

# The 4<sup>th</sup> International Agronursing Conference

## “Optimizing The Role of Nursing and Health Professionals to Enhance Health Care Quality in The New Normal Era”

Faculty of Nursing, University of Jember, Ph (0331) 323450 Email: ianc@unej.ac.id

---

### KNOWLEDGE AND ATTITUDE OF ELEMENTARY SCHOOL CHILDREN REGARDING COVID-19

Arif Rohman Mansur<sup>1</sup>, Ira Mulya Sari<sup>2</sup>, Yelly Herien<sup>3</sup>, Meri Neherta<sup>4</sup>, Miftahul Ilmi<sup>5</sup>, Aditya Yudha Pradhana<sup>6</sup>

<sup>1-4</sup>Affiliation (Pediatric and Maternity Department, Faculty of Nursing, Universitas Andalas, Indonesia)

<sup>5-6</sup>Affiliation (Undergraduate Nursing Student, Faculty of Nursing, Universitas Andalas, Indonesia)

Corresponding author: arifrohmanmansurphd@nrs.unand.ac.id.

#### ABSTRACT

**Background:** The COVID-19 pandemic around the world puts children at risk of becoming the most prominent victims. Children usually have less ability to decipher and understand the content of the news about the COVID-19 outbreak. Assessment of elementary school children's knowledge and attitudes is critical in identifying gaps, strengthening prevention efforts, and overcoming the epidemic. **Purpose** This study was aimed to describe and assess elementary school children's knowledge and attitudes about COVID-19, signs and symptoms, modes of transmission, precautions, and attitudes towards COVID-19. **Methods** This research was used a cross-sectional design to describe knowledge and attitude of elementary school children. The cluster sampling technique was used to recruit 92 of children aged 7-12 years. An online questionnaire was posted through WhatsApp group questionnaire that developed by the author to measure knowledge and attitudes towards COVID-19 based on literature. The instrument was declared valid and reliable with Cronbach alpha 0.71, consisting of four main parts: socio-demographics, sources of information, knowledge, and attitudes of primary school children regarding COVID-19. Data analysis used descriptive statistics, percentage, and frequency for grouped measurements. **Results:** The majority of children get COVID-19 information from social media and family/friends (62.4%), knowing about COVID-19 (59.9%), mode of transmission (88%), signs and symptoms (47.8%), prevention (78.4%), and protective attitudes against COVID-19 (58.3%). **Conclusion** The insufficient understanding still become a problem of school aged children regarding the symptoms of COVID-19 and the lack of attitudes of elementary school children towards self-protection against COVID-19 that potential for increasing the transmission of COVID-19 infection to children. Nurses as educators could provide health education to improve elementary school students' understanding of signs of symptoms and attitudes for protecting against COVID-19 through a learning by playing approach

**Keywords:** COVID-19; Knowledge; Attitude; School age Children.

#### BACKGROUND

On January 31, 2020 The World Health Organization (WHO) announced that the COVID-19 outbreak had become a public health emergency of international concern (Sun, 2020). Then COVID-19 was categorized as a global pandemic on March 11, the virus has spread rapidly, infecting millions of people and spreading health crises

in countries across the world (3). During the COVID-19 outbreak, people have received a large volume of information that could lead to confusion (Sun et al., 2020).

Update on Covid-19 cases as of November 2020 from the Emerging Infection Information website of the Ministry of Health of the Republic of Indonesia is 2.6% are cases in girls aged 5-14 years and 2.5% are cases in boys aged 5-14 years. Although children are

not the direct face of the pandemic, the effects of the virus on their lives are far reaching and that is why it is important to understand their level of knowledge and how household behaviours can change so that they are not direct victims. Besides, COVID-19 threatens children's basic rights and exposes them a potentially massive disruption to access to health and education, teachers, peers, and their broader communities (Save the Children International, 2020).

