

# Perception Survey, Mental Health and Social Media Exposure in Adolescents during The COVID-19 Pandemic

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**Abstract.** In the event of an outbreak, the emergency will depress the community, which can affect the health conditions of the community. The COVID-19 pandemic has a profound effect on all aspects of society, including mental health and physical health. The risk of decreased physical and mental health can attack vulnerable groups such as the elderly, adolescents, and children. The author explores perceptions, and social media exposure during the COVID-19 pandemic. Research data will be used to develop strategies to reduce the psychological impact that may arise during a pandemic. The purpose of this study was to survey adolescents to better understand the impact of social exposure on perception during the COVID-19 pandemic. The survey was conducted on adolescents aged 10-24 years. A total of 1357 adolescents participated in this survey. The survey method was carried out online. Teenagers fill out survey forms online with certain applications. -

**Keywords:** Perception, Social Media Exposure, Adolescents, Covid-19

## 1 Introduction

COVID-19 caused panic around the world since the end of 2019. Initially, the disease was named temporarily as the 2019 novel coronavirus (2019-nCoV), then WHO announced a new name on February 11, 2020 namely Coronavirus Disease (COVID-19) caused by the virus Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) [1]. In March 2020 WHO announced COVID-19 as a pandemic [2]. Hundreds of thousands of people are infected, even thousands more have died. This virus was first discovered in Wuhan, China and has infected as many as tens of thousands of people. The source of the host is thought to come from animals, especially bats. This virus can be transmitted from human to human. Symptoms that are usually seen include fever, coughing and difficulty breathing.

The Indonesian government issued a state of disaster emergency on 29 February 2020 related to the COVID-19 pandemic [3]. One of the steps taken by the government to prevent the transmission of this virus is by staying at home and implementing social distancing. This

step was taken to break the chain of transmission of COVID-19 by keeping a safe distance between people at least 1 meter, and not making direct contact with others, avoiding crowds and mass gatherings. [4]

The distribution of COVID-19 cases on 30 June 2020 in Indonesia was 56,385 which was confirmed positive, 24,806 were recovered and 2,876 died [5]. Cases in Central Java were found as many as 4,025 positive cases of the Corona virus, 1,820 of whom were treated (45.22 percent), 1,878 recovered (46.66 percent), and 327 died (8.12 percent). [6] Central Java is recorded as one of the five provinces with the highest number of COVID-19 cases in Indonesia, besides East Java, Sulawesi, DKI Jakarta and South Kalimantan. [5]. At present, Central Java is entering COVID-19 emergency status.

Humans as social creatures need communication to exchange information. The development of globalization has an impact on the development of Information and Communication Technology (ICT). One form of progress from ICT is social media [7]. Social media has become part of the modern lifestyle for various activities. Social media has a very important role in radically changing the lifestyle of people communicating and interacting [8]. Social media in the form of social networks and blogs make it easier for everyone to connect. Social media is a digital platform that provides information sharing / exchange facilities, user content -generated (can be ideas, images, videos, and audio-videos), and collaboration between people through a network [9]. In addition, social media has the potential to revolutionize organizational behavior. [10]. During the time of silence at home, many people who use devices to connect with the outside world. Some applications that are often used are social media. This phenomenon triggers researchers to conduct a survey of the impact of social media exposure on perception and mental health in adolescents.

## **2 Methods**

Location of the research conducted was in Central Java. The population in this study were adolescents aged 10-24 years who were male and female, the method used in this study was a survey. Where this survey was conducted online in adolescents in the age range of 10-24 years. A total of 1357 adolescents participated in this survey. The survey method was carried out online. Teenagers fill out survey forms online with certain applications. To obtain the validity and reliability of the data the credibility, dependability, transferability and confirmability assessments are carried out, so that the findings can be trusted and have the accuracy of the data produced. This will be used to measure the level of perception and social media exposure of adolescents during the COVID-19 pandemic. The data used in this study are qualitative data. The type of research conducted is descriptive analysis, which provides education and understanding to the reader, and the type of data used in this study is secondary data.

## **3 Results and discussion**

### **3.1 Adolescent Characteristics**

According to the Population and Family Planning Agency (BKKBN) the age range of teenagers is 10-24 years and not yet married. The total number of adolescents who filled the

survey was 1357 adolescents. The number of early adolescents aged 10-14 years is 83 children. The number of middle adolescents aged 15-18 years is 494 children. The number of late teens aged 19-24 years was 778 children. the sexes of adolescents are grouped in 407 male and 950 girls.

