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THE EFFECT OF EMOTIONAL DEMONSTRATION METHODS AND VIDEO LEARNING ON HAND WASHING ON KNOWLEDGE AND SKILLS OF HOUSEWIVES

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Abstract

Introduction: Efforts to prevent the transmission of infectious diseases through hands can be prevented by washing hands. It is especially emphasized on mothers with toddlers. However, many mothers do not know how to wash their hands using soap correctly and adequately. This study aims to analyze the effect of the emotional demonstration method and video media on how to wash hands on the knowledge and skills of homemakers.

Materials and Methods: This research is a quasi-experimental method, with a two-group design pretest-posttest approach involving 40 participants, conducted in September-October 2020 in Penyengat Olak Village. The research sample was divided into two groups, 20 participants received the emo demo method, and 20 other participants received videos.

Results: The results showed an increase in mothers' knowledge and skills after receiving an education using the emotional demonstration method and video media and statistically showed significant results (<0.05).

Conclusion: Therefore, this educational media is highly recommended as a method of educating the public about good and correct hand washing

Keyword: Wash-hands, Education media, Emotional demonstration, video learning, knowledge, skill

Introduction

The hand is the easiest part of the body as an intermediary for entering germs in the body [1,2]. Therefore, hand hygiene can reduce morbidity and mortality due to infections spread by the fecal-oral route and person-to-person contacts, such as diarrhea and upper respiratory tract infections. Information about this is widely known, but the habit of washing hands with soap is still not optimal [3,4]. Most people already know the importance of washing hands with soap, but there are still few (only 5%) washing hands properly in practice. Most people think that washing hands with water is enough to prevent disease. This perception is undoubtedly wrong because water cannot kill germs/bacteria on hands [5]. Handwashing with proper soap reduces the risk of developing diseases such as diarrhea and can reduce the risk of diarrhea among children five years and under by up to 45% [6].

The lack of public awareness, especially mothers who have pre-school children, in implementing washing hands with soap is the effect of lack of understanding. Therefore, the form of intervention that can improve community compliance, especially homemakers, can be done by giving examples to mothers through demonstrations or showing videos [7]. Emotional Demonstration (Emo Demo) is one of the public education methods developed by the Global Alliance for Improved Nutrition (GAIN) through a new approach that refers to the Behavior Centered Design (BCD) theory [8]. BCD was initiated by the Environmental Health Group of the London School of Hygiene and Tropical Medicine (LSHTM) [9]. BCD was developed based on evolutionary principles and environmental psychology and a way to plan and test imaginative and provocative behavior change interventions. BCD theory holds that behavior can only change in response to something new, challenging, surprising, or interesting. This Emo Demo method uses imaginative and provocative ways to achieve behavior change in public health [10].

Emo Demo is a communication strategy in behavior change that incorporates Behavior Communication Change (BCC), an interactive process between individuals, groups, or communities

to develop communication strategies to achieve positive behavior change. Behavior Communication Definition (BCD) is a communication process that utilizes individual psychological constructions involving feelings, needs, and thoughts. It is one of the methods that is being widespread and gaining attention [11]. The success and effectiveness of using Emo Demo have been proven in implementation in several areas. These results encourage the need for the introduction of this method in other areas of health education. The Emo Demo method, in addition to providing health information, also uploads the subject's emotions so that the subject will be encouraged to make behavioral changes [12,13].

Another method that can be used is learning videos on how to wash hands properly and correctly. Video media has become an integral part of both desktop and laptop computers. The latest development of video media as a digital device is its ability to display images and sound simultaneously with a high level of clarity. It is known as picture and sound in high definition format. The rapid development of video technology, both software, and hardware, has given this media its advantages to be used as a learning medium [14].

The learning video program differs from other video programs regarding the objectives to be achieved [15,16]. The instructional video program has more specific objectives when compared to the objectives to be achieved in the entertainment video program. This program is usually proposed to support learning activities for specific audience groups to achieve specific competencies [17,18].

Lack of proper handwashing practice causes bacteria to enter the body quickly because hands are a medium for rapid transfer/exchange. Therefore, this study aims to analyze the effect of the Emotional Demonstration Method and video media on How to Wash Hands on the knowledge and skills of homemakers in Penyengat Olak Village.

