

## ORIGINAL ARTICLE

# Health promotion of families and “PAUD” teachers in improving cognition, commitment, and behavior to prevent Covid-19 transmission in children

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### ARTICLE INFORMATION

#### Article history

Received January 25, 2022

Revised June 16, 2022

Accepted July 20, 2022

#### Keywords

Promotion, Health, Behavior,  
Covid 19

### ABSTRACT

**Introduction:** Indonesia was entering the Covid-19 emergency response period, as indicated by the increase in Covid-19 cases and the risk of transmission in high-risk groups, one of which is children. The increase in Covid-19 cases has not been followed by compliance with Covid transmission prevention behavior in the community, especially among children. This research aimed to improve the cognition, commitment, and behavior of Covid 19 prevention during the Covid emergency through the Health Promotion of families and kindergarten teachers. **Method:** The research design used was the Quasy Experiment, with a large sample of 100 preschool-age children divided into two groups, simple sampling techniques random sampling, Independent variables: Health promotion of families and teachers using pocketbook media, children's AKB Logbook, Educational Videos, and Variable dependents: cognition, commitment and preventive behavior of Covid 19 in preschool children. The instrument used was a questionnaire and statistical test using Wilcoxon Rank Test, Pair T-Test, and Mann Whitney. **Results:** The results of the study found that health promotion using pocketbooks, AKB logbooks, Whatsapp Group media, and Educational videos were able to improve cognition, commitment, and behavior of Covid 19 prevention because it provides information directly to families and teachers. For 7 days, the child under the supervision, assistance, and facilitation of teachers performed Health promotion in school and, through the help of parents carried out the process at home. This helps children get used to adapting to new life in a Covid emergency. **Conclusion:** there is an improvement in cognition, commitment, and preventive behavior of Covid 19 in children after being given Health Promotion.

**Journal of Nursing** is a peer-reviewed journal published by the School of Nursing at the Faculty of Health Science, University of Muhammadiyah Malang (UMM), and affiliated with the Indonesia National Nurse Association (INNA) of Malang.

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## 1. Introduction

World Health Organization (WHO) declared the coronavirus outbreak in January 2020 as an international public health emergency WHO stated that there is a high risk of spreading COVID-19 to other countries worldwide. In March 2020, WHO declared COVID-19 a pandemic. Global cases as of July 20, 2020, reached 14,508,892, while domestic cases in Indonesia confirmed cases 88,214. WHO has reported more than 2 million cases of Covid-19 in more than 210 countries and territories, resulting in 195,755 deaths (Nakoe, S Lalu, and Mohamad, 2020). Statistically, as of May 17, 2020, there were 4,535,731 (four million five hundred and thirty-five thousand seven hundred and thirty-one) positive cases of Covid-19, and as many as 307,537 (three hundred thousand five hundred and thirty-seven) died worldwide (WHO, 2020) the Indonesian Pediatricians Association (IDAI, 2020) mentioned 3,324 children who were patients in the hospital. Supervision (PDP) until May 18, 2020. Of these, 129 children with PDP status died, while

the number confirmed positive for Covid-19 amounted to 584 children. 14 of them died with a positive status of coronavirus.

WHO, UNICEF, and IFRC in Key Messages and Actions for COVID-19 Prevention and Control in Schools, a basic principle that can help keep students, teachers, and staff safe in schools and help stop the spread of this disease. Schools should enforce regular activities such as hand washing with clean water and soap, maintaining distance, cough and sneeze ethics, and using masks (WHO, 2020). Maintaining distance can stop the transmission of the virus, and using a mask can prevent the virus from entering the respiratory tract (Rahmawati, Utomo, and Ahsanah, 2020). In Indonesia, hand washing using soap, maintaining distance, using masks, and the ethics of coughing and sneezing during pandemics are often seen as one eye or considered trivial. However, this action attempts to break the chain of microorganisms, including viruses as a source of disease (Tabi'in, 2020). Based on the results of a preliminary study of 10 mothers conducted at Anna Husada Madura Bangkalan kindergarten on February 1, 2021, 5 children (50%) had less behavior in the prevention of Covid-19, 2 children (20%) had good behavior in the prevention of Covid-19, and 3 children (30%) had good behavior in prevention. Covid-19, Low behavior of children in the prevention of Covid-19 in children, is characterized by children not knowing the 6 steps of proper hand washing, children do not use masks properly when outside, children do not wash their hands properly after activities outside the house, children do not bring hand sanitizer when outside the house, children do not keep a distance when outside the house. Based on the preliminary study results above, the problem in this study is still the low behavior of children in the prevention of Covid-19.