**Table 1.** Adolescent characteristics

<b>Age</b>	
10-14 years	85
15-18 years	494
19-24 years	778
<b>Gender</b>	
Male	407
Girls	950
<b>Education</b>	
Not completed	23
Graduated from Elementary school	68
Graduated from Middleschool	254
Graduated from Hightschool	970
Graduated	42
<b>Job</b>	
Not working yet	14
Teacher	10
Student	1318
Private	15
<b>Homebase</b>	
Countryside	948
Urban	409

Characteristic of adolescents according to age can influence the formation of adolescent perceptions. This statement is consistent with the theory of Robbins and Judge that the variables of gender, age, level of education, and social status affect perception. [11] Turban, King, Lee, Liang, and Turban define a dependent digital generation as a representation of the young generation who are growing up in the world of broadband connections, continually connecting with information technology, and being uncomfortable when they do not have access to the internet. [12]

A total of 970 teenagers graduated high school/equivalent. There are 1258 teenagers who are students. The main activity of teenagers is going to school or college. During the pandemic, schools were closed, so teenagers had to go to school and study from home. In rural areas than urban youth. This condition is caused because many adolescents who go to school or study in urban areas must return to their homes during the pandemic. The number of adolescents who are aged 10-24 years in rural areas is 948 children, while the number of adolescents in urban areas is 409 children. The number of teenagers in rural areas is almost double that of urban teenagers.

Health conditions of adolescents must remain awake and must remain in prime condition during the pandemic mas. Mental health will make life satisfaction closely related to happiness where happy people will have a high immune system so they can ward off the outbreak of the virus [13]. A total of 661 adolescents are in good health, and only 51 adolescents feel in poor health. When associated with the Covid-19 pandemic, it is better for humans to think and interpret the positive side of the presence of the plague. then humans will be in a state of calm and alert adalam facing this plague. Besides that humans will also be better prepared and stronger in the face of other traumatic events in the future [14]

Next thing become an important concept in maintaining mental health is communication / interaction between all members family. Using communication and interaction as amechanism defenseto go through difficult times during the COVID-19 pandemic. There are 793 teenagers who agree that before Covid 19 communication / interaction between all family members was in good condition. In fact, there are as many as 736 adolescents stating that communication/interaction between all family members remained incondition good at the time of the Covid pandemic 19.

### 3.2 Perception

There are 442 teenagers who agree that their health will be damaged if exposed to the corona virus. SARS-CoV-2 transmission from symptomatic patients occurs through droplets that come out when coughing or sneezing [15]. Clinical manifestations of COVID-19 patients have a broad spectrum, ranging from asymptomatic, mild symptoms, pneumonia, severe pneumonia, ARDS, sepsis, to septic shock.. How large the proportion of asymptomatic infections is unknown [16]. The course of the disease begins with an incubation period of about 3-14 days (median 5 days). Some cases show the course of the disease in patients with severe COVID- 19, even more severe than the flu. There are 497 teenagers who agree that COVID-19 is heavier than the flu.

Some of the other risk factors set forth by the Centers for Disease Control and Prevention (CDC ) iscontact close, including living with a COVID-19 patient and a history of travel to the affected area. Being in one environment but not in close contact (within a 2 meter radius) is considered a low risk. [17] Medical personnel are one of the populations at high risk of contracting. Hospitals are prioritized for the management of COVID-19 and illnesses with emergencies that must be dealt with immediately. There are 433 adolescents who do not agree if they have another disease, they not willgo to the hospital because of the risk of getting a new corona virus in the hospital. This illustrates that teenagers perceive that it is still safe if they go to the hospital, regardless of the risk of contracting other diseases.