Almost 6 months into the pandemic, accumulating evidence and collective experience argue that children, particularly school-aged children, are far less important drivers of SARS-CoV-2 transmission than adults. Therefore, serious consideration should be paid toward strategies that allow schools to remain open, even during periods of COVID-19 spread. In doing so, minimizing the potentially profound adverse social, developmental, and health costs that our children will continue to suffer until an effective treatment or vaccine can be developed and distributed or, failing that until we reach herd immunity (Young, 2020).

Action is needed to address the physical and mental health effects of the COVID-19 crisis among children. Children now face diminished access to health care because of loss of school-based services, increasing parental unemployment, loss of health insurance, and avoidance of health care settings. Therefore, the aim of this study want to describe and to assess elementary school children's knowledge and attitudes about COVID-19, signs and symptoms, modes of transmission, precautions, and attitudes towards COVID-19.

## **METHODS**

### **Design:**

A cross-sectional design was used to recruit elementary students through online questionnaire. an online questionnaire was posted through the WhatsApp group. It was developed by the author about knowledge and attitudes towards COVID-19 based on literature. The questionnaire was written in Bahasa. This instrument consists of four main

parts: socio-demographics, sources of information, knowledge, and attitudes of primary school children regarding COVID-19. Each question-answer was given zero points for the wrong answer and one point for the right answer. This instrument was found to be valid and reliable with Cronbach alpha = 0.71.

### **Place and time of research:**

The research was conducted at Nurul Qur'an Integrated Tahfizh Elementary School (SDIT Nurul Qur'an) and Public Elementary School 03 Kampung Olo. This school is located in Nanggalo Sub-district which is an urban area. The other is Madrasah Diniyah Takmiliah Awaliyah (MDTA) Located in Pasaman, Sub District West Pasaman which is a rural area. The research was performed on July-September 2020.

### **Population and samples:**

A cluster sampling technique was used to recruit students in Elementary School. Ninty two students completed the questionnaire. All students in elementary school were qualified for this research. Students that willing to be a respondent and could read written texts and were 7-12 years old were eligible to participate in the survey.

### **Data measurement:**

The researcher used online surveys in whatsapp group to collect data for this research. Before sending the survey to the students, the researcher got permission from the headmaster of each school. Participants were informed that the study was completely anonymous and participation voluntary. After confirming voluntary participation, the authors distributed the online questionnaire with consent to collect the required sample of the study. Questionnaires were used to collect responses from students to understand their knowledge and attitude about COVID-19. The questionnaire was straightforward and without typos. Students were given a reasonable time allowance to finish the questionnaire. The researcher submitted the questionnaire to the research committee to ensure the questions were clear.

### **Data analysis methods:**

The instrument was declared valid and

reliable with Cronbach alpha = 0.71. Data analysis used descriptive statistics, percentage, and frequency for grouped measurements.

**Ethical aspects:**

All procedures performed in this study, involving human participants, complied with the institutional research committee's ethical standards. Eligible subjects were issued detailed information concerning the aims of the study. The study was designed and conducted in accordance with the ethical principles established by Ethics Research Committee RSUP Dr.M.Djamil Padang No. 284/KEPK/2020.

**RESULTS**

**Demographic variables**

A total of 92 online surveys use whatsapp class group, children participated in this research of whom 50 (54,3%) were male and 42 (45,7%) were female. The mean age of the participant was 10,28 years. Almost one hundred percent (98,9%) of Children already heard information about the coronavirus. Children depended mainly on electronic media (n =82; 89,1%) (television, radio, etc) for their information on COVID-19. See table 1.

**Table 1.** Demographic variables of school children Knowledge and Attitude about COVID-19 Variable

Variable	Frequency (%) / Mean ± SD
Gender	
Male	50 (54,3%)
Female	42 (45,7%)
Age	10,28 ± 1,440
Never heard information about the corona virus	
already	91 (98,9 %)
Not yet	1 (1,1%)
Source of Information regarding COVID-19	
Social Media (Facebook, Whatsup, Youtube, twitter, etc)	49 (53,3%)
Electronic Media (television, radio etc)	82 (89,1%)
Print Media (Newspaper, magazine, etc)	21 (22,6%)

Family, friend, neighbours.	62 (67,4%)
Government website	19 (20,7%)

In the Sub variable of knowledge, The majority of children have a good understanding of the mode of transmission (n=80; 88%), but still, have a low understanding of the corona virus and clinical symptoms of COVID-19. Significant knowledge gaps still appear to exist concerning corona virus and clinical symptoms of coronavirus infection.

