



GOOD COMMUNICATION SUPPORTS PRE-SCHOOL CHILDREN'S ABILITY AND ITS APPLICATION TO PERSONAL HYGIENE HAND WASHING IN KINDERGARTEN

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ABSTRACT

Infectious diseases in pre-school children are prone to occur because their growth and development age is in the pre-adolescent age range or pre-school age where this age requires more space for wider movement such as schools, large fields. Hand washing is one of the knowledge that needs to be applied correctly by school-age children to maintain hand hygiene. This knowledge apart from home needs to be emphasised from the teacher at the child's school. Children's dominant activities at school make school one of the places expected to provide knowledge about proper hand hygiene. This research is a quantitative study with an analytical descriptive approach and design and method used is aquasi experiment with a pre and post without control group design approach. This study is to measure the effect of good communication on the ability of pre-school children to wash their hands. Data was collected by video recording children while washing their hands before and after the communication intervention. Bivariate data analysis using non-parametric test with Wilcoxon test because the data distribution is not normal. The results showed 40 respondents z count value of -4.465 with a p-value of $(0.000) < \alpha (0.05)$, this indicates that there is a significant influence between the ability of children to wash their hands before the pretest before the treatment of good communication about hand washing on the posttest after the application of good communication treatment about hand washing. It can be concluded that there is an effect of good communication on the ability of pre-school children to wash their hands.

Keywords: childhood infections; good communication; handwashing; preschool

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INTRODUCTION

Infectious diseases in pre-school children are prone to occur because their growth and development age is in the pre-adolescent age range or pre-school age where this age requires more space for wider movement such as schools, large fields. At this age, children have begun to explore themselves to the surrounding environment to play and learn in groups with their friends (Dong et al., 2020) The activities of children of this age provide opportunities for children to be exposed to the elements that exist in the surrounding environment while learning and playing. Elements of soil, air and water that if not considered will be at risk of spreading germs that can cause infections in children. The spread of germs that can cause infections in school-age children such as respiratory, skin, and even infectious diseases that can cause death (Palmeirim et al., 2021)

Communicable and non-communicable infectious diseases can cause death in children around

the world, especially in low-income countries. Research conducted in Tanzania in several villages found that more than 50% of children had infections from various parasites. Infections that occur in school-age children, especially pre-school age, are caused by poor personal hygiene transmitted through contaminated hands from various germs (Gupta et al., 2020). Research on infections that are often experienced by school-age children, especially pre-school age, are caused by parasitic infections, for example in children of this age in Nepal, around 94% of 288 children examined for faecal samples were infected with parasites due to poor sanitation and hand hygiene that is not considered (Kua & Pang, 2020) In Singapore, it was found that children under the age of 7 years on average had skin infections due to lack of hand hygiene where children were cared for in daycare (Djuma et al., n.d., 2019)

In Indonesia, several studies reported cases of infection in school-age children such as in Kupang in 56 children were due to parasitic infections, namely 96.4% of children infected with worms due to a lack of clean lifestyle (PHB) (Djuma et al., n.d. 2019). In Bali, a study of 138 school-age children found about 78.6% had helminth parasitic infections due to a lack of good PHB behaviour, one of which was hand hygiene after playing (Ayu et al., n.d., 2019) . Looking at the 2018 Riskesdas Data, the National Lung TB prevalence was 0.4%, while the National Malaria prevalence was 0.4%. Indonesia also still has the challenge of HIV cases that increase every year. In 2017, 48,300 cases were recorded. Not only that, threats to infectious diseases also arise from several infectious diseases that can cause pandemics including SARS, Poliomyelitis, H1N1, Ebola, MERS-CoV, Diphtheria and DR-TB. (Kemenkes RI, 2019). Hand washing is one of the knowledge that needs to be applied correctly by school-age children to maintain hand hygiene. This knowledge apart from home needs to be emphasised from the teacher at the child's school. Children's dominant activities at school make school one of the places expected to provide knowledge about proper hand hygiene. According to research on children's knowledge of infection and hand hygiene in 13 schools in Germany from 493 children as respondents showed their knowledge of infectious diseases and how they are transmitted and places that should be avoided and prevented one of them by washing hands. However, deeper knowledge about the right way has not been explored with this report (Klar et al., 2022). Therefore, this study aims to analyse the effect of good communication on the ability and application of hand washing in pre-school children.