**Table 2.** Perception

<b>My health will be damaged if exposed to coronavirus</b>	
Agree	442
Disagree	142
Don't know	33
Neutral	437
Very Agree	186
Very Disagree	117
<b>Coronavirus is worse than the flu</b>	
Agree	497
Disagree	66
Don't know	16

Neutral	343
Very Agree	328
Very Disagree	107
<b>Won't go to the hospital because of the risk of getting coronavirus in the hospital</b>	
Agree	229
Disagree	433
Don't know	44
Neutral	406
Very Agree	78
Very Disagree	167
<b>Coronavirus caused serious damage to the surrounding community</b>	
Agree	473
Disagree	100
Don't know	36
Neutral	408
Very Agree	224
Very Disagree	116
<b>The risk of corona virus will spread widely in Central Java</b>	
Agree	205
Disagree	261
Don't know	124
Neutral	476
Very Agree	73
Very Disagree	218
<b>I can protect myself from the corona virus</b>	
Agree	480
Disagree	62
Don't know	39
Neutral	431
Very Agree	245
Very Disagree	100
<b>I can protect myself from the corona virus better than anyone else</b>	
Agree	353
Disagree	105
Don't know	69
Neutral	598
Very Agree	156
Very Disagree	76

A total of 473 teenagers agree that COVID -19 will causing serious damage to the community around them, both in terms of social and economic.Total 476 adolescents declared neutral that COVID 19 would be widespread in Central Java. When compared with the results of the research a little different, especially related to the COVID incident in Central Java.cases Positive confirmed patientare increasing in Central Java.

A total of 480 teens perceive that they can protect themselves from COVID-19. This is because many teenagers who know several ways of prevention that they can do. Even as many as 446 adolescents believe that they can protect themselves from the corona virus better than anyone else. WHO recommendations in dealing with the COVID-19 outbreak are basic protection, which consists of washing hands regularly with alcohol or soap and water, keeping a distance from someone who has symptoms of coughing or sneezing, conducting ethic cough-

ing or sneezing, and seeking treatment when having complaints that are according to the suspect category.

Recommended distance to maintain is one meter [18]. Soap can lift and break down compounds hydrophobic such as fat or oil. [19] In addition to using water and soap, ethanol 62-71% can reduce viral infectivity. [20] Avoid touching the face especially the face, nose or mouth with the surface of the hand. When the hands are contaminated with a virus, touching the face can be an entry portal. Finally, be sure to use one-time tissue when sneezing or coughing to avoid spreading droplets [21]

### 3.3 Mental Health

**Table 3.** Mental Health

<b>I feel cheerful and uplifting</b>	
1-3 days	69
4-6 days	76
7-9 days	239
10-13 days	182
Everyday	764
Never	27
<b>I feel calm and relaxed</b>	
1-3 days	51
4-6 days	72
7-9 days	208
10-13 days	153
Everyday	834
Never	39
<b>I feel active and excited</b>	
1-3 days	75
4-6 days	83
7-9 days	248
10-13 days	213
Everyday	701
Never	37
<b>I wake up feeling refreshed</b>	
1-3 days	64
4-6 days	63
7-9 days	219
10-13 days	167
Everyday	791
Never	53
<b>My daily life is full of interesting thing</b>	
1-3 days	76
4-6 days	90
7-9 days	222
10-13 days	172

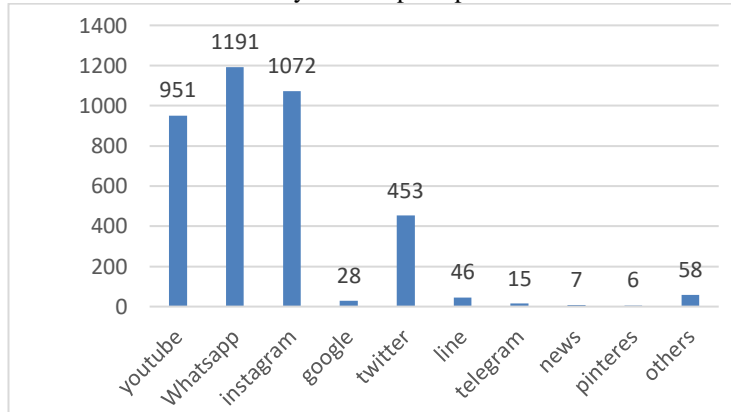
Everyday	734
Never	63
<b>Feeling nervous, anxiety, or anxious</b>	
1-3 days	605
4-6 days	203
7-9 days	155
10-13 days	105
Never	289
<b>Can't stop or control worries</b>	
1-3 days	584
4-6 days	190
7-9 days	133
10-13 days	64
Never	386
<b>Feeling difficulty relaxing</b>	
1-3 days	519
4-6 days	193
7-9 days	164
10-13 days	86
Never	395
<b>Get very nervous</b>	
1-3 days	555
4-6 days	137
7-9 days	99
10-13 days	37
Never	529
<b>Gets irritated easily</b>	
1-3 days	503
4-6 days	226
7-9 days	222
10-13 days	122
Never	284
<b>Feeling scared as if something bad is about to happen</b>	
1-3 days	575
4-6 days	186
7-9 days	167
10-13 days	98
Never	331