Early childhood health behavior problems (4 - 6 years) will increase the risk of children being exposed to and contracting Covid-19 (Tabi'in, 2020). During the Covid-19 pandemic, parents need support from the workplace, home environment, and where children are educated. Parents need health education about good home learning and supporting child development. Parents need the support of health workers in caring for children's health at home; parents also need information from education personnel in the place where children attend school about learning methods and media at home (Rahmawati, Utomo, and Ahsanah, 2020).

Health promotion in families and teachers is one of the efforts that can be done to provide physical, psychological, and social health support in improving Covid-19 prevention behavior in children. Two fundamental concepts in family-centered care are empowering and empowering or involving parents in their child's care (enabling). They are enabling families by creating opportunities for all family members to demonstrate their latest abilities and competencies and to gain abilities and new competencies to meet the needs of the children and families (Wong et al. 1, 2008). This research aims to improve cognition, commitment, and behavior to prevent the transmission of Covid-19 in children through health promotion using pocketbook media, offline health counseling, and Educational Videos through WhatsApp Group and Logbook. The results of this study are expected to provide information for early childhood education institution managers, health workers, the general public, and stakeholders in providing efforts to prevent the transmission of Covid-19 in children.

## 2. Methods

The research design used is quasi-experiment research. The design seeks to reveal causal relationships by involving control groups in addition to experimental groups. The variables in this study are:

Independent Variables: Health Promotion of Teachers and Parents using pocketbook media and Audio Visual Media, Logbook

- a. Family behavior in the prevention of Covid transmission in children
- b. Cognition of prevention of Covid-19 transmission in children
  - 1) Commitment to prevent the transmission of Covid-19 in children
  - 2) Preventive measures for transmission of Covid-19 in children

The population in this study was IGTKI Teachers of Bangkalan Regency and Parents with children aged 4-6 years who were registered in 6 kindergartens in the Bangkalan Cluster region. The size of the sample in this study was as many as 100 divided into 2 groups, namely 50 treatment groups (Kindergarten Anna Husada Madura and TK Raudhatul Islam and TK Tunas Mekar) and 50 control groups (TK Muhibin and Kindergarten Syafinda and Kindergarten Aulia), sampling technique: Simple random sampling with lottery technique that we make a list of the names of all kindergarten students who qualify as many as 234 students, and then we take the name lottery as many as 50 treatments and 50 controls. Research instruments used for health promotion variables use the Covid 19 Prevention PocketBook in Children and Audio Visual (Educational Video). Variables of cognition, commitment, and prevention of Covid-19 transmission in children Using questionnaires as many as 3 types, namely cognition questionnaire (8 questions with measurement results in the form of total score), commitment questionnaire (10 questions with measurement results in the form of total score) and observation sheet of Covid19 preventive behavior (10 items with total score results).

Parents and Teachers in the treatment group get educated by hybrid learning (Offline and Online) with the media PocketBook "Guidelines for preventing the transmission of Covid in children in the Covid-19 Emergency Response Period," which was given at the first meeting and explained directly in kindergarten. Parents and Teachers are also gathered in WhatsApp Groups to get an education assisted by The class teacher becomes a facilitator. Group WA became a medium to send educational videos and have discussions for 21 days with classroom teachers and parents about Covid-19 in children. The family also gets an AKB (New Habit Adaptation) logbook about Habituation of Covid-19 Transmission Prevention Behavior in children that must be filled out every day for 21 days. Aimed to familiarize children and families with transmission prevention behaviors per the Health Protocol. Statistical tests used after the Data Normality Test are as follows:

- a. Test the difference in Cognition between before and after (treatment group), Test the commitment difference between before and after (treatment group) using the behavioral difference test between before and after (treatment group): Wilcoxon Signed Rank Test.
- b. Test the difference in Cognition between before and after (Control group) and Test the Commitment difference between before and after (Control group): Wilcoxon Signed Rank Test
- c. Test the difference in Behavior between before and after (Control group): Paired T Test
- d. Test Differences in Cognition, Commitment, and Behavior between treatment and control groups using: Mann Whitney.

