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The effect of health counseling on handwashing technique in early childhood settings

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Abstract

Background: Preschool children generally fall within the age range of 4 to 6 years old. During this phase, youngsters demonstrate a pronounced inclination towards curiosity, develop a distinctive imagination, and maintain a strong belief in their own abilities. During this period, a notable aspect of psychosocial development is the broadening of the child's social sphere, as they start to desire companions for play and participate in routine activities beyond their home setting. Environment. Children's participation in outdoor activities can increase their vulnerability to diseases because of their inclination towards lethargy, which leads them to view handwashing as a burdensome chore. Hence, it is imperative to integrate the Story Telling Method into handwashing health education in order to foster children's comprehension that handwashing may be a pleasurable activity.

Purpose: To determine the effect of health counseling on handwashing technique in early childhood settings.

Method: A quantitative quasi-experimental, the random sample technique to choose a group of 32 pre-school children, ranging in age from 4 to 6 years, from Bengkulu City. Univariate statistical tests, specifically a paired t-test to evaluate the impact and an independent t-test to evaluate the efficacy.

Results: That the utilization of narrative-based handwashing health education is efficacious in preschool and early childhood environments. Interval of confidence at a 95% level. The handwashing ability before therapy was measured to be 1.09 with a standard deviation of 0.000, while after treatment it increased to 2.30 with a standard deviation of 0.520. The p-value of 0.000 indicates a statistically significant difference in the ability to wash hands before and after obtaining health education utilizing the story-telling method.

Conclusion: The utilization of the narrative approach in health education on handwashing can effectively alter children's perceptions, enabling them to evaluate their behaviors based on acquired knowledge.

Keywords: Handwashing; Health Education; Story-Telling Method.

INTRODUCTION

Preschool children are highly active and undergoing a phase of physiological development, which includes the maturation of their immune system. During this period, the child's body is extremely vulnerable to ailments, especially infectious ones, many of which are caused by insufficient hand hygiene practices. This is due to the fact that the majority of individuals do not adequately cleanse their hands. Handwashing is a proactive measure taken to preserve personal well-being.

Handwashing is a common daily practice that people frequently engage in. Furthermore, apart from its affordability and simplicity, it also offers advantages as an initial preventive measure to mitigate a range of illnesses that frequently result in infant mortality, including diarrhea, acute respiratory infections (ARI), hepatitis, typhoid, and other fatal diseases. Centers for Disease Control and Prevention, 2024; Ministry of Health of the Republic of Indonesia, 2022). According to the World Health Organization (WHO),

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handwashing with soap has the potential to decrease the likelihood of experiencing diarrhea by 45% and pneumonia by 25%. Proper hand hygiene using soap can also aid in the prevention of the transmission of various illnesses, including malaria, HIV/AIDS, and measles (World Health Organization, 2022; The National Population and Family Planning Board, 2023; Ministry of Health of the Republic of Indonesia, 2024).

According to the World Health Organization, there is a low level of adherence to handwashing practices worldwide, with 24.8% of individuals not washing their hands properly. The African region has the highest incidence of inadequate handwashing behavior (World Health Organization, 2024). According to UNICEF, inadequate handwashing practices among children can be attributed to the absence of basic facilities, lack of awareness, and insufficient promotion. This is particularly prevalent among children living in rural or metropolitan settings where parents have demanding schedules (United Nations International Children's Emergency Fund, 2021a). According to Basic Health Research data, the percentage of pre-school children who practice proper handwashing behavior is consistently below 50%. The community encounters difficulties in obtaining good hygiene items in remote rural locations (Ministry of Health of the Republic of Indonesia, 2018). UNICEF has also articulated similar apprehension.

Health education is an effective method for enhancing handwashing proficiency after school (Budury, Purwanti, & Hidaayah, 2023). The capacity of children to assimilate diverse stimuli during the pre-school period surpasses that of adults. Children are young individuals. Children possess a greater capacity for rapid knowledge acquisition compared to adults. Additionally, once they develop the ability to imagine, they are capable of generating unique ideas that exceed the expectations of adults. Thus, if individuals are provided with health education throughout this time frame, it will be in accordance with their preferences (Fadlillah, 2014; Tadjuddin, 2015). Implementing many methodologies to provide health education during early development. At this stage of development, the most appropriate approach is one that is enjoyable, engaging, comprehensible, and utilizes media that youngsters

find appealing. Currently, we may enhance the development and growth of children by providing appropriate educational stimulation that encourages them to adopt proper and accurate handwashing habits (Ummah, Mansur, & Setiawan, 2021). The many ways of teaching can include lectures, question and answer sessions, habituation techniques, exemplary demonstrations, interactive play activities, storytelling sessions, singing exercises (Juliawan, Mirayanti, & Parwati, 2019), nature tourism experiences, problem-solving exercises, and simulation activities (Fadlillah, 2014).

