

Research Article

The Effectiveness of Storytelling to Improve Handwashing Knowledge and Attitude in School-Age Children in Indonesia

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Abstract. During the COVID-19 pandemic, good knowledge and attitude towards handwashing are essential. Education through various media is found in public places, television, social media and others. However, a specific approach is needed for children of school age as a vulnerable population, since the prevalence of COVID-19 is relatively high in this group. Storytelling is a method to deliver health education and develop cognitive (knowledge), affective (feelings), social and conative aspects in children. This study aimed to determine the effectiveness of storytelling in improving handwashing knowledge and attitudes among school-age children. This research used a quantitative approach with a pre-experimental one-group pretest-posttest design, and it was conducted in April-May 2021. A total of 40 respondents participated. Data were collected using a self-filled questionnaire related to handwashing knowledge and attitude with good reliability (Cronbach's alpha > 0.881 [knowledge] and > 0.925 [attitude]). Data were analyzed using SPSS Version 23 for univariate and bivariate formulas. Storytelling had a significant impact on knowledge and attitudes in the school-age children ($p < 0.001$).

Keywords: storytelling, hand puppets, knowledge, attitude, school-age children

1. Introduction

School-age children are very sensitive to the stimulus thus at this age easy to be given guidance and familiarized with healthy life style behavior [1] Children still need to be nurtured to be able to achieve their intellectual development therefore they can calculate risk level for various health problems [2] They susceptible to infectious disease because their unclean food habit or not wash their hands appropriately [3]

Low awareness and lack of knowledge caused improper hand washing are mostly found among children [4]Based on [5] only 17% children practice hand washing with soap and clean water. Moreover, only 46.7 % of children older than 10 years wash their hands [5]The ultimate disease prevention is by washing hands, because hands is a gents that carry germs and cause pathogens to move from one person to another, either by direct or indirect contact [6]

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Good hand washing needs to be given from an early age where at this phase children are easily receptive to stimuli so that they can be guided, directed and instilled good habits (7) High awareness of the importance of hand washing starts from knowledge and providing information to school children needs to be socialized with the right media (8,9). One of the method is by storytelling. Storytelling is a method that can develop cognitive (knowledge), affective (feeling), social and conative aspects (appreciation) in children (10) Telling stories using hand puppet media will make children enjoy stories and indirectly learn life (11)

The literature review described that the practice of handwashing is increased from 25.43% to 65.35% (12). After the intervention of hand puppets was given handwashing compliance and knowledge are also significant increased. There is unmeet need for interesting and easy-to-understand information for hand washing knowledge and attitudes for school-age children (9). Based on the explanation above, researchers are interested in exploring the effectiveness of storytelling by hand puppets method toward handwashing knowledge and attitudes among school-age children because there is still limited research related to that.

2. Methods and Equipment

2.1. Methods

This study is a quasi-experimental design with one group pretest and posttest design. The total of 40 respondents agreed to participated in this study. This study was conducted on April 2021 in one of the biggest elementary schools in a rural area at Subang, West Java, Indonesia. At this school there is still limited counseling about knowledge and handwashing attitudes at the school

The research instrument including of demographic data, self-filled questionnaire related with hand washing knowledge and attitude created by Hasanah et al (2019). The total of 24 questions with 12 on each variables, consecutively. The correct answer is given one score, while blank or wrong score given score 0 in knowledge variable and Likert Scale from 1-4 from strongly agree to strongly disagree. This instrument had good reliability with Cronbach's alpha > 0.881 (knowledge) and > 0.925 (attitude). Data analyzed used SPSS Version 23 on univariate and bivariate formula. Normality test with Shaphiro-Wilk described that data was normally distributed with p-value > 0.005 Storytelling intervention were consist of the handwashing definition, purposes, time and stages.

TABLE 1: Demographic characteristics among elementary school children (N=40)

Variables	n(%)
Age (years old)	Mean (± SD) 11.15 (0.94)
9	3 (7.5)
10	(15)
>11 tahun	31 (77.5)
Grade	
4	10 (25)
5	13 (32.5)
Gender	17 (42.5)
Male	18 (45)
Female	22 (55)

TABLE 2: The difference of handwashing knowledge and attitude among school age children

Variables	Mean±SD	95% CI	t	p-value
Knowledge	Pre 6.75 ±1.905	1.905-4.780	13.335	0.000**
	Post 10.90 ± .744			
Attitude	Pre 38.80 ± 4.328	2.975- 5.975	6.034	0.000**
	Post 43.28 ± (2.522)			

The intervention was conducted two times in one week and respondents were given the storytelling method intervention for 50-60 minutes by using hand puppet dolls as media. The story was adaptable from study by (11) told about Dina and Fara practice hand washing.

3. Results

Based on the description in Table 1, in this study most respondents (n=31, 77.5%) are > 11 years old, on grade 6 (n=17, 42.5%) and female (n=22, 55%). Age will determine appropriate method for health education therefore educate children to wash their hands by providing good knowledge is essential.

There is a significant statistically difference (Table 2) between the mean score before and after intervention on knowledge ($t=13.335$) and attitude ($t=6.034$) of hand washing ($p < 0.000$). There was an increase in total score of knowledge and attitudes among respondents after the intervention of storytelling given.

4. Discussion

Elementary school students range 6-12 years old are strongly needed to be give good information. In Indonesia only 43% students showed good practice and the total of 47.1% lack of knowledge toward on handwashing,consecutively (2) It is necessary to deliver information with an interesting method for school-age children specifically with storytelling.

The most well-known method for health education is story telling. Researcher read a loud the stories and children not only remembered the message but spontaneously draw their own imagination (13)This study is similiar with previous research (14,15) that resulted by conducting health education through stories is effective on hand washing skills with soap ($p < 0.000$). The information provided through storytelling method is easier for children to comprehend and remember. Through the stories conveyed by the researcher as storytellers and with demonstrations taught are well received by the children and most of the children understand about hand washing.

Storytelling can increase the motivation to practice personal hygiene up to 100%. It can be concluded the impact of storytelling to deliver health information is an effective solution and easier to understood by school-age children along with their growth and development (16)However, in contrast result by (17)the effect of using digital storytelling on student learning outcomes was found very low because during the COVID-19 pandemic learning face-to-face replaced with online therefore researchers cannot directly monitor students in digital platform by WhatsApp group.

From the results of bivariate analysis, school age children are very suitable to give lesson for handwashing. Parents collaboration to teach or familiarize children with washing hands is also vital because the family environment affect children learning habits. Researchers used hand puppet dolls because gives several advantages as generally children like dolls and identical to them. In addition, hand puppets are often played in groups or individually, therefore that the stories conveyed through puppet characters will clearly attract attention. Using dolls as media is effective in increasing children compliance in washing their hands (18)This study is in line with (19) that health education is affected through the storytelling method on the level of dental hygiene knowledge of school-age children. It can be seen that there is an effect of health education through storytelling.

5. Conclusion

During pandemic Covid-19 knowledge and attitude toward of hand washing are essentials. Education through various media are found in public places, television, social media and others. However, a specific approach is needed for children of school age as vulnerable populations since this prevalence of Covid-19 is relatively high.

Schools are expected to actively give efforts by utilizing the delivery of health education using the storytelling method for school-age children. For pediatric nursing in community school it is hoped that story telling can be a consideration in the development and application of the standard operation on another health education.

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