### 3. Results and Discussion

Table 1 Characteristics of Respondent

Characteristics of Respondent	Treatment Group		Control Group	
	N	%	N	%
Age				
20-30	21	42	19	38
31-40	26	52	30	60
41-50	3	6	1	2
Education				
Magister	3	6	4	8
Bachelor or Diploma	8	16	14	28

High School	19	38	12	24
Junior High School	9	18	8	16
Elementary School	8	16	10	20
No School	3	6	2	4
Work				
Housewife	20	40	19	38
Entrepreneur	16	32	17	34
Teacher or Lecturer	9	18	10	20
Farmer	5	10	4	8
Gender of child				
Male	21	42	19	38
Woman	29	58	31	62
Number of children				
1-2	26	52	29	58
3-4	12	24	11	22
5-6	12	24	10	20

Table 2 Tests Differences in Treatment and Control Groups

Variable	P-value
Cognition Difference Test between treatment and control groups	P Value : 0,000
Test Commitment Differences between treatment and control groups	P Value : 0.001
Behavioral Differences Test between treatment and control groups	P Value : 0.003

### 3.1 Differences in Cognition between treatment and control groups

The study results show differences in cognition between the treatment group and the control group. Family health promotion is one of the effective and efficient efforts to improve behavior, especially parental cognition. It is relevant to the philosophy of child nursing; the philosophy of family-centered care shows that the family is constant in the child's life. Service and personal systems must support, appreciate, encourage and enhance the strength and competence of families through the empowerment of practical approaches and assistance (Duns and Trivette, 1996 in Wong et al, 2008). Families are supported in natural care delivery and decision-making roles by building their unique strengths as individuals and families. Two fundamental concepts in family-centered care are enabling and empowering. Empower or involve parents in the care of their children (enabling). Nurses enable families by creating opportunities for all family members to demonstrate their latest abilities and competencies and to acquire new abilities and competencies necessary to meet the needs of children and families (Wong et al, 2008). Through this health promotion, parents experience improved cognition as a basis for making decisions or building commitment into a habit or consistent preventive measure.

The results showed that cognition in the treatment group was better compared to the control group, with a Mean score: 7.15 in the treatment group and 5.16 in the control group. The parents' activities influenced this, and the class teacher accompanied. Information received directly through pocketbooks, and Educational Videos provides information to parents and Teachers about the importance of Covid 19 prevention in the Covid Emergency. The direct impact of family empowerment activities through health education is that families can increase their understanding of the importance of preventive measures in children. It is like the concept of the health promotion model (Nolla J Pander) that human cognition will see the benefits of action, see obstacles to action that can inhibit health behaviors, and see self-efficacy, which is a person's

ability to decide to use or avoid health promotion behaviors that will be done. Self-efficacy affects the resistance to action, so high self-efficacy impacts low resistance and vice versa (Alligood, 2017). Health education conducted for parents and teachers will help parents understand how to prevent the transmission of Covid 19 in homes and schools. This is supported by the results of the study (Pradana et al., 2021) that the knowledge of respondents before health education the majority of knowledge is sufficient 56.7%, and after health education, the majority became good knowledge 73.3%.

### **3.2 Differences in Parental Commitment in the prevention of Covid 19 Transmission in children between treatment and Control groups**

Based on the study results, there was a significant difference between parental commitment in the treatment group and the control group with P Value: 0.001 with a mean value of 25.5 and the mean control group 19.5. This showed significant differences and high commitment of parents who received interventions. Parents who get an explanation when meeting offline in kindergarten continue by reading independently Pocket Books submitted to parents to make parents more understanding about the prevention of covid prevention in children. Parents who understand the benefits of prokes and the obstacles and abilities of self make parents sure to do Prokes prevention of Covid in children. As in the concept of Nolla J Pander, commitment to the plan is the intention and purpose of a person to create a planning strategy to implement health behaviors optimally. It is relevant to the study's results (Nofrita et al., 2020) that commitment will increase when given health education in schools about the prevention of Covid 19. (Kurniati, Nur Alfaeni and Andriani, 2020). The role of parents is vital in increasing commitment to the prevention of Covid 19, so it requires the active participation of parents in health education. One of the things parents can do is read stories about Covid 19 to children (Sulastri, Maharani, and Sarilah, 2020).

