Original Research

The Effect of Health Education Course Review Horay Method and Video Media on Improvement of Personal Hygiene Ability in Children Age School

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ARTICLE HISTORY
Received: February 5, 2020
Accepted: May 13, 2020
Published: May 14, 2020

KEYWORDS
health education; media; personal hygiene; children

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ABSTRACT

Introduction: Personal hygiene problems that often occur in school-age children are related to hand hygiene and dental hygiene. This study aims to explain the effect of health education methods review horay courses and videos media on improving personal hygiene abilities.

Methods: Quasy-experimental pretest-posttest design with control group design. A population of 150 students in Elementary School (ES) A of Surabaya and 123 students in ES B of Surabaya. The sample size was proportional to stratified cluster random sampling. A total of 72 respondents in ES A of Surabaya and 36 treatment groups and 36 control groups. The instrument used a questionnaire and an observation sheet (checklist). The analysis uses the Wilcoxon Signed Ranks Test and the Mann-Whitney U Test.

Results: Wilcoxon Signed Ranks Test showed knowledge (p = 0.000), attitude (p = 0.000), hand hygiene practice (p = 0.000) and tooth brushing practice (p = 0.000). The value of p <0.05 then there was the effect of intervention courses review horay method and video to increase the ability of personal hygiene in school-age children. Mann-Whitney U Test results showed knowledge (p = 0.000), attitude (p = 0.000), hand hygiene practices (p = 0.000) and tooth brushing practice (p = 0.000). The value of p <0.05 then there was a mean difference in the level of personal hygiene ability between the treatment and control groups.

Conclusion: Health education horay review course method and video media to improve the ability of personal hygiene in school-age children to increase knowledge, attitudes and actions in the form of hand hygiene and tooth brushing properly and correctly in the elementary school.

Cite this as:
Riya, N., Arief, Y. S., & Kurnia, I. D. (2020). The Effect of Health Education Course Review Horay Method and Video Media on Improvement of Personal Hygiene Ability in Children Age School. Pediomaternal Nurs. J., 6(1), 1-9. Doi: http://dx.doi.org/10.20473/pmnj.v6i1.17745

1. INTRODUCTION

Personal hygiene problems that often occur in school-age children are related to hand hygiene and dental hygiene. Hand hygiene is still a very important moment to continue to be applied in daily life, including when carrying out activities related to the ability to wash hands properly (Korhonen et al., 2019). The next personal hygiene problem is oral
and dental hygiene. School-age children do not do dental treatment in the sense of not brushing their teeth regularly. That is due to lack of knowledge related to brushing teeth. Thus, there are dental caries or cavities caused by not brushing teeth properly and regularly (Yeriza, 2017).

According to RiskeESas (2013), 25.9% of the Indonesian population have dental and mouth problems. The prevalence indicates that under 12 years of age suffer from oral and dental health problems. While RiskeESas (2018), the proportion of dental and mouth problems and getting services from dental medical personnel at the provincial level (2018), Indonesia reached 57.6% of 100%. The problem experienced an increase in (2013) by 25.9% and (2018) by 57.6%. While the RiskeESas report (2018), washing hands is considered trivial by the public. The habit of washing hands properly and correctly in children and families, Indonesia is still relatively low ie the use of soap when washing hands is only 24.5%. According to a Preliminary Study conducted by researchers on September 4, 2019 at ES A Surabaya and September 5, 2019 at ES B Surabaya through interviews of 10 children in grade IV and class V, respectively, most experienced problems with hand hygiene and dental hygiene. The data obtained include 70% and 80% knowing hand hygiene, 60% and 80% agree not to wash hands after playing and inappropriate hand hygiene practices include 60% and 70%. The data on dental hygiene includes 40% and 60% know the time to brush their teeth, 80% and 70% agree to prefer to brush their teeth while bathing and the practice of brushing their teeth has not been properly covered 60% and 80%.

This personal hygiene ability if not accustomed or applied routinely and correctly then, has a negative impact on health such as ARI, diarrhea, intestinal worms and dental caries (AbdAllah, Metwalli and Badran, 2018). Based on the data above and the problems as well as the impact that arises related to the lack of good personal hygiene ability, the researcher will provide motivational encouragement in the form of interventions that can trigger an increase in personal hygiene abilities, namely the provision of health education methods with a horror review course model and video media.

The horay review course itself is a school-age learning model that applies a re-understanding test related to the material that has been delivered by the speaker through direct questions or demonstrations. Students who answer the most correctly are required to display group slogans or hooray (Mashitah and Ispriantari, 2017). This study aims to explain the effect of health education methods review horay courses and videos media on improving personal hygiene abilities.

