The covid-19 can affect the physical and mental health of a teenager. The prevalence of psychological disorders in adolescents is relatively high. There are four psychological symptoms: stress, depression, anxiety, and sleep disturbances. As nurses, we can teach adolescents simple exercises, including deep breathing, muscle relaxation, and positive self-talk. Nurse has an essential helping them understand their role in society, understand that physical distance is not equal to distance emotional, and identify problems during the pandemic.

Keywords: COVID-19 pandemic; psychological response; adolescent; mental health; impact

INTRODUCTION

The covid-19 pandemic caused by the novel coronavirus (SARS-Cov2) is an unprecedented disease with a tremendous impact on all of humanity with long-term consequences that still need to be uncovered (Dragun et al., 2021). Adolescents may be more vulnerable than adults to mental health problems, especially during quarantine, as they are in a transitional phase from growing up in close-knit families to wider social networks with the increasing importance of peers who struggle with them, often with fragile self-esteem (Neural and Behavioral Signatures of Social Evaluation and Adaptation in Childhood and Adolescence: The Leiden Consortium on Individual Development (L-CID), 2020). Due to the high potential for infection and disease mortality, psychological events, especially in adolescents, also tend to be high (Qi et al., 2020). During this period, poor mental health can jeopardize adolescent development and future potential (Wambua et al., 2018). Therefore, more attention to adolescents' mental health is very important during this crisis.

Globally, there are 103,201,340 confirmed cases of covid-19, including 2,237,636 deaths reported to WHO. January 31, 2021, the number of cases rose to over 102 million, and the number of deaths to 2.2 million from 222 countries and territories. Globally, 3.7 million new cases were reported last week, a 13% decrease compared to the previous week, and the third week in a row saw a decline in cases. There were 96,000 new deaths, and a 1% decrease compared to the previous week (World Health Organization, 2021). According to WHO, there were 28,637,952 positive cases of COVID-19 and 917,417 deaths worldwide. According to the Centers for Disease Control and Prevention, the United States had 6,571,867 total cases, resulting in 195,053 deaths as of September 16, 2020. According to Satgas Covid-19 (2021), the number of active Covid-19 cases in Indonesia was 110.679 (14.46%), the number of recovered cases was 631.937 (82.57%), the number of dead cases was 22.734 (2.97%), and the addition of positive cases was +6,877. The number of deaths was 22.734 (2.97%) above the world average (2.17%), the cure rate reached 631.937

(82.57%), which was above the average world cure (70.73%), and the number of active cases was 110.679 (14.46%) which was below the World average (27.10%).

Infectious diseases are one of the greatest threats to human health and well-being. Since December 2019, new infections of covid-19 have spread rapidly throughout China and Internationally (Wenjun et al., 2020). The covid-19 pandemic has resulted in the risk of death from a viral infection and the risk of psychological symptoms among people, mainly due to the long-term nature of the pandemic, which is still developing today (Xiang et al., 2020). The world's governments have implemented lockdown and social distancing policies during the covid-19 pandemic to maintain citizens' security and safety, including the government's strategic efforts to prevent transmission. This policy is one of the most effective ways to reduce the spread of covid-19 so far (WHO, 2020). According to Kemdikbud RI, (2020) learning during the covid-19 pandemic is temporarily carried out with distance learning and limited face-to-face learning while still implementing health protocols. Mandatory behavior throughout the education unit environment is to use a mask, wash hands with soap or hand sanitizer every time you enter or leave the room, maintain a minimum distance of 1.5 meters, not make physical contact such as shaking hands and kissing hands, and applying cough/sneezing etiquette. During limited face-to-face learning, education is required to divide the hours of entry from each class, breaks, and exits from the education unit to minimize crowds simultaneously (Wenjun et al., 2020).

Along with the hormonal and biological changes associated with puberty, adolescence is a time of profound psychological and social transformation (Orben et al., 2020). In the early stages, adolescents aged 10-13 years cognitively have limited thinking capacity, but intellectual interests develop and become more critical. In the mid-adolescence stage, aged 14-16 years undergo many social and emotional changes, including increased self-involvement and increased drive for independence. Meanwhile, late 17-19 year-olds can reason about ideas, delay gratification, plan for the future, and gain a strong sense of identity (AMCHP, 2021). In the developmental stage, emotions, cognition, and peer relationships are oriented toward expanding positive future expectations and opportunities (D. Smirni et al., 2019). The pressing need in virtual learning environments increases inequalities in resources, access, and connectivity across families. It can also hinder the continuing development of youth in athletic skills or direct vocational skills with potential impacts on their higher education and professional future (CDC, 2021). Adolescents and their psychological and emotional reactions become less focused; even fragile individual souls, such as adolescents, have a high destabilizing and psychological effect. The decline in social relationships has provided a greater challenge to adolescents regarding psychological problems and psychiatric disorders (Lee, 2020). Previous outbreaks have reported that the psychological impact of quarantine can vary from immediate effects, such as irritability, fear of contracting and spreading the infection to family members, anger, confusion, frustration, loneliness, denial, anxiety, depression, insomnia, hopelessness, to extremes, consequences, including suicide (Dubey et al., 2020).

