

# IMPROVING THE QUALITY OF PERSONAL HEALTH CARE WITH COMMUNITY NURSING INTERVENTIONS FOR SCHOOL-AGE CHILDREN DURING THE COVID-19 PANDEMIC

Muflih Muflih<sup>1\*</sup> ; Sang Ayu Made Adyani<sup>2</sup> ; Endang Nurul Syafitri<sup>1</sup>

<sup>1</sup>Faculty of Health Sciences, Universitas Respati Yogyakarta

<sup>2</sup>Jakarta Veterans National Development University

[muflih@respati.ac.id](mailto:muflih@respati.ac.id)

## ABSTRACT

The COVID-19 pandemic is a vulnerable time for the health of school-age children. There is an ineffectiveness of personal health care due to restrictions on mobility and limited access to health care facilities. Therefore, nursing interventions are needed based on a community nursing approach that is appropriate to the problem. The purpose of this study was to determine the effectiveness of community nursing interventions on improving the quality of health care in the aggregate of school-age children during the COVID-19 pandemic. The research method used is action research. The research process is carried out online. The research stage begins with observing the data using the google form application. Nursing intervention design provided through google meet application. Evaluation of the results of its implementation uses indicators of knowledge and obedient behavior. The participants involved were 16 children aged 10-14 years in the Special Region of Yogyakarta, Indonesia. The results of the study showed that the knowledge outcome increased from the level of limited knowledge to high knowledge, the outcome of obedient behavior towards the recommended activities increased from the level of rarely showing to the level of often showing. The conclusion of the study was that community nursing interventions were effective in improving the quality of personal health care with community nursing interventions. So, Nurses in community services can optimize online-based nursing interventions for school-age children during the COVID-19 pandemic.

**Keywords:** *Community; Knowledge; Nursing Intervention; Obedience; School Age Children*

## Introduction

During the COVID-19 pandemic, the basic health of school children should remain a concern and not be neglected. One of them is the quality of personal health care during the pandemic such as hand washing activities, oral and dental hygiene, and compliance with using masks when outside the home. However, these health activities tend not to receive adequate attention.

School-age children should be given responsibility for their own health behavior. Because, school age is a time when a child acquires the basics of knowledge to adjust to adult life and acquire certain skills (1,2).

Riskesdas 2018 data shows the prevalence of handwashing behavior aged 10 years in Yogyakarta in the range of values of 40-60% (3). The results of previous studies showed that the understanding of elementary school-aged children about washing their hands properly was still low (4). The dental health status of school-age children is still low (5). Likewise, compliance with the use of masks is still not done properly (6). This condition is quite worrying because it can increase the risk of transmission of COVID-19. There needs to be an effort to improve this health behavior for the better.

The results of the windshield survey at the research site found that efforts to maintain the health of school-age children have not been effective. This is indicated by knowledge of how to wash hands, dental and oral health status and adherence to the use of masks which

are quite low. This condition can still be improved with outreach activities, health education, or other educational activities.

However, this is difficult to do face-to-face, due to restrictions on mobility and restrictions on crowding during the COVID-19 pandemic. So, it is necessary to carry out online-based health improvement activities. Activities undertaken to overcome these problems are a form of community nursing intervention, but not many have been reported scientifically. Therefore, further research is needed to be able to prove it scientifically. This study aims to identify the effectiveness of community nursing interventions to improve personal health maintenance in school-age children.

## **Methods**

The method used is action research. The study was conducted on a group of 16 school-age children who experienced the problem of ineffective personal health care in a village in the Yogyakarta region, Indonesia. The sample was selected by purposive sampling technique by meeting the criteria, namely: age range 10-14 years, can access the internet network, have dental and oral health problems, knowledge of hand washing is not fully correct, often do not use masks when outside the home.

The research activity was carried out in September 2020. The research stage began with collecting data on the Community As Partner (CAP) nursing theory framework, which used the google form application (7). The data obtained in the form of qualitative data which was analyzed and determined the diagnosis of nursing problems. The data analysis technique proceeds in an inductive-interpretation-conceptualization process.