For the past 2 weeks, some teens feel that they are in a good and pleasant mental state every day. 764 adolescents felt cheerful and uplifting, 834 adolescents felt calm and relaxed, 701 felt active and excited, 791 awoke feeling refreshed, and 734 adolescents felt their daily life was full of interesting things.

There are several psychiatric problems that adolescents experience during the pandemic. but the average teenager can overcome problems that arise due to psychiatric disorders for 1-3 days. There are 605 teenagers feel nervous, anxiety, or anxious for only 1-3 days. 584 adolescents can stop or control worries, 519 adolescents who have difficulty relaxing only for 1-3 days. 555 teens get very nervous, 503 teens get irritated easily, 575 Feeling scared as if something bad is about to happen. this data shows that adolescent mental health is in a stable condition for the past 2 weeks. teens don't need a long time to experience mental health disorders, and they tend to be more able to solve them.

**3.4 Social Media Exposure**

A total of 1191 teenagers access whatsapp, 1072 teenagers access Instagram and several other social media. Survey results indicate that teenagers very often accessing social media, there are as many as 446 adolescents who say that. This provides information that the average social media usage activity is almost equivalent to 8 hours of employee work. If access to social media is used for positive things, then productivity can be increased in all respects. The positive impact of using social media is teenagers get entertainment, get information, and can strengthen social relationships with others. In addition to the positive effects felt by adolescents, negative impacts also arise, for example the exposure of adolescents about HOAX news about COVID19 which can cause anxiety and misperceptions occur in adolescents.



**Fig. 1 Social media**

**Table 4. Social media exposure**

<b>In one day, how often do you Access social media (Before the Pandemic COVID-19)</b>	
Very often	191
Often	517
Sometimes	404
Once in a while	206
Never	39
<b>In one day, how often do you access social media (After the Pandemic COVID-19)</b>	
Very often	446
Often	410
Sometimes	276
Once in a while	191
Never	34

“Table 4 (Continued)”



<b>In one day, how often do you access information about COVID-19 on social media</b>	
Very often	128
Often	388
Sometimes	491
Once in a while	284
Never	66
<b>In one day, how often did you share information about COVID-19</b>	
Very often	40
Often	174
Sometimes	483
Once in a while	425
Never	235

Social media exposure to adolescents can be seen in the table. Before the COVID-19 pandemic in one day 517 adolescents often accessed social media, even after the COVID-19 pandemic there were 446 adolescents whose frequency of accessing social media more often in one day.

Based on the table there are 128 teenagers who very often access information about COVID 19 on social media. This is interesting because only a few teenagers use social media to find information about COVID 19. There are 66 teenagers who have never even used social media to access information about COVID19. It is undeniable that teenagers need entertainment in the form of information about entertainment, culinary, and other entertainment topics besides COVID19 topics. There are as many as 40 teenagers who very often share information about COVID 19 after getting information from social media. But there are 235 teenagers who never share information about COVID after getting information from social media. Further research needs to be done whether the information conveyed on social media can be justified. Because a lot of HOAX news circulating on social media about the COVID19 topic.

#### 4 Conclusion

During the pandemic many teenagers access social media. Some even have frequent frequencies in accessing social media. There are 128 teenagers who access information about COVID 19 and 40 of them spread information about COVID 19 that they get. Exposure to social media influences adolescents' perceptions of COVID 19. Adolescents assume that they can protect themselves from COVID 19 by taking basic preventative measures, where these steps are widely promoted through social media. The benefits of using social media in shaping adolescent perceptions include promoting preventive measures, selling items that can be used as personal protective equipment, studying adolescent perceptions by listening to their conversations on social media and providing support services to adolescents to answer questions about COVID19. The implication of this research for adolescents is to wisely use social media. Be aware of the positive and impacts negative of social media and wise in responding to misleading information about COVID 19.

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