Methods

Trial design

This research is a quasi-experimental study using two groups of pretest-posttest design

Participants

This study involved 40 participants who were divided into 2 groups and was carried out in September-October 2020 in Penyengat Olak Village. The study involved housewives who were randomly selected with the inclusion criteria of mothers who had never participated in a study with the same theme, mothers who were under or equal to 35 years of age, while mothers who had hand skin disease were not included.

Intervention

The study sample was divided into two groups, 20 participants received the emo demo method, and another 20 participants received videos. a video on how to wash hands with soap made by the researcher himself, as well as a demonstration on how to wash hands by the researcher.

The research variable is the mother's knowledge and skills. Before the intervention was given, the researcher first measured the level of knowledge and skills of the mother/participant (pre-test), then after the intervention was given the researcher again measured the level of knowledge and skills of the mother. /participant (post-test). The knowledge and skills questionnaires each consist of 15 questions with correct and incorrect answer choices. If the mother answered correctly, she was given a score of 1 and if the answer was wrong, she was given a score of 0. Both of these questionnaires used the Guttman scale.

Researchers have done a lot of research in the health sector and have compiled a lot of questionnaires so that the questionnaires in this study have been prepared by the researchers themselves. Before the research was conducted, the questionnaire was tested on 10 mothers and the

results showed that there were 2 questions that had to be replaced because they were invalid.

Outcomes

This study compares the knowledge and skills of mothers in washing hands using soap after being given an intervention in the form of emo demos and videos

Sample size

This study involved 40 participants who were divided into 2 groups

Ethical Consideration

No economic incentives were offered or provided for participation in this study. The study was performed in accordance with the ethical considerations of the Helsinki Declaration. This study obtained ethical feasibility under the Health Research Ethics Commission of the Ministry of Health, Jambi, and registration number: LB.02.06/2/151/2020.

Statistical analysis

Data are presented as numbers and percentages for categorical variables. Continuous data were expressed as mean ± standard deviation (SD) or median with Interquartile Range (IQR). Then proceed with bivariate analysis using the Wilcoxon test. The Wilcoxon test was used to determine the effect of the emo demo and video intervention on knowledge and skills. All tests with p-value (p)<0.05 were considered significant. Statistical analysis was performed using the SPSS version 16.0 application.

Results

The characteristics of respondents in this study include age, education level, and occupation. The

following is the frequency distribution of the respondents' characteristics in this study:

Characteristics	Number	Percentage
Age (Years)		
20-25	6	15.0
26-30	19	47.5
31-35	15	37.5
Level of Education		
Elementary	12	30.0
Junior School	11	27.5
High School	17	42.5
Employment		
Merchant	5	12.5
Housewives	21	52.5
Civil servant/Army/police	6	15.0
Entrepreneur	9	22.5

Table 1. *Frequency Distribution of Respondents Characteristics*

In Table 1 it is known that all participants in the study were women, most of the respondents with an age range of 26-30 years were 19 respondents (47.5%). most of the respondents have high school education as many as 17 respondents (42.5%). Most types of work are housewives as many as 21 respondents (52.5%).

Participants' knowledge before and after being given emo demos and videos can be presented in the following table,

Intervension	N	Pre test n(%)	Post test n(%)
Knowledge on emo demo			
Good	20	5 (25)	16 (80)
Poor	20	15 (75)	4 (20)
Knowledge on video			
Good	20	6 (30)	11 (55)
Poor	20	14 (70)	9 (45)

Table 2. *Frequency Distribution Knowledge about hand washing with soap Before and After intervention*

Table 2 shows that participants' level of knowledge before giving the intervention using the emo demo method or video media was higher in the less category. However, after being given the material, participants' level of knowledge increased higher in the "good" category than in the "poor" category.

Participants' skills before and after being given emo demos and videos presented in the following table:

Intervention	N	Pre test n(%)	Post test n(%)
Skill on emo demo			
Good	20	6 (30)	15 (75)
Poor	20	14 (70)	5 (25)
Skill on video			
Good	20	7 (35)	12 (60)
Poor	20	13 (65)	8 (40)

Table 3. *Frequency Distribution Skills about hand washing with soap Before and After intervention*

Table 3 shows that participants' skills before giving the intervention using the emo demo method or video media were higher in the poor category, but after the intervention, the participants' skills increased higher in the good category than the poor category.

