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# 3. An overview of the physical, psychological, and social responses of adolescents during the COVID-19 pandemic in urban area

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## An overview of the physical, psychological, and social responses of adolescents during the COVID-19 pandemic in urban area

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### Abstract

The COVID-19 pandemic has had an impact on all sectors of life in all age groups, including teenagers. The physical and psychological responses on adolescents due to the COVID-19 pandemic cannot be explained yet. This study aims to explain the physical and psychological responses of the COVID-19 pandemic on adolescents. This research method was descriptive with a survey approach. The survey was conducted on 219 teenagers in the West Surabaya area. Respondents filled out questionnaires about physical responses (weight, height and use of minus glasses), psychological responses (anxiety, stress and depression), and social responses (social interactions). DASS was used to measure the psychological response. The data were analyzed using descriptive statistics and Wilcoxon sign rank test to measure body weight before and during pandemic COVID-19. The physical responses that occurred during the COVID-19 pandemic were an increase in the respondent's weight and the use of glasses due to the online school process. The social response that occurs is adolescent social interaction at a sufficient level. Psychological responses showed stress 57%, anxiety 68.9%, and depression 63.9%; only 7.8% teenagers have good social interaction. The responses of the COVID-19 pandemic on adolescents can be seen physically, socially and psychologically. Efforts are needed to overcome and anticipate problems resulting from these changes.

**Keywords:** adolescents, physical, psychological, social, covid-19

### Introduction

The COVID-19 pandemic has an impact on all levels of society, including teenagers. The number of adolescents in Indonesia in 2020 is more than 40 thousand people (BPS, 2020). Adolescence is a period of human transition from children to adults, therefore comprehensive observation is needed to adolescents. Adolescents must be seen in their entirety or from various aspects, namely physical, psychological and social. However, until now the impact (physical, psychological and social) of the COVID-19 pandemic on adolescents cannot be explained.

During the COVID-19 pandemic (Hafidzhah et al., 2021; Turista et al., 2020; Wijaya et al., 2021), teenagers are active from home, both at school and in other activities. Schooling from home requires teenagers to use gaged (mobile phones or laptops) for a longer time, this will affect their eyesight. Psychologically, based on data obtained by the Association of Indonesian Mental Medicine Specialists (PDSKJI), which examined the psychological development of the community during the COVID-19 pandemic, 64.3% of the

1,522 respondents experienced anxiety problems. The respondents consisted of women as much as 76.1% aged from 14 years to 71 years. They come from several areas, namely West Java (23.4%), Central Java (15.5%), East Java (12.8%), and DKI Jakarta (16.9%). Socially, adolescence requires interaction with peers, this is a characteristic of adolescents. Based on this, researchers are interested in examining the impact of the COVID-19 pandemic on adolescents from physical, psychological and social aspects.

## Materials and Methods

### Participant

The survey was conducted on 219 teenagers in the West Surabaya area who were willing to become respondents after informed consent, from July to September 2021. The inclusion criteria in this study were adolescents aged 12-25 years, currently attending school from home, and willing to become respondents. This research has been declared eligible by the Brahmanda Lentera Chakra Institute with the number 031/06/V/EC/KEPK/Lemb.Candle/2021.

### Study design

This research method was descriptive with a survey approach. Respondents filled out questionnaires about physical responses (weight, height and use of minus glasses), psychological responses (anxiety, stress and depression), and social responses (social interactions). DASS was used to measure the psychological response. A description of the DASS assessment of one's perceived results starting with the number 0: Absent or never, 1: According to what is experienced to a certain degree, or sometimes, 2: Often, and 3: Very much according to what is experienced or almost every time it is experienced. Questionnaires were given online using the Google Form application so that respondents can fill in anytime and anywhere. The data were analyzed using descriptive statistics and Wilcoxon sign rank test to measure body weight before and during pandemic COVID-19.

## Results and discussion

Table 1. Respondent characteristics (n = 219)

Characteristic	n	%
<b>Age (years old)</b>		
12-16	165	75.3
17-25	54	24.7
<b>Sex</b>		
Man	82	37.4
Woman	137	62.6
<b>Education</b>		
Basic	69	31.5
Middle	114	52.1
Higher	36	16.4

Table 2. Characteristic physical responses (body weight) (n=219)

	N	Minimum	Maximum	Mean	Std. Deviation	Asymp. Sig. (2-tailed)
Weight	219	25	82	50.20	13.037	.000
Weight Pandemic	219	25	80	52.19	12.534	

There is a significant difference in the respondent's weight before and during the COVID-19 pandemic. The respondent's weight increased significantly during the pandemic.

Table 3. Characteristic physical responses (uses glasses) (n=219)

Use Glasses during pandemic	n	%
No	172	78.1
Yes	47	21.9

Respondents who just used glasses during the pandemic were 21.9%.