2. METHOD

2.1 Design

This research was a quantitative study with a Quasy-Experiment research design with Pre-Test Post-Test Control Group Design. This design was to reveal the causal relationship by involving the control group in addition to the experimental group (Nursalam, 2015). The design in this study the experimental group was given an intervention while the control group was not given an intervention only aired a conceptual video.

2.2 Population, Samples, and Sampling

The population in this study were all school children in ES A with a total of 150 students and ES B totaling 123 students with Class IV and class V, respectively. The sample taken amounted to 72 respondents for 2 groups namely the control group and the treatment group with the inclusion criteria of grade IV children and V, aged between 10-11 years. Sampling in this study by proportional stratified cluster random sampling.

2.3 Variables

The variables in this study were independent and dependent variables. The independent variable was health education, the method of reviewing horays and video media. While the ability of personal hygiene in school-age children as the dependent variable.

2.4 Instruments

The research instruments used included a knowledge and attitude questionnaire about hand hygiene and tooth brushing adopted from previous studies and an observation checklist sheet of handwashing practices.
from WHO standards (2009) and brushing teeth.

2.5 Procedure

The researcher conducted a research introduction from the nursing faculty of Airlangga University. Then, the researcher conducted a study on October 28 2019-12 November 2019. The time of the study was conducted when the children in class IV and V when they were before the teaching and learning process in the morning at 06.30-08.30 WIB according to permission from the school principal and homeroom teacher. While the control group was carried out before learning began at 11.00-13.00 WIB.

Researchers divided respondents into two groups namely 1 treatment group (ES B children) and 1 control group (ES A children) with the same criteria namely Accreditation and extracurricular types. The division of the two groups was divided into 2 sessions, namely in the morning in the treatment group while the control group was held in the afternoon at 11.00-13.00 WIB.

The first meeting on October 28, 2019, researchers combined treatment respondents in the room at the hour before the start of the learning process with the approval of the homeroom teacher. Respondents were then given informed consent that the researcher gave an explanation of the intent and purpose of the ongoing research so that the informed consent, demographic data questionnaire, was at the same time witnessed by the respective homeroom teacher. Then, the researchers did the same thing with the control group, gathering one space for the distribution of informed consent sheets and demographic data.

The second meeting on October 30, 2019, researchers collected informed consent that was signed by the respondent's parents or guardians, demographic data and took pretest data as well as to the control group. Data collection and initial data collection for the pretest using a 2 session system. Session 1 namely (distribution of questionnaires to respondents) and session 2 (practice). In session 1, 4 facilitators including researchers were given time to distribute the questionnaire directly to each respondent according to the group that had been divided. Session 2 (hands washing and brushing teeth) with 60 minutes for each group that will be observed by several facilitators. Session 1: treatment group respondents were collected into one room to be given a questionnaire of knowledge and attitudes to wash hands and brush their teeth by each facilitator for 45 minutes which was distributed according to the group and its facilitators. Next to the second session is the practice of washing hands and brushing teeth. The first practice is hand hygiene and then brushing your teeth by group 1 entering first then group 2 and so on.

The third and fourth meetings on 01 and 04 November 2019, the treatment group was given health education in the form of a cooperative learning model with a course review horay method and video screenings of hand hygiene and brushing teeth. Whereas the control group only aired a simple video in the form of a general concept of personal hygiene in the form of a slide. For the treatment group, 2 interventions were given. The first intervention was shown a video about washing hands and brushing teeth for ± 15 minutes. Then entering the second intervention, the course review horay method where the testing of understanding of the material presented by researchers to respondents in the form of direct questions or in the form of demonstrations. The method was carried out by forming into 9 groups, each group consisting of 4 members, respondents were given an explanation of the material about washing hands and brushing their teeth in the form of power points then the researcher gave the opportunity to respondents to ask again related material that had been submitted.

The fifth meeting on November 9, 2019, researchers took post test data in the control group and the treatment group. Retrieval of posttest data is the same as when taking pretest data which consists of 2 sessions. After the posttest, the control group was given the same intervention as the treatment group, which started with video screenings. Then enter the cooperative learning method with the horay review course method on November 11, 2019.

The last meeting on November 12 2019, researchers conducted a termination of respondents and distributed souvenirs and
thanks to all those who helped and were involved in conducting the research. After the intervention was given and the posttest stage was completed, the researchers tabulated the data and then analyzed it using SPSS software or computer software to process the data using the Wilcoxon Test and Mann Whitney with $\alpha \leq 0.05$ significance so that the conclusions obtained from the results of the research conducted.

