



**THE EFFECTIVENESS OF MEDIA ( VIDEO, IMAGE, AND SONG) TO  
HANDWASHING BEHAVIOR IN 1<sup>ST</sup>-3<sup>RD</sup> GRADERS OF SDIT PERMATA  
MULIA MOJOKERTO**

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**ABSTRACT**

**Keywords**

**Introduction:** Hand washing is an activity of removing microorganism from hand using soap and flowing water. Video, image, and song methods are the ones that can be used for school-age children to provide health education about hand washing. The objective of the research was to find out the effectiveness of video, image, and song methods on hand washing behavior. **Method:** This study was researched using Pre-experiment design with pre-post test design, the one using a causal relationship without control group participation. The population of research consisting of 90 students. The technique of analyzing data used was to compare mean scores of video, image, and song methods. **Result:** The result of research showed that the mean score of hand washing ability in video group was 2.183 before intervention and 5.727 after intervention; there was an increase by 3.545 points in the mean score of hand washing ability. In Image group, the mean score of hand washing ability was 2.273 before intervention and 4.545 after intervention; there was increased by 2.273 in the mean score of hand washing ability. Meanwhile, in the song group, the mean score of hand washing ability was 2.273 before intervention and 6.00 after intervention; there was increased by 3.727 in the mean score of hand washing ability. **Analysis and Discussion:** Respondents in the song group had the highest increase in the hand washing ability compared with those in video and image groups. Song method could be a choice for hand washing practice.

*video, image,  
song, hand  
washing*

## INTRODUCTION

Hand washing with soap is one of Healthily and Cleanly Living Behaviors (*Perilaku Hidup Sehat dan Bersih*, thereafter called PHBS) and currently attract the world's attention because the problem of poor hand washing behavior practice occurs not only in developing but also in developed countries in which most of its people still forget to perform handwashing behavior. As a result, diarrhea incidence rate is still high in such countries as Indonesia. Therefore, on October 15, 2008, United Nation established this day as the World's Hand Washing with Soap Day focusing on school children as "the agent of change" (Kemenkes, 2015). (Hidayat, 2009) states that school-age children are vulnerable to disease because their body immunity has not developed perfectly. Hand washing-with-soap behavior is still low in children currently because of the less appropriate method applied to them. Some studies on hand washing methods such as health promotion and health education using leaflet and even video have not been able to improve handwashing behavior in school-age children, as indicated with the incorrect handwashing behavior.

Considering the statement, appropriate methods such as Video, Image, and Song should be applied to correspond to school age that will provide and improve a conception of correct hand washing joyfully.

WHO's Unicef Joint Monitoring reports that only half of Indonesian populations have access to adequate sanitation, and event only a third in rural areas. Considering the data of Indonesian Public Health Development Index (IPHDI) in 2010, on average only 24.3% of Indonesian populations have performed hand washing-with-soap behavior correctly (Kemenkes, 2014). A preliminary study conducted in SDIT Permata Mulia found that 10 children have not been able to wash their hand correctly, because they got only one-time handwashing practice and the result of

interview showed that only 3 (70%) children had washed their hand with soap after defecation, and all of them washed their hand without soap before meal.

Many factors leading the school-age children to be not willing to have hygienic and sanitation behavior, as mentioned by (Green, 1991) in Notoatmojo (2007), are supporting factor such as no motivation, enabling factor such as no infrastructure or health facility available, and reinforcing factor such as community leaders' attitude and behavior, and health workers' attitude<sup>5</sup>. Hand washing is something commonly done by Indonesian people, despite less correct method. Our community has not considered yet that soap use during hand washing is very desirable. They use soap during hand washing because of dirty reason or to avoid hand from some odor. It is this that leads the children to do similarly. Life spans starting from 7-9 years are often called. school age or school age. This period starts from the entry of the child to. School environment, which has a significant impact on development and child relationship with other people (Wong, 2008). 4th graders already have, awareness of self-learning (Nesi, 2011). School-age children, consider external forces as a cause of disease.