The psychological approach to preschool children entails utilizing a mode of communication that is suitable, engaging, and enjoyable, such as the practice of storytelling. Children in that age group are more likely to retain information from psychological approaches. The objective of this study is to enhance the handwashing abilities of pre-school children in order to decrease the occurrence of diseases in that age group. Initial studies in the Bengkulu City region indicate a rise in cases of diarrhea and pneumonia, primarily attributed to inadequate hand hygiene.

RESEARCH METHOD

This study utilizes a quasi-experimental approach, specifically focusing on a single group. The assessment system used involves measuring the participants' responses both before and after the therapy. The examination evaluates the respondents' practical proficiency in executing correct handwashing techniques. This practice aims to improve the respondents' handwashing skills, hence reducing the risk of infections such as diarrhea. Participants in this study are provided with treatment in the form of narratives that illustrate the outcomes of inadequate or incorrect handwashing procedures.

The participants of this study were young children attending preschool in the Bengkulu City region. This study had a sample of 32 participants, chosen using a basic random selection method that considered certain criteria for inclusion and exclusion. Children between the ages of 4 and 6 who live in Bengkulu City fulfill the requirements for inclusion. Children who are in poor health or ill but have not obtained consent from their guardians to take part in this study are not eligible to participate. Consequently, the

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researcher has successfully received agreement from the guardians or parents of all respondents to engage in the research. To assess the efficacy of good handwashing, we will categorize the participants into two distinct groups based on their gender.

A data collection instrument known as an observation sheet is utilized in this investigation. The Ministry of Health's of Indonesia implemented the standardized handwashing by Standard Operating Procedure (2022) as the foundation for this observation sheet. Prior to adopting the story-telling strategy for handwashing health education, the researchers assessed the observation sheet. After implementing the story-telling method for handwashing health education, they subsequently reevaluated it, analyzed each participant's answers, and meticulously documented the outcomes in a

comprehensive database. The data in the table was analyzed. We conducted a step-by-step analysis of the data shown in the table, starting with a test to ascertain whether it followed a normal distribution. Determine the suitable statistical model for bivariate analysis. The normality test resulted in a p-value of 0.89, which is more than 0.05. This suggests that the data follows a normal distribution. Subsequently, the researcher will do a univariate test to ascertain the frequency distribution of the respondents' attributes. In addition, the researcher will perform a bivariate analysis to evaluate the impact of health education. All these processes will be conducted using the SPSS 25 application.

This research has been approved by the Ethics Team of the Faculty of Health Sciences, Dehasen University, with ethics number 0021/D-KEPK/FD/II/2024.

RESEARCH RESULTS

1 Table 1. Characteristic of the Participant's (N=32)

Variable	Results
Age (Mean±SD)(Range)(Year)	(5.28±0.672)(4-6)
Age (n/%)	
4	4/12.5
5	15/46.9
6	13/40.6
4 Gender (n/%)	
Male	17/53.1
Female	15/46.9

12 Table 1 shows that the average age of participants was 5.28 with a standard deviation of 0.672, the majority were male, as many as 18 (53.1%).

Table 2. Differences in Ability Before and After Treatment (N=32)

Variable	(Mean±SD)	p
Handwashing Practice		
Pre	(1.00±0.000)	0.000
Post	(2.30±0.520)	
Differences	(-1.297±0.520)	

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Table 2 displays the findings of the Paired T-Test, which reveal that the mean handwashing proficiency prior to treatment was 1.00, with a standard deviation of 0.000. After the treatment, the average handwashing ability increased to 2.30, with a standard deviation of 0.520. The mean handwashing ability showed a significant increase of

-1.297 between the pre-treatment and post-treatment measurements, with a standard deviation of -1.033. Following the study, the obtained p-value was 0.000 at a significance threshold of 5%, demonstrating a noteworthy disparity in the capacity to wash hands before and after receiving health education using the story-telling approach.

Table 3. Handwashing Practices Before and After Based on Gender (N=32)

Gender	Correlation	Mean	95% CI	p
Male	0.521	4.1	2.1 to 7.87	<0.000
Female	0.499	6.3	1.9 to 9.7	<0.000
Differences		2.1	1.3 to 5.32	<0.021

Table 3 shows that storytelling had a significant impact on preschool male capacity to practice effective handwashing with a mean of 4.1, and narrative communication influenced female proficiency in practicing proper handwashing with a mean of 6.3. The efficacy of storytelling showed a mean difference of 2.1 between male and female. The results showed that storytelling treatment had a greater impact on preschool female.