The effects of emo demo and video media interventions on participants' knowledge and skills are presented in the following table:

Intervention	N	Mean±SD	Median (IRQ)	Wilxocon test
Knowledge on emo demo				
pre test	20	9.10±3.49	10 (6.75 – 11.25)	0.0001
Post test	20	15.85±4.66	17.5 (13.5 - 20)	
Knowledge on video				
pre test	20	8.45±2.46	8.5 (7-9.25)	0.0001
Post test	20	13.9±3.49	14.5 (12.75-16)	
Skill on emo demo				
pre test	20	4.10±3.36	7.5(6.25-10-5)	0.005
Post test	20	7.90±2.04	15.5(14.25-16.5)	
Skill on video				
pre test	20	4.25±2.17	8.5(7-9.75)	0.005
Post test	20	6.55±2.60	12(11-15.75)	

Table 4. *Effects of emo demo and video media interventions on participants' knowledge and skills*

Table 4 shows the effect of providing emo demo and video media interventions on participants' knowledge and skills with a p-value < 0.05.

Discussion

Based on the study results, it was known that before the intervention, their level of knowledge and skills on how to wash their hands correctly and adequately was very low. It may be influenced by the low level of education and low access of homemakers to the media; the subordinate role of health workers also influences it in providing information and education to the public.

In line with previous research by Padila [19] at Aisyiyah 1 Kindergarten, Bengkulu City, it was found that before the intervention was given, most of them received the first-star category as many as 27 people (90%), while the number of respondents after the intervention was mostly increased in ability and received the fourth-star category. totaled 23 people (76.7 %). Likewise, Nidiyah's research [20] at RA Raisul Anwar Kedung Rejoso, Kota Anyar District, Probolinggo Regency, found a change in knowledge after obtaining material through demonstration media (emo demo) how to wash hands in 7 steps.

The results of this study reject the null hypothesis regarding the effect of the emotional demonstration method and video media on how to wash hands on the knowledge and skills of homemakers. The result is in line with Nidiyah's research [20] which states that the emo demo method increases children's knowledge, behavior, and habits to wash their hands properly and well. Fermi Avissa [21] also found that the demonstration method was more effective in increasing the knowledge and skills of handwashing in preschool children at Flamboyan Platuk Kindergarten Surabaya. Indah Lastari's research [22] found differences in health education skills through demonstrations and learning videos of the washing skill with the hand-soap method in PAUD. The way of learning through a demonstration method is suitableto be applied on preschool children because this demonstration method makes students receive a clear perception from direct observation. Students obtain practical experiences to develop their proficiency and skill.

Through the demonstration method of hand washing, mothers can directly practice the appropriate intervention that has been given. Skills that are trained with repeated practice will become habitual

or automatic [23]. A suitable respondent's knowledge then impacts the actions taken by respondents with good criteria as well. Health education interventions with demonstration and video methods cause homemakers to be skilled in washing their hands to prevent various diseases related to hand hygiene, especially when feeding children when eating [24].

This research is very important to be carried out, especially during the COVID-19 pandemic, where everyone is required to practice hand washing before and after contact with other people, and according to the researcher, washing hands in 7 steps is very effective in preventing transmission of the COVID-19 virus [25–27].

In the current pandemic, the best way to prevent infection is to avoid exposure to the virus that causes it. Prevention of transmission can be done in daily life practices, such as washing hands using soap and running water, the behavior of people who have not practiced clean and healthy lifestyles, especially washing hands with soap can increase the risk of contracting COVID-19. For the community, it is very important to carry out clean and healthy living behavior in the form of washing hands to prevent COVID-19 in the current pandemic era even though COVID-19 can be prevented as recommended by the government to reduce the increase in COVID-19 cases, especially in Indonesia [10].

In general, the results of the study found that the knowledge and skills of respondents increased after the intervention, although there were some respondents that did not change after being given education through emo demo media and video media, this was probably due to their poor memory.

Conclusion

Health education using the demonstration method has been proven to increase knowledge and skills in washing hands, especially for homemakers, so it is highly recommended that health workers provide education on how to wash hands to apply the emo demo and video methods.

Limitations of Study

The limitations of this study include the very limited number of samples, and this study only involves one country, namely Indonesia, so the results may be different when comparing the effects of emo demo and video interventions on mothers in European countries.

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Competing interests statement

There are no competing interests for this study.

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