The attempt of improving children's hygienic and sanitation behavior such as hand washing is, among others, to improve health education using an appropriate method corresponding to their age. Some methods have developed and can be used in school-age children learning: video, image, and song. Regarding the song (singing) method, (Wijanarko, 2016) states that a concept will be implanted more easily through song as it is repeatedly uttered, and even memorized.<sup>6</sup>Yuni Fachmawati as cited in (Nurhayati, Fadilah, & Mutmainnah, 2014) states that singing with music activity can develop knowledge and skill, that is, practicing emotional feeling sensitivity; practicing children' mentality to love harmony, beauty, and kindness; trying to express content or purpose; improving the

ability of listening to message and to synchronize movement and music; and improving listening ability by observing character and enhancing sensitivity to content and message of music or singing.(Arif Mahya Fanny, 2013), image media is one of the general learning media most commonly used and a common and understandable language that is enjoyable anywhere. This image can help students express information contained in the problem so that the relationship between components in the problem can be seen clearly<sup>7</sup>. Meanwhile, the use of video media will be able to achieve the effectiveness of learning process, lead the students to focus their attention to the material learned thereby the learning process becomes interesting, and give the students the direct experience with an incidence or an event. The learning material retention level will improve significantly if the prior information acquisition process is conducted more through auditory and visual senses (Daryanto, Arif, & Yang, 2017).

## MATERIALS AND METHODS

This research employed Pre-experiment design with pre-post test design form, using a causal relationship without involving a control group. In this research, there are three groups given different treatments: Image, Video, and Song. Before the treatment, an observation (pre-test) was conducted first with two groups in handwashing behavior. After the procedure, the observation (post-test) was conducted again with the three groups.

The population of research was the 1<sup>st</sup>-3<sup>rd</sup> graders of SDIT Permata Mulia, consisting of 90 students. Meanwhile, the sampling technique used in this research was total sampling.

The inclusion criteria in this study are:

- 1) Students from grade 1 to grade 3 who attend school at SDIT Permata Mulia
- 2) Students who are allowed by their parents to become respondents

And Exclusion criteria in this study are:

- 1) Children who are sick
- 2) Children who did not participate in the intervention even though only 1 time
- 3) Children who are not cooperative with research actions
- 4) Children who are not permitted by their parents to become respondents

Implementation Handwashing songs 30 second's, hand washing pictures 1 minutes and Handwashing videos 2 minutes.

Data collection started with collecting previous data on population constituting the general data of respondents consisting of age, sex, class (grade) and parents' occupation. The research was conducted for one day. In the first day, a pre-test was conducted by observing the hand washing ability of individual respondents one by one. Education activity was conducted using Image, Video, and Song methods in the class (one group in 1 grade) and the assessment of hand washing ability was conducted in the place in which water tap and liquid soap are available during the resting time at 10.00-10.30 a.m. for 30 minutes. Then, the intervention was conducted in each of the groups in turn. After that, Post Test was carried out.

## RESULTS

From the result of research, it can be found that the mean score of hand washing before intervention is 2.182 in video group, with a minimum score of 1.000 and a maximum score of 3.000. That in Image group is 2.273, with a minimum score of 2.000 and a maximum score of 3.000. Meanwhile, that in Song group is 2.182, with a minimum score of 1.000 and a maximum score of 3.000. The data can be seen in table 1.

Table 1. The Result of Assessment on Hand Washing Ability Before Intervention in Video, Image, and Song Groups in the 1<sup>st</sup>-3<sup>rd</sup> grades of SDIT Permata Mulia

Pre Test	Video	Image Song
Mean	2.182	2.273 2.273
Maximum Score	1.000	2.000 2.000
Minimum Score	3.000	3.000 3.000
N	30	30 30

From the 6 (six) criteria for hand washing procedure assessment before video method intervention is given, it can be seen that 100% of respondents can do step 1, 90.8% can do step 2, 27.3% can do step 3, and 0% can do steps 4, 5, and 6 in video group. In image group, 100% of respondents can do step 1, 90.9% can do step 2, 18.2% can do step 3, 0% can do steps 4, and 9.1% can do steps 5, and 6. Meanwhile, in song group 100% of respondents can do step 1, 90.9% can do step 2, 18.2% can do step 3, 0% can do steps 4, and 9.1% can do steps 5, and 6. These data can be seen in Table 2.