The primary interventions related to health education through parents, cognitive behavioral therapy for insomnia and interventions related to the possible treatment of post-traumatic stress disorder, as indicated by increased anxiety at bedtime and nightmares. Social support can relieve or reduce insomnia symptoms, anxiety, and depression. So that parents, school organizations, and other groups must provide social support to teenagers and young adults during the covid-19 pandemic (Robillard et al., 2021). Parents are the best example for children as advisers or model life skills are actual examples of reducing their psychological disorders. For every disappointment and uncertainty, parents need to be involved in it to instill a sense of control in adolescents, and parents can involve adolescents in decision making, especially in matters relating to their age. Meanwhile, school teachers can take the time to educate about covid-19 and preventive health behavior according to the maturity level of students. For example, help/teach the teenager simple exercises, including deep breathing, muscle relaxation, and positive self-talk. Teachers have an essential role in promoting students' mental health, helping to understand their role in society, understanding that social distancing is not the same as emotional distance, and identifying problems during a pandemic (Singh et al., 2020).

This research aims to explore or find relationships or find out the psychological response of adolescents during the covid-19 pandemic that has occurred since the end of last year, which was found in Wuhan City, China. Almost all over the world or countries experienced the outbreak. Thus, the author is interested in conducting a literature review discussion about the impact of the COVID-19 pandemic on adolescent psychological responses.

METHOD

This study uses a literature review method from existing literature on the impact of the covid-19 pandemic on adolescent psychology. The inclusion criteria in the article used PICO. Journal articles must meet inclusion criteria, including Population: Covid-19, Adolescents 11-19 years; Outcomes: Impact, Psychological, Mental Health; Study Design: Quantitative, Original Research; and Publications: 2017-March 2021. Quality analysis in each study was checked with multiple questions to assess study quality (n=10). Assessment of article quality using JBI Critical Appraisal

for Cross-Sectional research design, each criterion is given a score of 'yes', 'no', 'unclear', or 'not applicable', each criterion with a score of 'yes' is given one point, and another score is zero, each study score is then summed (Moola, Munn, 2017). And the Critical Appraisal Skills Program (CASP) for Cohort Studies design includes 12 questions; the assessment criteria are rated 'yes', 'no', and 'not applicable' (CASP, 2018). The data will be processed for each selected article by making a theoretical mapping containing the author's name, title, purpose/problem, method, and results.

Table 1. Theoretical Mapping

Author	Title	Problem	Method	Result
(Guo et al., 2020) Quartiles 1	Is the psychological impact of exposure to COVID-19 stronger in adolescents with pre-pandemic maltreatment experiences? A survey of rural Chinese adolescents	To examine whether exposure to COVID-19 predicts increased levels of anxiety and post-traumatic stress symptoms and whether pre-pandemic experiences of abuse exacerbate this impact on mental health in adolescents.	D = Cross-sectional. S = There are 7208 subjects, the population is taken from middle school and high school in the age range of 11 to 18 years V = Zung self-rated (SAS), Adverse Childhood Experiences (ACE) I = This online survey questionnaire is distributed and retrieved via a web-based platform. A = Multivariable linear regression on PTSD or anxiety in three steps, and in each step the same covariates were used, gender, ethnicity, paternal education level, maternal education level, family income, previous exposure.	Reported family abandonment amounted to 0.15 for PTSD (post-traumatic stress disorder), while family abandonment amounted to 0.11 for anxiety. Experience or fear of exposure to COVID-19 predicts a statistically significant difference in PTSD and anxiety. The standard beta ranges from 0.06 to 0.09, so the effect size is much smaller than that found for ACE. The fear of being exposed to the virus was 0.15 for PTSD, and 0.08 for anxiety.
(Qi et al., 2020) Quartiles 1	The Effect of Social Support on Mental Health in Chinese Adolescents During the Outbreak of COVID-19	To explore the relationship between levels of social support and mental health among Chinese adolescents during the outbreak.	D = Cross-sectional S = A total of 7,202 teenagers aged 14-18 years V = Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorder (GAD-7) I = Online survey to assess mental health problems. A = Binary multivariate logistic regression analysis was used to explore the relationship between predictors of depression and anxiety symptoms.	Higher depression 95% confidence interval, 95% anxiety symptoms. 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.
(Commodari & La Rosa, 2020) Quartiles 2	Adolescents in Quarantine During covid-19 Pandemic in Italy: Perceived Health Risk, Beliefs, Psychological Experiences and Expectations for the Future.	To find out the perception of risk related to covid-19 and the psychological experience of adolescents during the pandemic.	D = Cross sectional. S = 978 adolescents (boys = 339, girls = 639) age range: 13-20 years old V = Statistical Package for the Social Sciences (SPSS) version 25.0 (IBM Corporation, Armonk, NY, United States) I = Using internet-based questionnaires A = Qualitatively coded and analyzed to show emerging themes.	About 40% of students reported feeling more tense and sad (42.6%) and more irritable (49.6%) than usual, with increased rumination (59.6%). A high percentage reported difficulty concentrating (55.9%) and sleeping (55.6%). A small number of students reported eating difficulties, such as forgetting to eat or skipping meals (13.7%), heart rate disturbances (18.7%), frequent crying (34.4%), or other symptoms that indicate a clear condition.
(Zhang et al., 2020) Quartiles 1	The Psychological Impact of the COVID-19 Pandemic on Teenagers in China	To survey middle and high school students in China to better understand the psychological consequences, such as anxiety,	D = Cross-sectional S = 493 junior high school students (male = 239, mean age = 13.93 years) and 532 high school students (male = 289, mean age = 17.08 years) V = Skala Ketahanan Singkat (BRS), Coping Style	Resilience and positive coping are protective factors for the occurrence of symptoms of depression, anxiety, and stress in junior and senior high school students (p<0.05). Positive coping was a protective factor for trauma-related stress in junior high