METHOD

This research is a quantitative study with an analytical descriptive approach and design The method used is aquasi experiment with a pre and post without control group design approach. This research is to measure the effect of good communication knowledge and its application on personal hygiene hand washing in kindergarten (KEMENKES, 2019). The subjects in this study consisted of kindergarten students in Rawalumbu District. The subjects will be measured before and after the intervention (pre-posttest) (Dharma, K., 2017).

RESULTS

The 40 respondents had an average age of 4.5 years with a standard deviation of 0.24, the youngest age was 4.2 years and the oldest was 5.1 years. Based on gender, most of them were female, 55%. In the indicator score table, the average score of the 6-step hand washing indicator before the intervention was 3.33, the median was 3.50 and the standard deviation was 1.439 with the lowest score of 1 and the highest score of 6. After the intervention, the average score of the 6-step hand washing indicator before the intervention was 4.93, the median was 5 and the standard deviation was 1.269 with the lowest score of 2 and the highest score of 6.

Table 1.
Distribution of Respondent Characteristics (n= 40)

| Variabel | f (%) |
|---------------|----------|
| Umur | |
| Mean | 4.5 |
| Median | 4.5 |
| SD Deviasi | 0.24 |
| Min-Max | 4.2-5.1 |
| Jenis Kelamin | |
| Laki-laki | 18 (45%) |
| Perempuan | 22 (55%) |

Table 2.
Indicator Score (6 Steps of Handwashing) (n=40)

| Skor Indikator (6 Langkah) | Mean | Median | Standar Deviasi | Minimal-Maksimal |
|----------------------------|------|--------|-----------------|------------------|
| Sebelum | 3,33 | 3,50 | 1,439 | 1-6 |
| Sesudah | 4,93 | 5 | 1,269 | 2-6 |

Analysis of the effectiveness of good communication on children's ability to do proper hand washing bivariately using the Wilcoxon test. Significance tests were conducted using alpha (0.05) and 95% Confidence Interval. The results of the analysis obtained 3 children with posttest scores < than pretest scores (negative ranks), 6 children posttest scores and pretest scores are the same (ties), 31 children with posttest scores > than pretest scores (postive ranks). The results of the Wilcoxon test obtained P value (0.000) < α (0.05) then Ho is rejected, meaning that there is an effect of effective communication on children's ability to wash their hands properly.

Table 3.
The effect of good communication on children's ability to wash their hands properly (n=40)

| Skor Indikator 6 Langkah | f | Mean | Negative ranks | Postive ranks | Ties | Z hitung | Pvalue |
|--------------------------|----|------|----------------|---------------|------|----------|--------|
| Sebelum | 40 | 3,33 | | 31 | | | |
| Sesudah | 40 | 4,93 | 3 | | 6 | -4.465 | 0,000 |

DISCUSSION

Good communication can have a positive impact on children's ability to wash their hands because communication is given according to the age of the child, then by using clear language, giving positive examples, directly involving the child in the activity described, making the process fun for example while playing, giving praise and rewards for what is done and teaching the right steps (Khatoon et al., 2017). Pre-school children's abilities in various activities are influenced by a number of factors involving physical, cognitive, social and emotional development. Some of the factors that can affect pre-school children's abilities such as physical development, namely gross and fine motor skills, cognitive development in the ability to think and remember, social and emotional development can be seen in the child's interaction skills. Then the physical and mental health factors, and the childcare environment all affect the child's ability to do something that is taught or delivered (UNICEF;Parenting, n.d., 2018).

To be able to implement the success of children, especially pre-school age, to wash their hands properly, parents need help to set the right example and become role models in their daily lives. When providing care to children for their needs, it is the parents who play an important role in determining the behavior and abilities of children (Mthiyane, 2019). Health

and education institutions can work together to create an education or health promotion program related to hand hygiene. This may have been known by the public through health campaigns through television media and so on, but it needs to be intensified to be able to continue to remind the public, especially the family community through schools (Watson et al., 2017).

CONCLUSION

The results showed that of the 40 respondents, the z value was -4.465 with a p-value of $(0.000) < \alpha (0.05)$, this indicates that there is a significant influence between the ability of children to wash their hands before the pretest before the treatment of good communication about hand washing on the posttest after the application of good communication treatment about hand washing. the average value of the two variables is 1.60. The application of good communication treatment about hand washing significantly improves children's ability to wash their hands properly.