The nursing intervention design provided was health counseling and watching educational videos, each of which was given 1 meeting. Another intervention is group teaching which includes teaching hand washing, dental and oral care and proper use of masks. All these interventions are given online through the google meet application. During the implementation of the intervention, feedback and reflection were carried out to provide input and answers to the responses or questions from the sample.

At the evaluation stage, data measurement uses instruments that focus on indicators of knowledge and obedient behavior. Measurement of data using the same application, namely google form. The data from the evaluation were analyzed to obtain conclusions and followed up into the next intervention plan. This research activity has applied research ethics and norms as appropriate.

## **Result and Discussion**

Based on the results of initial data collection or assessment of 16 participants, it was found that 10 children knew the correct rules about hand washing and dental and oral hygiene and the use of masks, while 6 others did not know. All participants had received health education in school, but had forgotten. There were 13 children who claimed not to use masks when doing activities outside the home. After the data was analyzed, it was concluded that the diagnosis of the nursing problem was the ineffectiveness of personal health care. Furthermore, the implementation of the intervention is in accordance with the predetermined design and evaluation measures are carried out based on indicators of knowledge and obedient behavior.

After the intervention, there was an increase in knowledge from a limited level to a large level and indicators of obedient behavior increased from the level of rarely showing, to the level of often showing. In detail the research results are described as follows:

### **Health Knowledge**

The data before the intervention showed that 10 of the total 16 samples stated that they did not know the rules of washing their hands properly. One of them said:

*"....saya tau kapan cuci tangan dan sikat gigi itu setelah makan.... lainnya tidak tau...."*. (".....I know when to wash my hands and brush my teeth after eating..... others don't know..."). Participant 1

*"....pernah mendapatkan pendidikan kesehatan tentang cara cuci tangan dan sikat gigi di sekolah, tapi sudah lupa..."*. ("....had received health education on how to wash hands and brush teeth at school, but had forgotten..."). Participant 3

*".... kalau main keluar jarang pakai masker. Sering lupa bawa masker...."*. ("... when I play outside, I rarely wear a mask. Often forget to bring a mask..."). Participant 7

After the health education intervention (health counseling and watching educational videos) there was an increase in health knowledge about hand washing rules, dental and oral health and the use of masks. During the implementation of the intervention all participants were very interactive when given health education, being able to mention when, benefits and steps of hand washing and dental and oral care. All participants were observed to be able to practice how to wash their hands and brush their teeth properly and correctly. This means that there is an increase in the level of knowledge that occurs from the level of limited knowledge to the level of much knowledge.

This is in line with an opinion that the purpose of providing health education is to achieve changes in the behavior of individuals, families and communities (8). Health education activities can be in the form of fostering and maintaining healthy behavior and a healthy environment, as well as playing an active role in efforts to achieve optimal health degrees (9). Knowledge is a determinant of a person's behavior change (10). One's knowledge of health is one of the important aspects before the occurrence of health behavior.

There is a change in the level of knowledge from limited knowledge to much knowledge, in line with the results of the study, namely there is a significant influence between the knowledge of respondents before and after being given health education (11,12). The results of a similar study showed that there was an effect of hand hygiene counseling on the behavior of elementary school students in North Minahasa (13). Other studies also show that there is a change in knowledge of how to use masks correctly after being given health education.

This shows that health education can have an impact on increasing the level of knowledge even though it is given online. This is similar to the results of reports from health education activities provided online that can provide the expected results.

Knowledge of personal health is the basis for efforts to prevent the transmission of COVID-19, especially in the school-age community. Increased knowledge is a trigger factor for the recommended health behavior. Therefore, personal health knowledge is important and needs attention by community health nurses.

### **Obedient Behavior**

Obedient behavior in this study was indicated by the willingness of the sample to demonstrate again the demonstration of washing hands, brushing teeth and using masks correctly.

The data obtained before the intervention was that 8 participants could demonstrate or practice how to wash their hands, brush their teeth and use masks, but the steps were not

appropriate and 3 participants did not want to because they were ashamed to practice it, and there were 5 other children who refused to do it.