Author	Title	Problem	Method	Result
		depression, and stress, of the COVID-19 pandemic.	Questionnaire (CSQ), Impact of Event Scale (IES), Depression Anxiety Stress Scale (DASS-21) I = Online survey using structural questionnaire A = SPSS versi 16.0 (IBM, Chicago, IL)	school students ($p < 0.05$). Negative coping is a risk factor for depression, anxiety, stress symptoms, and trauma-related stress in junior and senior high school students ($p < 0.05$).
(Liu et al., 2021) Quartiles 1	Associations between feelings/behaviors during COVID-19 pandemic lockdown and depression/anxiety after lockdown in a sample of Chinese children and adolescents	To identify factors associated with depression/anxiety in children and adolescents after the COVID-19 pandemic lockdown.	D = Cross-sectional S = A total of 5175 children and adolescents aged 9-18 years V = PHQ-9 versi Cina, Koefisien Cronbach GAD-7 versi Cina I = Online questionnaire survey "The Survey Star", Changsha Ranxing Information Science and Technology Co., Changsha, China) A = STATA 15.1	12.33% and 6.26% of all participants reported depression and anxiety after isolation, separately. Suicidal ideation, arguments with parents, insomnia, difficulty in concentrating during online learning, and anxious and depressed mood during lockdown were positively related to depression and anxiety after isolation.
(Dragun et al., 2021) Quartiles 1	Have lifestyle habits and psychological well-being changed among adolescents and medical students due to COVID-19 lockdown in Croatia?	To investigate eating habits, sleep and psychological well-being of adolescents and medical students during the COVID-19 lockdown in Split, Croatia.	D = Cross-sectional S = 1326 18 years old students V = Mediterranean Diet Presentation Score (MDSS), Perceived Stress Scale (PSS-10) questionnaire, Likert Scale I = Paper-based approach in the pre-covid-19 period and web-based approach during the covid-19 lockdown A = IBM SPSS Statistics (v21.0; IBM, Armonk, NY, USA).	The most notable changes were feeling refreshed after a night's sleep, reported by 31.5% of students during lockdown and 8.5% before; median sleep duration increased by 1.5 hours. Lockdown significantly affected the students' quality of life, happiness, optimism (all $p < 0.001$), and perceived stress ($p = 0.005$). There are differences in the stress response of pre-covid-19 and during the isolation of covid-19, during the isolation of covid-19 it was found that moderate stress was quite high among students (63.3%).
(Oosterhof et al., 2020) Quartiles 1	Adolescents' Motivations to Engage in Social Distancing During the COVID-19 Pandemic: Associations with Mental and Social Health	To identify youth motivation for social distancing, determine the extent to which different motivations are related to the degree of social distancing, and examine the relationship between social distancing and adolescent mental health and social health.	D = Cross sectional S = A total of 683 youths aged between 13 and 18 years old V = Perception-based social distance assessment, Interpersonal needs questionnaire, Patient Measurement Information System 8 items I = The study was advertised on various social media platforms (Facebook, Instagram, Twitter, Reddit), and participants self-selected into the study to complete a 10-minute survey. A = Multiple regression was used to test the main study hypothesis.	The most frequently reported motivations for social distancing relate to social responsibility and not wanting others to get sick. Motivations about state or city lockdowns, parental rules, and social responsibility were associated with greater social distancing, whereas motivations about not having alternatives were associated with less social distancing. Specific motivations for distancing were differentially associated with adolescent anxiety symptoms, depressive symptoms, burdens, and possessions
(Oliviero et al., 2021) Quartiles 1	Changes in Sleep Patterns and Disturbances In Children And	To find out the impact of confinement at home during the COVID-19 pandemic on sleep	D = Cross sectional S = A total of 4,314 adolescent subjects aged 13-18 years. V = Child Sleep Habits Questionnaire (CSHQ) I = anonymous online survey	School-age children and adolescents experienced the most significant delays: weekday bedtime 23 was reported by 28.4% of children aged 6 to 12 years during lockdown 0.9%, before 63.5% and 12, 3% of 13 to 18