REFERENCES

- Ayu, S., Suryantari, A., Bagus, A., Satyarsa, S., Ngurah, G., Rai, B., Hartawan, M., Kadek, I., Parastuta, Y., & Sudarmaja, I. M. (n.d.). Prevalence, Intensity And Risk Factors Of Soil Transmitted Helminths Infections Among Elementary School Students In Ngis Village, Karangasem District, Bali. In *Indonesian Journal of Tropical and Infectious Disease* (Vol. 7, Issue 6).
- Djuma, A. W., Olin, W., & Pan, I. M. (n.d.). Risk Factors of STH Infections in Children Aged 6-12 Years in Sub-Villages II and IV Manusak Village of East Kupang District-Kupang Regency Year 2019 (Vol. 14, Issue 2).
- Dong, Y., Wang, L., Burgner, D. P., Miller, J. E., Song, Y., Ren, X., Li, Z., Xing, Y., Ma, J., Sawyer, S. M., & Patton, G. C. (2020). Infectious diseases in children and adolescents in China: Analysis of national surveillance data from 2008 to 2017. *The BMJ*, 369. <https://doi.org/10.1136/bmj.m1043>
- Gupta, R., Rayamajhee, B., Sherchan, S. P., Rai, G., Mukhiya, R. K., Khanal, B., & Rai, S. K. (2020). Prevalence of intestinal parasitosis and associated risk factors among school children of Saptari district, Nepal: A cross-sectional study. *Tropical Medicine and Health*, 48(1). <https://doi.org/10.1186/s41182-020-00261-4>
- Kemendes RI. (2019). Penyakit Menular Masih Jadi Perhatian Pemerintah. <https://www.kemkes.go.id/article/view/19042500004/penyakit-menular-masih-jadi-perhatian-pemerintah.html>.
- Khatoon, R., Sachan, B., Khan, M., & Srivastava, J. (2017). Impact of school health education program on personal hygiene among school children of Lucknow district. *Journal of Family Medicine and Primary Care*, 6(1), 97. <https://doi.org/10.4103/2249-4863.214973>
- Klar, K., Knaack, D., Kampmeier, S., Hein, A. K., Görlich, D., Steltenkamp, S., Weyland, U., & Becker, K. (2022). Knowledge about Hand Hygiene and Related Infectious Disease Awareness among Primary School Children in Germany†. *Children*, 9(2). <https://doi.org/10.3390/children9020190>
- Kua, J. A., & Pang, J. (2020). The epidemiological risk factors of hand, foot, mouth disease among children in Singapore: A retrospective case-control study. *PLoS ONE*, 15(8 August). <https://doi.org/10.1371/journal.pone.0236711>

- Mthiyane, M. N. , & H. A. (2019). Asuhan Keperawatan Keluarga Pada Tahap Perkembangan Keluarga Dengan Anak Usia Remaja. *Tjyybjb.Ac.Cn*, 3, 58–66.
- Palmeirim, M. S., Mrimi, E. C., Minja, E. G., Samson, A. J., & Keiser, J. (2021). A cross-sectional survey on parasitic infections in schoolchildren in a rural Tanzanian community. *Acta Tropica*, 213. <https://doi.org/10.1016/j.actatropica.2020.105737>
- KEMENKES, R. (2019). Panduan Cuci Tangan Pakai Sabun. https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Panduan_CTPS2020_1636.pdf
- UNICEF;Parenting. (2018). How to teach your kids handwashing. <https://www.unicef.org/parenting/health/how-to-teach-your-kids-handwashing#:~:text=Demonstrate%20the%20correct%20steps%20of%20handwashing&text=Step%201%3A%20Wet%20hands%20with,Rinse%20thoroughly%20with%20rinning%20water>.
- Watson, J. A., Ensink, J. H. J., Ramos, M., Benelli, P., Holdsworth, E., Dreibelbis, R., & Cumming, O. (2017). Does targeting children with hygiene promotion messages work? The effect of handwashing promotion targeted at children, on diarrhoea, soil-transmitted helminth infections and behaviour change, in low- and middle-income countries. In *Tropical Medicine and International Health* (Vol. 22, Issue 5, pp. 526–538). Blackwell Publishing Ltd. <https://doi.org/10.1111/tmi.12861>.