2.6 Analysis

Data were analyzed with differences in changes in knowledge, attitudes and actions before and after the intervention was given. The analysis uses the Wilcoxon Signed Rank Test if the data shows ordinal data with a significance level of $\alpha \leq 0.05$. If the results obtained are $\alpha \leq 0.05$. Then there are differences between the pretest and posttest scores. Thus, the effect of the intervention on personal hygiene as written on the hypothesis can be accepted. The second test is using the Mann Whitney test with a significance level of $\alpha \leq 0.05$.

2.7 Ethical Clearance

Before collecting research data, an ethical test was conducted first with a research ethics commission from the Faculty of Nursing, Airlangga University. The research ethics permit, the researcher filled out a protocol containing questions about the feasibility or ethics of the research to be conducted to respondents. Then the protocol was reviewed by 3 viewers with results stating that this thesis research was declared to have passed the ethical test with No. 1804-KEPK.

3. RESULT

The results of data for personal hygiene knowledge (washing hands and brushing teeth) show data that at the time before being given an intervention was in the sufficient category. Whereas when the post test experienced an increase that is in the good category. In the control group the most pretest scores were sufficient. Whereas at the time of the post-test the level of knowledge category experienced constant which is still the same in the sufficient category. The results of the data obtained by using the Wilcoxon Signed Ranks Test on the knowledge variable during the pre test and post test treatment group showed that $p = 0.000$ then $p < 0.05$. This means that the value of knowledge in the treatment group increased before and after the intervention was given. Meanwhile the results of the data in the control group with the Wilcoxon Signed Ranks Test show that $p = 1.000$ then $p > 0.05$. This means that the value of knowledge in the control group did not differ between values before and after the intervention was given. The results of the difference data or find out the level of difference in the rank of the 2 groups are free from the pre-test and posttest values in the treatment group and the control group using the Mann-Whitney U Test, showing that the results of $p = 0.000$ then $p < 0.05$ so it can be concluded that there are the degree of difference in the mean values increased significantly in knowledge significantly in the pre test post test of the two groups (Table 1).

As for the results of the attitude shows the data that in the treatment group most of the respondents during the pretest were in the positive attitude category. While the posttest of all respondents experienced an increase in being in the positive attitude category. In the control group the pretest value of all respondents was in the positive category. While at the posttest there was a decrease in the level of the category that some respondents in the negative category. The results of the data obtained by using the Wilcoxon Signed Ranks Test on the pre test and post test attitude variables in the treatment group showed that $p = 0.000$ then $p < 0.005$ which means that the attitude value in the treatment group there was an increase towards positive before and after the intervention was given. Meanwhile the results of the control group data by using the Wilcoxon Signed Ranks Test showed $p = 0.018$, then $p <0.05$ which means that the value of attitudes in the control group were positive towards before and after the intervention was given. The results of the two groups using the Wilcoxon test, the control group also had the same yield value as the treatment group, which was $p < 0.05$. The results of the difference between the pre-test and post-test results in the treatment group and the control group using the Mann-Whitney U Test, showed the results that $p = \ldots$
Table 1. The effect of the course review horay method and video media on the level of personal hygiene knowledge and attitudes of school-aged children

| Variable          | Treatment | Control | p* | p** | p*** |
|-------------------|-----------|---------|----|-----|------|
|                   | Pretest   | Posttest| Pretest| Posttest|     |
|                   | n        | %      | n    | %    | n    | %       |
| Knowledge         |           |        |      |      |      |
| Well              | 3        | 8      | 35   | 97   | 0    | 0       | 0.000 | 1.000 | 0.000 |
| Enough            | 3        | 86     | 1    | 3    | 30   | 83      | 30    | 83    |       |
| Less              | 2        | 6      | 0    | 0    | 6    | 17      | 6     | 17    |       |
| Total             | 36       | 100    | 36   | 100  | 36   | 100     | 36    | 100   |       |
| Attitude          |           |        |      |      |      |
| Positive          | 22       | 61     | 36   | 100  | 36   | 100     | 33    | 92    | 0.000 | 0.018 | 0.000 |
| Negative          | 14       | 39     | 0    | 0    | 0    | 3       | 8     |       |       |
| Total             | 36       | 100    | 36   | 100  | 36   | 100     | 36    | 100   |       |

p*: Wilcoxon Signed Ranks Test (treatment); p**: Wilcoxon Signed Ranks Test (Control); p***: Mann-Whitney U Test