Author	Title	Problem	Method	Result
	Adolescents In Italy During The Covid-19 Outbreak	patterns and sleep disorders in Italian children and adolescents.	A = Descriptive statistics	years old teens. Research was also delayed with most of the subjects waking up after 8 in all age groups and sleep duration increasing in all groups but not in the younger groups. Sleep disturbances increased in all groups but not in adolescents. The younger group experienced an increased prevalence of sleep difficulties, sleep anxiety, night awakenings, nightmares and sleep terrors.
(Munasinghe et al., 2020)	The Impact of Physical Distancing Policies During the COVID-19 Pandemic on Health and Well-Being Among Australian Adolescents	To find out changes in physical activity, dietary behavior, and well-being during the initial period of this policy.	D = Studi kohort prospektif S = A total of 1,298 participants aged 13–19 years V = MBAR, NSW Center for Public Health Nutrition, Kessler Psychological Distress I = Ethica Data smartphone app A = Multi-level multilevel logistic regression model	In Australia, a policy of limiting physical activity has been implemented during the covid-19 pandemic, psychological events due to the impact of the pandemic on adolescents during the implementation are relatively low, their responses based on a K6 19 score indicate "the possibility of psychological stress disorders occurring".
(S.-J. Zhou et al., 2020)	Sleep problems among Chinese adolescents and young adults during the coronavirus-2019 pandemic	To assess the prevalence and correlation of insomnia symptoms in Chinese adolescents and young adults affected by the coronavirus disease-2019 (COVID-19) outbreak.	D = Cross-sectional S = A total of 11,835 subjects, involving Chinese adolescents and young adults aged 12-29 years V = Pittsburgh Sleep Quality Index (PSQI), Patient Health Questionnaire (PHQ-9), Generalized Anxiety Disorders Scale (GAD-7), Level of Social Support Scale (SSRS) I = Online survey via Wenjuanxing platform A = SPSS versi 24.0 (IBM Corporation, Armonk, NY, USA)	The prevalence of insomnia symptoms during the COVID-19 epidemic period was 23.2%. Binomial logistic regression analysis revealed that female gender and urban living were greater risk factors for insomnia symptoms. Depression or anxiety is a risk factor for insomnia symptoms. However, social support, both subjective and objective, is a protective factor against insomnia symptoms. In addition, symptoms of anxiety and depression are mediators of social support and symptoms of insomnia.

RESULT

Respondents come from various countries, age groups, and genders. According some researchers from China, Guo et.al, (2020) conducted a survey of 6,196 participants aged 11-18 years, Qi et.al, (2020) 7,202 adolescents aged 14-18 years for the male and female gender, Zhang et.al, (2020) 493 students aged 13-18 years for male = 239, and female = 289, Liu et.al, (2021) 5,175 children and adolescents aged 9-18 years for the male and female gender, Zhou et.al, (2020) 11,835 participants involving adolescents and young adults aged 12-29 years for both male and female gender. According to two researchers from Italy, Commodari & La Rosa, (2020) conducted a survey to 978 adolescents aged 13-20 years for male = 339, and female = 639, Oliviero et.al, (2021) 4,314 adolescents aged 13-18 years for male sex 2,217 (50.4%) and 2,097 women (49.6%). According to researchers from Croatia Dragun et.al, (2021) surveyed 1,326 students aged 18 years for male and female gender. Researchers from Australia Munasinghe et.al, (2020) conducted a survey to 1,298 participants aged 13-19 years for male and female gender. Meanwhile, according to researchers from the United States, Oosterhoff et al., (2020) surveyed 683 adolescents aged 13 and 18 years for the male and female gender.

DISCUSSION

Table 2. Demographic Data of Stress and PTSD

Author	Item	Result (%)
(Guo et al., 2020)	Male	47.9
(Commodari & La Rosa, 2020)	Female	52.1
(Zhang et.al, 2020)	Light	17.3
(Dragun et al., 2021)	Currently	6.3
	Heavy	1.9
	Awfully	1

Based on table 2 Adolescents may be more vulnerable than adults to mental health problems, particularly during quarantine, as they are in a transition phase from growing up in close-knit families to broader social networks with the increasing importance of peers, who struggle with them. often self-esteem is fragile(Neural and Behavioral Signatures of Social Evaluation and Adaptation in Childhood and Adolescence: The Leiden Consortium on Individual Development (L-CID), 2020). Traumatic experiences cause people to experience more negative emotions, which in turn causes PTSD(Quan et al., 2020).

From the results of research in Italy, it shows that during the quarantine period adolescents experience psychological effects, they have negative feelings during these conditions. Teenage girls have higher feelings about quarantine for those in the red zone(Commodari dan La Rosa, 2020). Feelings of stress are normal feelings because of the pandemic situation, where teenagers are stressed because they have not adapted to the current situation, especially teenagers who tend to have a high sense of wanting to play with their peers. Stress can be influenced by the mindset, have a high sense of anger, and are not able to get along with other people. During a pandemic like this, teenagers can do online activities through social media with their peers to prevent excessive stress.

To promote youth well-being and sense of security, it is recommended to promote reassurance, appropriate information, and stress reduction measures for adolescents. Parents are the closest and most real helpers for children and adolescents, dialogue with the aim of increasing understanding and reducing anxiety is recommended(Wang et al., 2020). Promoting a balanced lifestyle, especially sleep patterns, is also recommended(Guichard et al., 2020).