The increase in parental commitment to preventing Covid-19 transmission is in line with the results of Syah's research, Utari (2020), that TPQ Awalulmu'minin teachers are committed to implementing learning activities obliging to implement health protocols prevention of Covid 19 transmission in schools. This is because teachers experience an increased understanding of Covid-19 prevention in children after getting health education. Teachers understand the dangers of Covid-19 in children and how to effectively prevent the transmission of Covid-19 in children. This understanding affects the teacher's confidence and commitment to actively participate in preventing Covid 19 transmission in children.

The high commitment of parents who get health education due to the increased understanding of parents about the importance of prevention, the dangers of Covid in children, obstacles in the implementation of Prokes that they get after getting health education directly, reading pocketbooks, listening to educational videos, discussions in WA groups and accompanying children for 21 days implementing 10 AKB. Parents who understand the importance of Covid 19 prevention in children will increase their confidence and commitment of parents in helping, facilitating, and supervising children by implementing Prokes at home and school.

### **3.3 Differences in children's behavior in the prevention of Covid-19 transmission between treatment and control groups**

Based on the study results, there is a significant difference between the behavior of children in preventing Covid 19 transmission between the groups given treatment and those not. Families and Teachers get pocketbooks and educational activities online through Educational Videos and Discussions on Whatsapp Group. In contrast, children get a 21-day activity logbook containing about 10 New Life Adaptation (AKB) activities that children at home must do and at

school in carrying out the Covid 19 Prevention Health Protocol. For 21 days, the child gets help, supervision, and facilitation by the family and teachers in carrying out 10 AKB activities. Improved cognition scores and commitment to the treatment group impacted the behavior of the Covid 19 Prevention health protocol.

Families and teachers who better understand the importance, benefits and barriers of Prokes in children will be more confident in taking a stand and directly impact their behavior in everyday life. As the results of the study (Rizki, Putri, and Pati, 2021) It is also relevant to the results of research conducted by (Kurniati, Nur Alfaeni, and Andriani, 2020) that the role of parents is positively correlated to the behavior of children in the implementation of Prevention Prokes in the Covid pandemic. (Ausrianti et al., 2020) Education to prevent Covid 19 transmission effectively improves preschool children's behavior. Relevant to the study's results (Wiliyanarti, Putra, and Annisa, 2020), health education can improve children's treatment compliance.

Children's behavior in the prevention of Covid-19 transmission experienced a significant increase in the treatment group because for 21 days received parental assistance, supervision, and support to implement health protocols at home and assisted teachers while at school. Children get rewarded according to their parents' agreement when applying 10 New Habit Adaptation (AKB) for 21 days. Children feel motivated, reminded, and facilitated while carrying out 10 AKB at school and home. Children feel happy because they get rewards from parents because of changes in behavior for 21 days. After 21 days of applying the following 10 AKBs, children get reassessment. The results satisfy children without being scolded, reminded by teachers and parents are used to using masks every time they go out and interact with others, used to wash their hands after activities outside the house / the classroom, children use to use hand sanitizer when there is a place to wash hands, Children are used to nose and nose when coughing or sneezing, children are easy to accept when asked at home and do not come to crowded places.

#### **4. Conclusion**

Hybrid Learning Health Promotion with PocketBook media, Educational Videos, and Discussions via Whatsapp Group and LOGBOOK AKB can improve cognition, commitment, and Family Behavior, Teachers and Preschool Children in Covid 19 Prevention Prokes in the Covid 19 Emergency. Improving family and teacher understanding will empower families and teachers in improving children's behavior in Covid 19 Prevention. Teachers will help facilitate, support, and ensure the child's prokes behavior while at school, and the family ensures the child prokes while at home.

#### **Ethics approval and consent to participate**

This research has passed the ethics of research through the Health Research Ethics Commission of STIKes Ngudia Husada Madura on August 21, 2021 with the Number 1098/KEPK/STIKES-NHM/EC/VIII/2021.

#### **Acknowledgments**

Our thanks to several parties who helped smooth the research process from the beginning to the completion of the research report, namely the Chairman of STIKes Ngudia Husada Madura, The Head of PAUD (Anna Husada Madura, Syafinda, Aulia, Tuna Mekar, Muhibbin, and Raudhatul) who has granted research permits and facilitated research activities.

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