Table 4. Characteristic of social interaction responses

Characteristic	n	%
Less	6	2.7
Enough	196	89.5
Good	17	7.8

Table 5. Characteristic psychological responses

Characteristic	n	%
<b>Stress level</b>		
Normal	103	47
Mild	82	37.5
Moderate	34	15.5
Severe	0	0
<b>Anxiety level</b>		
Normal	68	31.1
Mild	95	43.3
Moderate	56	25.6
Severe	0	0
<b>Depression level</b>		
Normal	172	78.5
Mild	47	21.5
Moderate	0	0
Severe	0	0

The COVID-19 pandemic has an impact on all sectors of life in all age groups (Nidom et al., 2020; Nidom et al., 2021), especially health impacts (Ansori et al., 2020; Ansori et al., 2021a; Ansori et al., 2021b). Health is not only reviewed physically (biologically/physiologically) but must comprehensively include psychological and social aspects. In adolescents and adults based on research by Shanahan et al. (2020) with the title Emotional distress in young adults during the COVID-19 pandemic: evidence of risk and resilience from a longitudinal cohort study, with the results of coping strategies related to reducing distress including daily habits, physical activity, and positive thinking (Shanahan et al., 2020). In adolescents and adults based on research by Shanahan et al. (2020) entitled Emotional distress in young adults during the COVID-19 pandemic: evidence of risk and resilience from a longitudinal cohort study, with the results of coping strategies related to reducing distress including daily habits, physical activity, and positive thinking (Shanahan et al., 2020).

Many researches revealed that the COVID-19 pandemic in China had a major impact on mental health status in the entire population (Yu et al., 2020; Kharisma and Ansori, 2020; Fahmi et al., 2021; Kharisma et al., 2022). The impact of covid 19 on the global population was also studied by Shah et al. (2020) with the results that 50.9% of respondents experienced anxiety, 57.4% had signs of stress and 58.6% suffered from depression. This study only discusses the impact of the pandemic on the mental health of the population (Shah et al., 2021). Daily life cannot be separated from stress (Zahroh et al., 2020). This can directly affect physical, psychological and social health. The definition of health according to the Indonesian Ministry of Health is physiological, psychological and social health. Positively, due to the lockdown and social distancing policies, people will pay more attention to health, closer family relationships, the emergence of new productive and economical activities, including: increasing literacy, utilizing IT, and others.

Meanwhile, the negative impacts that are felt by the community are more pronounced to date, including multi-dimensional, including: limited activities, reduced community economic turnover, online learning models cause boredom and boredom due to ineffective online interactions, and others. This negative impact certainly leads to stress and anxiety which will result in a person's biological, psychological and social conditions.

Physiologically, when anxious and stressed, it naturally triggers the body's response to react to threats. At that time, the sympathetic nervous system is automatically in self-defense mode. This is controlled by the part of the brain that controls emotions called the amygdala, and then the amygdala sends "distress signals" to the hypothalamus gland at the base of the brain. The hypothalamus then codes for the adrenal glands to release the stress hormones cortisol and adrenaline. Once the hormone is released, the muscles in the body automatically become tense. Muscle tension serves to protect themselves from injury. The heart also beats faster to pump more blood to the muscles and increase oxygen intake. This is what triggers rapid breathing or shortness of breath and heart palpitations. In a "threatened" state, the body also releases more glucose & fat into the bloodstream to provide additional fuel for a person to be more alert.

Sociologically, the pandemic causes disorganization in society which leads to an uncertain social situation, so that it has an impact on the social order in society. People become over-protective of the surrounding environment, it is easier to be suspicious of people who cough, sneeze, or look pale around our environment in addition to bad views in the form of stigma and discrimination against people with ODP,



PDP, suspected Covid-19, patients positive for COVID-19, recovered patients and medical personnel. This stigma eventually gave rise to discriminatory attitudes, for example refusing to help other people by physical contact with people suspected of contracting the corona virus, the refusal of a nurse because the nurse worked in a hospital that received Covid-19 patients, the refusal of burial of the bodies of Covid-19 victims by a number of residents, the use of shopping apps are increasing.

The existence of the Corona virus that threatens everyone has the opportunity to be a stressor for most people, and the impact can be as severe as the impact if infected with the Corona virus itself (Taylor, 2019), these stressors can cause disturbances in physiological, psychological and social conditions in children. all ages ranging from the stages of the age of children, adolescents, adults and even the elderly. Stressor management is influenced by the ability to think or intelligence or intelligence (Zahroh et al., 2020).

According to Piaget (in Hurlock), psychologically, adolescents are the age at which individuals interact with adult society, the age at which children no longer feel under the bonds of older people but at the same level, at least in terms of rights (Hurlock, 2001: 206). Parson said "The Social System" that illness is not only a biological condition, but also a social role that does not function properly. Parsons sees illness as a form of deviant behavior in society, the reason being that sick people cannot fulfill their social roles normally and therefore deviate from the norm is consensual, one form of the disease is Social Disorganization (Knoll et al., 2020).

### **Conclusion**

Covid-19 has had a physical, psychological and social impact on adolescents. The physical impact was seen in changes in body weight and the use of glasses during school from home. Psychological impact is seen in conditions of stress, anxiety and depression. The social impact can be seen in the interaction of teenagers who remain intertwined even though they are online.

### **Availability of the Data and Materials**

The datasets used and/or analyzed during the current study are available from the corresponding author upon receipt of a reasonable request.

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### **Conflicts of interest**

The author have no conflicts of interest to declare

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