The World Health Organization has published recommendations aimed at adolescents to help them cope with stress, identify normal emotional reactions, engage in dialogue and social exchange, maintain appropriate lifestyles and social contacts, avoid smoking, alcohol and other drugs, seek help health workers when necessary, seek information from reliable sources, limit media exposure, develop strategies for emotional regulation (World Health Organization, 2020).

Table 3. Depression Demographic Data

Author	Item	Result (%)
(Zhang et.al, 2020)	Male	42.4
(Liu et al., 2021)	Famale	46.4
(Qi et.al, 2020)	Urban	38.6
	Rural	47.9
	Light	60.1
	Currently	49.8
	Heavy	26.2
	Awfully	3.2

Based on table 3, the 2019 coronavirus has become a public health emergency, especially for adolescents around the world(WHO, 2020). The impact of COVID-19 is expected to be a challenge for adolescents' psychological resilience, and it is very important to understand their mental health status(Xiang et.al, 2020). It has been shown that staying home for long periods of time and lack of availability of exercise also increase the risk of depression in adolescents(Kandola et al., 2020). A new study aged 10-15 years from 25 provinces in China, and the results revealed that rates of depressive symptoms were lower in urban areas (14%) than in rural areas (23%)(M. Zhou et al., 2018). Urban residents have better prevention practices, which may be related to the fact that urban residents have high levels of health. Meanwhile, rural residents usually have low levels of education, lagging health services, and health activities are rarely carried out, so it is necessary to increase prevention and control efforts in rural areas.(Yue et al., 2021).

Research findings Qi et.al, (2020) provide evidence supporting the implementation of strategies to improve youth social support during the COVID-19 pandemic. For example, psychologists and social workers should take the initiative to provide psychological assistance to individually target interventions for adolescents with depression and anxiety. Efforts should also be made to encourage the availability of other types of social support to promote mental health in adolescents experiencing the COVID-19 outbreak. Hormonal changes during puberty can increase the risk that some women have depressive symptoms, rates of depression are higher in women than men. Since girls usually reach puberty before boys, girls are more likely to develop depression at an earlier age than boys (Clinic, 2019).

Table 4 Anxiety Demographic Data

Author	Item	Result (%)
(Zhang et.al, 2020)	Male	36.6
(Guo et al., 2020)	Famale	39.2
(Qi et al., 2020)	Urban	33.2
(Liu et al., 2021)	Rural	40.7
	Light	50.9
	Currently	41.7
	Heavy	24.6
	Awfully	5.5

The COVID-19 pandemic causes fear, and urgent care is needed to understand the mental health status of the community, especially adolescents (Xiang et al., 2020). Strict quarantine, school closures, following online curriculum and doing daily activities indoors. The decline in social relationships has provided a more significant challenge to adolescents regarding psychological problems and psychiatric disorders (Lee, 2020). Fear of contagion has become a risk, leading some to believe that the future will be disastrous and threatening. Fear dominates every other emotion; it is reinforced by the abundance of media centered on information about deaths, the number of infections, overcrowded intensive care units, hospitals unable to accommodate the sick, other news that triggers fear and anxiety. The news can often spread widespread discord, and panic and hyperarousal symptoms have developed in the community(Chen et al., 2020, Yang et al., 2020).

Because teenagers are not indifferent to the impact of the covid-19 pandemic, understanding their behavior and emotions in responding to this emergency is undoubtedly very important for psychological well-being, not only in the short term but also in the long term (P. Smirni et al., 2020). Anxiety is getting worse year by year in high school because students face relatively high social and academic pressures (Grills-Taquechel et al., 2010). Additional stress has been shown to increase with age and is associated with increased anxiety levels; their brain development continues and allows them to relate their physical symptoms to anxiety-provoking situations (Moksnes & Espnes, 2011).

It has been shown that anxiety symptoms can increase when emotional support decreases (Zhang et al., 2020). The source of anxiety symptoms during the pandemic is due to the increasing number of confirmed and suspected cases, the increasing number of provinces and countries affected by the outbreak, shortages of masks and disinfectants, and extraordinary and sensational headlines (Bao et al., 2020).

Table 5. Sleep Disorder Demographic Data

Author	Item	Result (%)
(S.-J. Zhou et al., 2020)	Male	20.7
(Oliviero et al., 2021)	Famale	25.1
	Trouble sleeping	21.9
	Anxiety at bedtime	4.8
	Woke up >2	5.2
	Restless sleep	14.8
	Nightmare	4.2
	Sleepy during the day	12.9

Isolation at home can lead to substantial changes in the lifestyles of children, teens, and their families with the loss of essential habits that help maintain regular sleep/wake routines and schedules. Restrictions lead to unrestricted sleep schedules, prolonged screen exposure, limited access to outdoor activities, reduced peer interaction, and

increased stress and anxiety that can contribute to unhealthy sleep patterns and sleep disturbances in children and adolescents (Wang et al., 2020).