During the intervention, it was seen that all participants were very cooperative and could practice hand washing, brushing teeth, and wearing masks properly and correctly. After the demonstration activity, all participants were asked to make a schedule about the activities that had been taught.

One participant stated that:

*".....saya sudah bisa cuci tangan, sikat gigi, pakai masker juga seperti tadi... benar kan... yakin caranya sama... kalau waktunya sudah tau kapan saja harus mencuci tangan...."*. ("....I can already wash my hands, brush my teeth, wear a mask as well as before... that's right... I'm sure it's the same way... if it's time to know when to wash my hands....") Participant 8

This means that group teaching activities have succeeded in increasing obedient behavior from the level of rarely showing to the level of showing often. In addition, participants were committed to carrying out predetermined activities at home in the future.

This is in accordance with research which says that the correct behavior of washing hands with soap does not just appear, but must be used to it from childhood (14,15). Children will become agents of change in delivering education and teaching clean and healthy living behaviors, both for themselves and the surrounding environment. There have been many studies that show that infectious diseases can be reduced due to the behavior of washing hands using soap properly, one of which is COVID-19.

Washing hands with soap is one of the problems that often occurs in school-age children related to personal hygiene. School-age children are the most appropriate time to instill understanding and healthy living habits, especially hand washing with soap. The health of the community and the nation in the future can be determined by the health of school-age children (16). Proper hand washing is one of the aspects that become indicators of clean and healthy living behavior which is currently the world's concern. This is because not only in developing countries, but also in developed countries, there are still many people who forget to wash their hands properly, this shows that there is still a lack of practice or action to wash hands in the community (17).

By providing teaching on how to wash hands properly and correctly, it can increase the knowledge of school-age children so that it is expected to change good and correct hand washing compliance. The provision of health education in the form of counseling and demonstrations on how to wash hands has been proven to have an effect on school-age children (18,19)

Maintaining dental and oral hygiene requires personal awareness because the activities are carried out at home without any supervision from anyone. It completely depends on the knowledge, understanding, and willingness of the individual to maintain his oral health. Dental and oral care for school-age children should use the model and the technique as simple as possible, delivered in an attractive and attractive way without reducing the content (20). In this study, using online demonstration techniques and visual programs.

The demonstration method helps the child remember which parts of the teeth to clean while at home, so that the child understands better. If supported by children's concern for the maintenance of dental and oral health that is already quite good, the level of dental and oral hygiene will be maintained (21).

Health behavior in children can actually be caused by doing health habits. Behavior can be formed by habit or conditioning. The formation of behavior by getting used to behaving in accordance with what is expected will form a behavior, for example getting used to getting up early, brushing teeth, washing hands, and so on (22,23).

After the intervention was given, there was an increase in the practical ability and commitment of participants to use masks, especially when outside the home. The use of masks in school-age children is indeed difficult to implement. However, this still needs to be taught so that it remains a good habitual behavior. The use of masks is the key to preventing the spread of COVID-19.

Health education can provide the information needed to reduce bad behavior habits and can increase knowledge so that a person can determine a better attitude. In addition, it can reduce stress levels due to exposure to COVID-19 information (24). Health education is the addition of a person's knowledge and abilities through individual learning practices or instructions to increase awareness of the value of health, so that they have the awareness and willingness to change their behavior into healthy behavior. Therefore, health education is very important given to school-age children.

The follow-up plan from the evaluation results is that there is a need for a nursing action plan that aims to develop the ability of participants' knowledge and compliance levels, so that the effectiveness of self-care is achieved maximally. The suggested intervention plans include risk identification, decision support, health promotion behavior, and behavior management.

### **Conclusion and Suggestion**

There was an improvement in the level of knowledge from the level of limited knowledge to the level of much knowledge and the obedient behavior of school-age children from the level of rarely showing to the level of often showing. Knowledge and obedient behavior regarding hand washing procedures, dental and oral hygiene and using masks correctly, are important capital efforts to prevent the transmission of COVID-19. Community health nurses can optimize the delivery of online nursing interventions during a pandemic so that they can increase awareness and change the behavior of school-age children.

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