Table 2 Hand Washing Ability before Intervention in Video, Image, and Song Groups

No	Assessment Criteria	Video	Image Song
1.	Wet entire hand and use soap and apply it evenly (step 1)	100%	100% 100%
2.	Rub the back of right hand and the left palm and vice versa (step 2)	90.9%	90.9% 90.9%
3.	Rub both palms and cross both fingers (step 3)	27.3%	18.2% 18.2%
4.	Rub the back of fingers by	0%	0% 0%

	linking hands (step 4)	both		
5.	Rub the left thumb with the right palm and vice versa, by rotating it (step 5)	0%	9.1%	9.1%
6.	Rub the inner finger onto the palm by rotating movement (step 6)	0%	9.1%	9.1%

Table 3 shows that the mean score of hand washing ability after the intervention is 5.727 in video group, with a standard deviation of 0.467, a minimum score of 5.000 and a maximum score of 6.000. In the image group, the mean score of hand washing ability after the intervention is 4.545, with a standard deviation of 0.687, a minimum score of 3.000 and a maximum score of 5.000. Meanwhile, in the song group, the mean score of hand washing ability after the intervention is 6.00, with a standard deviation of 0.687, a minimum score of 3.000 and a maximum score of 5.000.

Table 3. The result of Hand Washing Ability Assessment after Intervention in Video, Image, and Song Groups in the 1<sup>st</sup>-3<sup>rd</sup> grades of SDIT Permata Mulia

Post Test	Video	Image Song	
Mean	5.727	4.545 6.000	
Minimum Score	5.000	3.000 6.000	
Maximum Score	6.000	5.000 6.000	
N	30	30	30

From the 6 (six) criteria of hand washing procedure assessment after intervention in

video group, it can be seen that 100% of respondents can do steps 1, 2, 4, and 6, 90.9% can do step 3, and 81.8% can do a step, 5. In image group, 100% of respondents can do steps 1 and 2, 45.5% can do step 3, 90.9% can do step 4, 27.3% can do step 5, and 81.8% can do step 6. Meanwhile, in the songgroup, 100% of respondents can do steps 1 – 6. These data can be seen in Table 4.

Table 4 Hand Washing Ability after Intervention in Video, Image, and Song Groups in the 1<sup>st</sup>-3<sup>rd</sup> grades of SDIT Permata Mulia

No	Assessment Criteria	Video	Image Song
1.	Wet entire hand and use soap and apply it evenly (step 1)	100%	100% 100%
2.	Rub the back of right hand and the left palm and vice versa, and the base of finger gap (step 2)	100%	100% 100%
3.	Rub both palms and cross both fingers (step 3)	90.9%	45.5% 100%
4.	Rub the back of fingers by linking both hands (step 4)	100%	90.9% 100%
5.	Rub the left thumb with the right palm and vice versa, by rotating it (step 5)	81.8%	27.3% 100%
6.	Rub the inner finger onto the palm by rotating movement (step 6)	100%	81.8% 100%

Table 4 shows that in singing (song) group consisting of 30 students, the mean score of hand washing ability before video method intervention is 2.182, this score increases to 5.727 after the invasion, with the mean increase of 3.545 points. In the image group consisting of 30 students as well, the mean score before intervention is 2.273, and it increases to 4.545 after the intervention, with the mean increase of 2.273 points. Meanwhile, in the song group consisting of 30, the mean score before intervention is 2.273, and it increases to 6.000 after the intervention, with the mean increase of 3.727 points.

Table 5. The change of Hand Washing Ability Before and After Intervention using Video, Image and Song Methods

	Video Group	Image Group	Song Group
	Change	Change	Change
Mean	3.545	2.273	3.727
Minimum	2.000	1.000	6.000
Maximum	5.000	3.000	6.000
N	11	11	11

## DISCUSSION

The result of the research shows that the respondents consisting of 90 students have not been able to wash their hand correctly using WHO's 6-steps hand washing method. From the six steps, only threestepsare done correctly. In a singing group, no one (0%) can do the steps of rubbing the back of finger by linking both hands, rubbing the left thumb with the right palm and vise versa, by rotating it and rubbing the inner finger onto the palm by rotating movement. Meanwhile, in the simulation group, no one (0%) can do the steps of rubbing the back of the finger by linking both hands and few (9.1%) respondents can do the steps of rubbing the

left thumb with the right palm and vice versa, by rotating it, and rubbing the inner finger onto the palm by turning movement.