Symptoms of anxiety and depression are risk factors for insomnia. There is a correlation and cyclical relationship between anxiety, depression, and insomnia (Rongmao et al., 2017). These changes can affect daily activities and sleep/wake patterns, and circadian rhythms (Altena et al., 2020). It is known that sleep is essential for the health and well-being of children and adolescents. The potential for sleep problems to arise or worsen during home quarantine is high. The likelihood of developing sleep disturbances may be related to isolation and protection, resulting in sedentary behavior and increased food consumption and weight gain. In addition, sleep disturbances may also be associated with increased stress levels due to possible changes in family financial conditions, health problems, and uncertainty about the future (Becker & Gregory, 2020).

Increased symptoms of insomnia, nightmares, and sleep in younger children may be related to anxiety about uncertainty about the pandemic, as reported in adolescents or high school students (Innocenti et al., 2020, Huang and Zhao, 2020). Social support can relieve or reduce insomnia symptoms, anxiety, and depression, so parents, school organizations, and other groups should provide social support to adolescents and young adults during the covid-19 pandemic. These findings indicate that the government needs to pay more attention to sleep problems, especially among adolescents and young adults during the covid-19 period. The Chinese government has provided psychological health services to various communities.

CONCLUSION

Based on the results of a review of 10 works of literature reviewed, based on the characteristics of respondents in the COVID-19 pandemic study, there are changes in lifestyle during quarantine have adverse and potentially prolonged effects on the mental health of each age in adolescents, lack of social support from parents, peers, and adolescents. Teachers in schools can be at risk of psychological disorders. There are four psychological symptoms: stress, depression, anxiety, and sleep disturbances. Parents or teachers at school are the closest and most real helpers for children and adolescents. During the current conditions, teenagers need a lot of motivation/support from their parents or teachers at school. Therefore, this research can be used to formulate psychological interventions to improve adolescent mental health during the covid-19 pandemic. As nurses, we can teach teenagers simple exercises, including deep breathing, muscle relaxation, and positive self-talk. Nurse has an essential role in promoting students' mental health, helping them understand their role in society, understanding that physical distance is not equal to distance emotional, and identifying problems during the pandemic.

REFERENCES

- Altena, E., Baglioni, C., Espie, C. A., Ellis, J., Gavrilloff, D., Holzinger, B., Schlarb, A., Frase, L., Jernelöv, S., & Riemann, D. (2020). Dealing with sleep problems during home confinement due to the COVID-19 outbreak: Practical recommendations from a task force of the European CBT-I Academy. In *Journal of Sleep Research* (Vol. 29, Issue 4). Blackwell Publishing Ltd. <https://doi.org/10.1111/jsr.13052>
- AMCHP. (2021). *Adolescent Development*. Association of Maternal & Child Health Programs.
- Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: address mental health care to empower society. *The Lancet*, 395(10224), e37–e38. [https://doi.org/10.1016/S0140-6736\(20\)30309-3](https://doi.org/10.1016/S0140-6736(20)30309-3)
- Becker, S. P., & Gregory, A. M. (2020). Editorial Perspective: Perils and promise for child and adolescent sleep and associated psychopathology during the COVID-19 pandemic. In *Journal of Child Psychology and Psychiatry and Allied Disciplines* (Vol. 61, Issue 7, pp. 757–759). Blackwell Publishing Ltd. <https://doi.org/10.1111/jcpp.13278>
- CASP. (2018). *CASP Checklist: Cohort Study*. Casp Uk.
- CDC. (2021). *Social, Emotional, and Mental Well-being of Adolescents during COVID-19*.
- Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D., Wang, L., He, L., Sheng, C., Cai, Y., Li, X., Wang, J., & Zhang, Z. (2020). Mental health care for medical staff in China during the COVID-19 outbreak. In *The Lancet Psychiatry* (Vol. 7, Issue 4, pp. e15–e16). Elsevier Ltd. [https://doi.org/10.1016/S2215-0366\(20\)30078-X](https://doi.org/10.1016/S2215-0366(20)30078-X)
- Clinic. (2019). *Depression in women: Understanding the gender gap - Mayo Clinic*.
- Commodari, E., & La Rosa, V. L. (2020). Adolescents in Quarantine During COVID-19 Pandemic in Italy: Perceived Health Risk, Beliefs, Psychological Experiences and Expectations for the Future. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.559951>
- Neural and behavioral signatures of social evaluation and adaptation in childhood and adolescence: The Leiden consortium on individual development (L-CID), 45 *Developmental Cognitive Neuroscience* 100805 (2020).
- Dragun, R., Veček, N. N., Marendić, M., Pribisalić, A., Đivić, G., Cena, H., Polašek, O., & Kolčić, I. (2021). Have lifestyle habits and psychological well-being changed among adolescents and medical students due to COVID-19 lockdown in Croatia?