**Table 2.** Knowledge and attitude of elementary school children regarding COVID-19

Variable	Frequency (%)
Knowledge	
Corona virus	55 (53,26%)
Mode of Transmission	80 (87,5 %)
Clinical symptoms	44 (47,8 %)
Attitude	
Prevention toward COVID-19	51 (78,6 %)
Protective attitudes against COVID-19	58 (58,15 %)

**Corona virus**

Coronavirus is dangerous and contagious (n=91; 98.9%), The human body fights coronavirus infection by using drugs (n=32; 34.8%), Coronavirus lives inside of living organ (n= 55; 59.8%), We get sick when the coronavirus overcomes our body's defense system (n=67; 72.8%), The coronavirus can be seen with the sense of sight directly without using a microscope (38; 41.3%).

**Clinical symptoms and Mode of Transmission**

The author gathered information about the knowledge and attitude of children regarding clinical symptoms of COVID-19. Most children state that Coughs, Colds, Fever, Headaches, Dry Coughs are not symptoms of the coronavirus disease (n=44; 47.8%), Corona virus can be transmitted through hand touch (n=80; 87.0%), The corona virus can be transmitted through the air when someone coughs or has a cold (n=81; 88.0%).

**Prevention and protected attitude against**

## COVID-19

Covering mouth when sneezing or coughing (N=82; 89.1%), wash your hands with soap (n=86; 93.5%), say hello then shake hands (n=43; 46.7%), physical distance from others at least 0.5 meters (n=49; 53.3%), Avoid the crowd (n=86; 93.5%), always wear a mask (n=88; 95.7%), may not wear a mask when healthy (n=44; 47.8%), It's best to leave the house to play (n=45; 48.9%) ill still go to school (n=42; 45.7%), If cough / fever see the teacher (n=45; 48.9%), wash your hands with running water and soap (n=86; 93.5%), You can wipe your eyes, nose and mouth if you haven't washed your hands (n=47; 51.1%), fight the Corona virus by staying at home (n=73; 79.3%), tell other friends about this Corona virus (n=46; 50.0%).

## DISCUSSION

COVID-19 is an emerging infectious disease and can pose a significant threat to public health. Given the magnitude of the danger caused by COVID-19 and the unavailability of a vaccine for COVID-19, implementing preventive measures plays a major role in reducing infection rates and controlling the spread of the disease. The need for community compliance in implementing preventive and control measures is influenced by their knowledge, attitudes, and practices (Al-Hanawi et al., 2020).

Children can access information in various ways, for their information on COVID-19 and the transparency of multimedia platform. Our results show that the students in this study depended mainly on electronic media (n =82; 89,1%) (television, radio, etc.) This results is inconsistent with (Depoux et al., 2020) who found that people rely heavily on social media channels such as Facebook and Twitter for the latest news. However, people need to be careful regarding the information that is presented in these and other resources (Abuhammad, 2020).

Our data shows that the majority of children get to know corona virus, the mode of transmission. It is very important to understand how COVID-19 is transmitted, to estimate the direction of the epidemic and the

likelihood of continuing transmission.

Household studies may be a strong source of evidence about timing and risk of transmission. Asymptomatic individuals can also transmit the coronavirus, suppressing distancing efforts such as avoiding crowds, and closing schools. Determining whether children are an important source of transmission is to evaluate whether the risks posed by school closures to children's well-being and education are justified (Abuhammad, 2020).