DISCUSSION

Early education is a powerful and uncomplicated measure for altering ingrained behaviors in a nation or group (United Nations International Children's Emergency Fund, 2021b). The younger generation has a significant role in driving societal transformation within a nation. Implementing health education at a young age, beginning with a basic practice such as proper handwashing, is an effective first approach that can be utilized for pre-school children (Hermawan, Sutandi, Setiawan, William, & Sumarno, 2019). Commencing this first measure can assist children in preserving their immune system and preventing the occurrence of contagious ailments (Tulak, Ramadhan, & Musrifah, 2020), such as diarrhea, which poses a threat of dehydration in the child's body (Setiawan & Sulistyorini, 2023). The handwashing behavior of pre-school children has an impact on the occurrence of diarrhea (Adha, Izza, Riyantiasis, Pasaribu, & Amalia, 2021; Wulandari, 2021), as well as viruses such COVID-19 (Dewi, Darwis, & Asdar, 2023; Ridwanuloh & Nurwulandari, 2022) and ARI (Hudju, Duyoh, & Masulili, 2022).

Furthermore, handwashing serves as the primary measure for managing the transmission of a lethal illness (Azmiardi & Haryanti, 2021). Consequently, making a habit modification sooner rather than later will have a more positive impact on both present and future health status (Hudju, Duyoh, & Masulili, 2022).

The utilization of the story-telling method in education is employed by cultural heritage (Dahlia, Srinatania, & Perdani, 2021). The concept of storytelling entails a psychological exchange between the storyteller and the audience. This approach entails imparting knowledge and messages to young children in a casual, enjoyable, and captivating manner, ensuring that they derive pleasure from the activity and comprehend the significance of hand hygiene for their well-being (Bellinda, Rachmadi, & Priyono, 2019). Integrating a captivating narrative into the storytelling approach can afford preschool children the chance to comprehend, retain, and reinforce proper hand hygiene, especially in critical periods such as a pandemic (Pratiwi, Damayanti, Anggraeni, Tanti, Winanda, Rahman, Mandagi, & Puspikawati, 2022).

The use of story-telling method is beneficial in teaching health education to pre-school children, helping them understand the importance of washing actions. Storytelling facilitates the comprehension of information for children who are in the process of developing their imagination and rely on their auditory and visual senses (Budury, Purwanti, & Hidaayah, 2023). Respondents can improve their memory of the material provided by utilizing visual perception. Media enhances the storytelling process,

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children's cognitive development increases (Ummah, Mansur, & Setiawan, 2021). Handwashing is a proactive measure that can effectively manage the spread of infectious diseases and lower the death rate among pre-school children (Ministry of Health of the Republic of Indonesia, 2022).

A study in Hong Kong demonstrated that the knowledge and proper hand hygiene (HH) practice of children can be positively influenced by the use of an age-appropriate education program. The results of this study have implications for school health educators and parents for promoting HH practices among children at home and at the school level (Suen, & Cheung, 2020). A study in Malaysia showed that knowledge of hand hygiene routines, namely after going to the toilet, after playing outdoors, after sneezing, and after playing with pets also increased significantly. This comprehensive knowledge transfers program significantly improved children's hand hygiene techniques and routines and is recommended to be integrated into the preschool curriculum (Mohamed, Jamaluddin, Zarini Ismail, Ramli, Ramli, Faroque, & Isahak, 2019).

Young children may lack the capacity to engage in personal hygiene and grasp the significance of good hygiene. Consequently, parents, instructors, or caregivers must provide attentive care and supervision. Studies have demonstrated that practicing proper hand hygiene greatly decreases the likelihood of illnesses spreading between individuals in hospital settings, making it a crucial component of infection management (Mandagi, Baithesda, & Laminase, 2023). Story-telling media can be used as a substitute method to promote children's awareness and conduct from a young age, allowing them to develop the ability to maintain cleanliness on their own (Hidayati, Romadhonika, & Salfarina, 2023).

CONCLUSION

By offering early stimulation, we can optimize the development and expansion of pre-school youngsters. An alternate approach is to offer health education that is engaging, enjoyable, comprehensible, and use media that children find appealing, such as the narrative technique, to boost children's inclination and drive to adopt proper and effective handwashing habits.

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Declaration of Conflicting Interest

This study is devoid of any conflict of interest.

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Authors' Contribution

All authors made contributions to the preparation, implementation, analysis, and writing of this research.

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