- Nutrients*, 13(1), 1–16. <https://doi.org/10.3390/nu13010097>
- Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., Lahiri, D., & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews*, 14(5), 779–788. <https://doi.org/10.1016/j.dsx.2020.05.035>
- Grills-Taquechel, A. E., Norton, P., & Ollendick, T. H. (2010). A longitudinal examination of factors predicting anxiety during the transition to middle school. *Anxiety, Stress and Coping*, 23(5), 493–513. <https://doi.org/10.1080/10615800903494127>
- Guichard, K., Geoffroy, P. A., Taillard, J., Micoulaud-Franchi, J.-A., Royant-Parola, S., Poirot, I., Brion, A., d'Ortho, M.-P., Gagnadoux, F., Schroder, C., Philip, P., & Bioulac, S. (2020). Stratégies de gestion de l'impact du confinement sur le sommeil : une synthèse d'experts. *Médecine Du Sommeil*, 17(2), 108–112. <https://doi.org/10.1016/j.msom.2020.04.003>
- Guo, J., Fu, M., Liu, D., Zhang, B., Wang, X., & van IJzendoorn, M. H. (2020). Is the psychological impact of exposure to COVID-19 stronger in adolescents with pre-pandemic maltreatment experiences? A survey of rural Chinese adolescents. *Child Abuse & Neglect*, 110, 104667. <https://doi.org/https://doi.org/10.1016/j.chiabu.2020.104667>
- Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Research*, 288, 112954. <https://doi.org/10.1016/j.psychres.2020.112954>
- Innocenti, P., Puzella, A., Mogavero, M. P., Bruni, O., & Ferri, R. (2020). Letter to editor: CoVID-19 pandemic and sleep disorders—a web survey in Italy. In *Neurological Sciences* (Vol. 41, Issue 8, pp. 2021–2022). Springer. <https://doi.org/10.1007/s10072-020-04523-1>
- Kandola, A., Lewis, G., Osborn, D. P. J., Stubbs, B., & Hayes, J. F. (2020). Depressive symptoms and objectively measured physical activity and sedentary behaviour throughout adolescence: a prospective cohort study. *The Lancet Psychiatry*, 7(3), 262–271. [https://doi.org/10.1016/S2215-0366\(20\)30034-1](https://doi.org/10.1016/S2215-0366(20)30034-1)
- Kemdikbud RI. (2020). Panduan Penyelenggaraan Pembelajaran Di Masa Pandemi Covid-19. *Kementerian Pendidikan Dan Kebudayaan*, 021, 28.
- Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child and Adolescent Health*, 4(6), 421. [https://doi.org/10.1016/S2352-4642\(20\)30109-7](https://doi.org/10.1016/S2352-4642(20)30109-7)
- Liu, Y., Yue, S., Hu, X., Zhu, J., Wu, Z., Wang, J., & Wu, Y. (2021). Associations between feelings/behaviors during COVID-19 pandemic lockdown and depression/anxiety after lockdown in a sample of Chinese children and adolescents. *Journal of Affective Disorders*. <https://doi.org/https://doi.org/10.1016/j.jad.2021.02.001>
- Moksnes, U. K., & Espnes, G. A. (2011). Evaluation of the Norwegian version of the Adolescent Stress Questionnaire (ASQ-N): Factorial validity across samples. *Scandinavian Journal of Psychology*, 52(6), 601–608. <https://doi.org/10.1111/j.1467-9450.2011.00907.x>
- Moola, Munn, T. et al. (2017). *Checklist for Analytical Cross Sectional Studies*. Joanna Briggs Institute Reviewer's Manual.
- Munasinghe, S., Sperandei, S., Freebairn, L., Conroy, E., Jani, H., Marjanovic, S., & Page, A. (2020). The Impact of Physical Distancing Policies During the COVID-19 Pandemic on Health and Well-Being Among Australian Adolescents. *Journal of Adolescent Health*, 67(5), 653–661. <https://doi.org/https://doi.org/10.1016/j.jadohealth.2020.08.008>
- Oliviero, B., Emanuela, M., Mattia, D., Elena, F., Karen, S., Grazia, M. M., Pia, V. M., & Raffaele, F. (2021). Changes In Sleep Patterns And Disturbances In Children And Adolescents In Italy During The Covid-19 Outbreak. *Sleep Medicine*. <https://doi.org/https://doi.org/10.1016/j.sleep.2021.02.003>
- Oosterhoff, B., Palmer, C. A., Wilson, J., & Shook, N. (2020). Adolescents' Motivations to Engage in Social Distancing During the COVID-19 Pandemic: Associations With Mental and Social Health. *Journal of Adolescent Health*, 67(2), 179–185. <https://doi.org/https://doi.org/10.1016/j.jadohealth.2020.05.004>
- Orben, A., Tomova, L., & Blakemore, S.-J. (2020). *The effects of social deprivation on adolescent development and mental health*. 4(8). [https://doi.org/10.1016/S2352-4642\(20\)30186-3](https://doi.org/10.1016/S2352-4642(20)30186-3)
- Qi, M., Zhou, S.-J., Guo, Z.-C., Zhang, L.-G., Min, H.-J., Li, X.-M., & Chen, J.-X. (2020). The Effect of Social Support on Mental Health in Chinese Adolescents During the Outbreak of COVID-19. *Journal of Adolescent Health*, 67(4), 514–518. <https://doi.org/https://doi.org/10.1016/j.jadohealth.2020.07.001>
- Quan, L., Zhen, R., Yao, B., & Zhou, X. (2020). Traumatic exposure and posttraumatic stress disorder among flood victims: Testing a multiple mediating model. *Journal of Health Psychology*, 25(3), 283–297. <https://doi.org/10.1177/1359105317707568>
- Robillard, R., Dion, K., Pennestri, M. H., Solomonova, E., Lee, E., Saad, M., Murkar, A., Godbout, R., Edwards, J. D., Quilty, L., Daros, A. R., Bhatla, R., & Kendzerska, T. (2021). Profiles of sleep changes during the COVID-19 pandemic: Demographic, behavioural and psychological factors. *Journal of Sleep Research*, 30(1). <https://doi.org/10.1111/jsr.13231>
- Rongmao, L., Yan, W.-J., Lin, R.-M., Xie, S.-S., & Yan, Y.-W. (2017). Intolerance of uncertainty and adolescent sleep quality: The mediating role of worry Article in Personality and Individual Differences · Intolerance of uncertainty and adolescent sleep quality: The mediating role of worry. *Elsevier*. <https://doi.org/10.1016/j.paid.2016.12.025>
- Satgas Covid-19. (2021). *Analisis Data COVID-19 Indonesia*.
- Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Research*, 293, 113429. <https://doi.org/10.1016/J.PSYCHRES.2020.113429>
- Smirni, D., Smirni, P., Di Martino, G., Operto, F. F., & Carotenuto, M. (2019). Emotional awareness and cognitive performance in borderline intellectual functioning young adolescents. *Journal of Nervous and Mental Disease*, 207(5), 365–370.