Most children knew high fever as the most common symptom of coronavirus (88%) and dry cough (76%), others mentioned sneezing (58%) and headache (44%). Other symptoms known were difficulty breathing (37%). Some children mentioned they did not know the symptoms of COVID-19. Although mixed, there is generally some level of knowledge of symptoms of COVID-19, and this needs to strengthen further by providing continuous information through trusted channels like a radio that children prefer. Some children did not know any symptoms of Corona Virus (Save the Children International, 2020). Children are not indifferent to the dramatic impact of the COVID-19 epidemic. They experience fears, uncertainties, and physical and social isolation and may miss school for a prolonged period. Understanding their reactions and emotions is essential to properly address their needs. If properly supported by healthcare professionals, families, and other social connections, including school environment, children and adolescents can appropriately overcome a condition of distress and prospectively stabilize emotionally and physiologically (Jiao et al., 2020).

Approximately 58.3 % of the students submitted protective attitudes against COVID-19 This indicates that the students have a good exposure information in the prevention of COVID-19. Children cannot advocate for themselves. Therefore, the recent Commission on the future of children across the globe called for all-inclusive strategy in preparation for the uncertainties facing the children (Abumuhammad, 2020). Knowing about the concept of a disease can be a

motivation to be higher, in every health education activity. Knowing the causes and sources of transmission of a disease can increase the likelihood of a person becoming more aware of the transmission of a disease, and taking precautions to slow transmission (Al-Hanawi et al., 2020).

## CONCLUSION

Findings of the current study prove that The insufficient understanding of primary school children about the clinical symptoms of COVID-19 and the lack of attitudes of elementary school children towards self-protection against COVID-19 can potentially increase the transmission of COVID-19 infection to children. Nurses as educators can provide health education to improve elementary school students' understanding of Clinical symptoms and attitudes to protect against COVID-19 through an approach following children's performance)

## ACKNOWLEDGMENTS

This research was supported by RDP Grant at the Institute for Research and Community Service (LPPM) Universitas Andalas. The opinions expressed in this article do not reflect \ the positions, policy, or endorsement of the University.

## REFERENCES

Abuhammad, S. (2020). Parents' knowledge and attitude towards COVID-19 in children: A Jordanian Study. *International Journal of Clinical Practice*, n/a(n/a), e13671. <https://doi.org/10.1111/ijcp.13671>

Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A. M. N., Helmy, H. Z., Abudawood, Y., Alqurashi, M., Kattan, W. M., Kadasah, N. A., Chirwa, G. C., & Alsharqi, O. (2020).

Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.00217>

Depoux, A., Martin, S., Karafillakis, E., Preet, R., Wilder-Smith, A., & Larson, H. (2020). *The pandemic of social media panic travels faster than the COVID-19 outbreak*. Oxford University Press.

Info Infeksi Emerging Kementrian Kesehatan RI. Accessed on 22<sup>nd</sup> Novemver 2020 from <https://covid19.kemkes.go.id/category/situasi-infeksi-emerging/info-corona-virus/#.X7nXZ7MxXIU>

Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020). Behavioral and emotional disorders in children during the COVID-19 epidemic. *The Journal of Pediatrics*, 221, 264. Save the Children International. (2020). *Knowledge, Attitudes and Impact of COVID-19 on Children in Non-formal Schools in Dadaab*. Resource Centre.

<https://resourcecentre.savethechildren.net/node/17884/pdf/Knowledge%20attitudes%20and%20impact%20of%20%20COVID-19%20on%20children%20in%20non%20formal%20schools%20in%20Dadaab%20%2802%29.pdf>

Sun, J., Xu, Y., Qu, Q., & Luo, W. (2020). Knowledge of and attitudes toward COVID-19 among parents of child dental patients during the outbreak. *Brazilian Oral Research*, 34.

Young, K. (2020). *COVID-19: Viral Spread by Kids / Persistent Symptoms / Adult Multisystem Inflammatory Syndrome / More Severe Stroke*. <https://www.jwatch.org/fw116824/2020/07/12/COVID-19-viral-spread-kids-persistent-symptoms-adult>