(Ajzen, 1991) in PBT (Theory of Planned Behavior) says that behavior is affected by such factors as a belief. behavior can be implemented (control beliefs) acquired from experience with doing the similar behavior previously or the experience of acquiring by seeing others (e.g., friends, a close relative). Doing behavior so that individual believes that he/she will be able to do it<sup>8</sup>.

The result of pre-test shows that the respondents have been able to do the step 1, wetting the hand and using the soap, because the principle of hand washing is wetting hand and it is used commonly by general society. Meanwhile, all respondents have not been able to do the steps of rubbing the back of finger by linking both hands, rubbing the left thumb with the right palm and vice versa, by rotating it; rubbing the inner finger onto the palm by turning movement. Those movements are found to be rarely used by general society and respondents' parents so that the respondents have no role model to wash the hand correctly. Also, the respondents' inadequate experience (only one-time education about 6-step hand washing) leads them to forget what they have learned.

The result of Post Test shows that the ability of 6-step hand washing correctly in the three groups (video, image, and song) has improved. However, an image group consisting of 30 respondents, only 9 (27.3%) of respondents can do the step 5, in video group consisting of 30 respondents, 12 (81.8%) of respondents can do it, and in song group, all respondents can do it.

This improved ability and behavior are due to the administration of hand washing practice through video, image, and song method. This finding is in line with (Shah, 2003) explaining that the primary objective of health education is to enable people to

solve their problem and to fulfill their own need, with the existing resource and external support, and to decide on the appropriate action to improve the community's standard of healthy life and welfare<sup>9</sup>. (Notoatmojo, 2003) says that some factors contributed to establishing behavior: knowledge, attitude, culture, and important people as a reference.

In this research, the hand washing ability of the three groups improves. However, the song group is more capable of doing hand washing activity compared with video and image group, particularly in the step of cleaning the thumb. It is because, in the song group, the information acquired is not only in verbal (words) and movement forms but also uttered in a song with which they have been familiar so that they can memorize and retrieve the hand washing movement more easily. Meanwhile, in video and image groups, information is only in the verbal (words) and movement forms, so that it is memorized and retrieved more difficulty.

The mean change (increase) of hand washing ability score is 3.545 in video group, 2.273 in the image group, and 3.727 in song group. It indicates that the mean change of hand washing score in song group is higher than that in the simulation group.

The improved implementation of hand washing technique is an effect of singing with hand washing song. Through singing activity, many education messages can be delivered to children. Thus, healthy living behavior knowledge and skill can be delivered through singing activity. Through singing activity, moreover when conducted jointly by educators and children, a joyful circumstance will be created, so that the message delivered by educators can be absorbed easily by children. So, the singing method can be used to develop healthily and cleanly living behavior (Ismaniar, 2010). De Porter citing Magnesen in Rachmayanti (2011) argues that 10% of us learn from what we read, 20% learn from what we hear, 30% learn from what we see, 50% learn from

what we see and hear, 70% learn from what we say, and 90% learn from what we say and do<sup>7</sup>.

The result of the study shows that there is an improvement of hand washing ability in the three groups, with the highest increase occurring in song group. The three methods affect the individual's memory equally. In video group, information is in verbal (words) and movement forms that is absorbed by left brain processing the linear and sequential thinking pattern, while in song group, the information is in words (utterance with tone) and movement that is absorbed not only by right brain processing the creativity but also by left brain processing the words. The two sides of the brain are connected by the corpus callosum, a very elaborate switch with 300 million active nerve cells. It continually balances the messages in the left and right brains using combining abstract image and concrete and coherent signal. For example: if we listen to a song, left brain will process its lyric, and right brain will process its music so that it is unsurprisingly that we can understand and memorize the song lyrics so easily and quickly, as both left and right brains are involved.

## CONCLUSIONS

Most of the respondents in the video, image, and song groups before intervention with 6-step hand washing method have not been able to do steps 3, 4, 5, and 6. After the intervention, the improvement of respondents' hand washing ability in video groups is better than that in the image group. Meanwhile, the respondents in the song group have the best improvement among the three groups. Song method is more effective than a simulation method in improving the hand washing ability of 1<sup>st</sup>-3<sup>rd</sup> graders of SDIT Permata Mulia Mojokerto.

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