<https://doi.org/10.1097/NMD.0000000000000972>

- Smirni, P., Lavanco, G., & Smirni, D. (2020). Anxiety in Older Adolescents at the Time of COVID-19. *Journal of Clinical Medicine*, 9(10), 3064. <https://doi.org/10.3390/jcm9103064>
- Wambua, G. N., Obondo, A., Bifulco, A., & Kumar, M. (2018). The role of attachment relationship in adolescents' problem behavior development: a cross-sectional study of Kenyan adolescents in Nairobi city. *Child and Adolescent Psychiatry and Mental Health*, 12(1), 27. <https://doi.org/10.1186/S13034-018-0237-0>
- Wang, G., Zhang, Y., Zhao, J., Zhang, J., & Jiang, F. (2020). Mitigate the effects of home confinement on children during the COVID-19 outbreak. In *The Lancet* (Vol. 395, Issue 10228, pp. 945–947). Lancet Publishing Group. [https://doi.org/10.1016/S0140-6736\(20\)30547-X](https://doi.org/10.1016/S0140-6736(20)30547-X)
- Wenjun, C., Ziwei, F., Guoqiang, H., Mei, H., Xinrong, X., Jiabin, D., & Jianzhong, Z. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287(March 20, 2020), 1–5.
- WHO. (2020a). *Coronavirus disease (COVID-19): Herd immunity, lockdowns and COVID-19*.
- WHO. (2020b). *WHO Director-General's statement on IHR Emergency Committee on Novel Coronavirus*.
- World Health Organization. (2020). *Coping with stress during the 2019-nCoV outbreak*.
- World Health Organization. (2021). COVID-19 Weekly Epidemiological Update. *World Health Organization, January*, 1–3.
- Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed, 7 *The Lancet Psychiatry* 228 (2020). [https://doi.org/10.1016/S2215-0366\(20\)30046-8](https://doi.org/10.1016/S2215-0366(20)30046-8)
- Yang, Y., Li, W., Zhang, Q., Zhang, L., Cheung, T., & Xiang, Y. T. (2020). Mental health services for older adults in China during the COVID-19 outbreak. In *The Lancet Psychiatry* (Vol. 7, Issue 4, p. e19). Elsevier Ltd. [https://doi.org/10.1016/S2215-0366\(20\)30079-1](https://doi.org/10.1016/S2215-0366(20)30079-1)
- Yue, S., Zhang, J., Cao, M., & Chen, B. (2021). Knowledge, Attitudes and Practices of COVID-19 Among Urban and Rural Residents in China: A Cross-sectional Study. *Journal of Community Health*, 46(2), 286–291. <https://doi.org/10.1007/s10900-020-00877-x>
- Zhang, C., Ye, M., Fu, Y., Yang, M., Luo, F., Yuan, J., & Tao, Q. (2020). The Psychological Impact of the COVID-19 Pandemic on Teenagers in China. *Journal of Adolescent Health*, 67(6), 747–755.
- Zhou, M., Zhang, G., Rozelle, S., Kenny, K., & Xue, H. (2018). Depressive symptoms of chinese children: Prevalence and correlated factors among subgroups. *International Journal of Environmental Research and Public Health*, 15(2). <https://doi.org/10.3390/ijerph15020283>
- Zhou, S.-J., Wang, L.-L., Yang, R., Yang, X.-J., Zhang, L.-G., Guo, Z.-C., Chen, J.-C., Wang, J.-Q., & Chen, J.-X. (2020). Sleep problems among Chinese adolescents and young adults during the coronavirus-2019 pandemic. *Sleep Medicine*, 74, 39–47. <https://doi.org/https://doi.org/10.1016/j.sleep.2020.06.001>