Table 2. Effects of course review horay methods and video media on the level of hand hygiene and tooth-brushing practices of school-aged children

| Variable          | Treatment | Control | p* | p** | p*** |
|-------------------|-----------|---------|----|-----|------|
|                   | Pretest   | Posttest| Pretest| Posttest|     |
|                   | n        | %      | n    | %    | n    | %       |
| Hand Hygiene Practice |           |        |      |      |      |
| Well              | 0        | 0      | 33   | 92   | 0    | 0       | 0.000 | 1.000 | 0.000 |
| Enough            | 0        | 0      | 3    | 8    | 3    | 8       | 3     | 8     |       |
| Less              | 36       | 100    | 0    | 0    | 33   | 92      | 33    | 92    |       |
| Total             | 36       | 100    | 36   | 100  | 36   | 100     | 36    | 100   |       |
| Tooth-Brushing Practice |           |        |      |      |      |
| Well              | 1        | 3      | 36   | 100  | 0    | 0       | 0     | 0     | 0.000 | 1.000 | 0.000 |
| Enough            | 31       | 86     | 0    | 0    | 26   | 72      | 26    | 72    |       |
| Less              | 4        | 11     | 0    | 0    | 10   | 28      | 10    | 28    |       |
| Total             | 36       | 100    | 36   | 100  | 36   | 100     | 36    | 100   |       |

p*: Wilcoxon Signed Ranks Test (treatment); p**: Wilcoxon Signed Ranks Test (Control); p***: Mann-Whitney U Test

0.000 then p <0.05 so that it can be concluded that there is a difference in the level of the mean value that increases positively at a significant attitude in the pretest and posttest from both groups (Table 1).

The results of the practice of hand hygiene show the data that in the treatment group all respondents the level of practice of washing hands during the pre test is in the poor category. While in the post test the level of hand hygiene practices has increased ie most of the respondents are in the good category. In the control group pre-test the level of hand hygiene practices most respondents showed in the category of lack. Whereas in the post test, the level of hand hygiene practices of the respondents showed that it was still constant, which was in the lacking category. The results of the data obtained using the Wilcoxon Signed Ranks Test on the pre-test and post-test handwashing practice variables showed that p = 0.000, then p <0.05, which means that the value of hand hygiene practices in the treatment group had an increase before and after intervention was given. While the results of the data in the control group by using the Wilcoxon Signed Ranks Test showed p = 1,000 then p> 0.05 which means that the value of hand hygiene practices in the control group was no difference before or after the intervention was given. The results of the difference between the pretest and post test results in the treatment group and the control group to find out the mean difference of the two groups using the Mann-Whitney U Test, showed that the results of p = 0.000 then p <0.05 so that it can be concluded that there is a level of difference in the mean improved significantly in the practice of hand hygiene significantly in the pre-test and post-test of the two groups.

While the results of tooth brushing practice show data that in the treatment group the level of tooth brushing practice in the pre test showed the most. While in the post test, the level of tooth brushing practice of all respondents has improved to be good. In the pre-test control group the level of tooth
brushing practice showed the most respondents in the sufficient category. Whereas in the post-test the level of practice of brushing the teeth of the respondents remained the same i.e. being in the sufficient category. The results of the data obtained by using the Wilcoxon Signed Ranks Test on the pre-test and post-test brushing variable of the treatment group showed that $p = 0.000$, then $p < 0.05$, which means that the value of tooth brushing practices in the treatment group had an increase before and after the intervention was given. While the results of the data in the control group using the Wilcoxon Signed Ranks Test showed $p = 1.000$ then $p > 0.05$ which means that the value of tooth brushing practices in the control group was no difference before or after the intervention was given. The results of the difference between the pretest and post-test results in the treatment group and the control group to find out the mean difference of the two groups using the Mann-Whitney U Test, showed that the results of $p = 0.000$ then $p < 0.05$ so that it can be concluded that there is a level of difference in the mean improved significantly in the practice of brushing significantly in the pretest and post-test of the two groups (Table 2).

4. DISCUSSION

4.1 Analysis of the Effect of Course Review Horay Method and Video Media on Personal Hygiene Knowledge

The treatment group at the pretest most of the respondents had a sufficient level of knowledge category. Not all respondents knew and answered correctly from the questions given. The sufficient category was indicated by respondents with the aspect of questions that were answered correctly including the understanding of HAND HYGIENE, hand hygiene facilities, type of water used, the purpose of HAND HYGIENE, preventable diseases, HAND HYGIENE time, type of food, purpose of brushing teeth and tooth brushing time. The respondents had an average father and mother with a background in high school and junior high school education. According to (Setyaningrum, Triyanti and Indrawani, 2014), explained that, one of the factors that influence children's cognitive function is the level of parental education, especially in mothers.

The treatment group at the time after being given an intervention in the form of a course review method of horay and video media, the researcher conducted a posttest to respondents with the results of the posttest score having increased in the good category. All respondents were not in the poor category.

However, there was still one respondent that was in the sufficient category but the respondent had an increase in 1 score. The provision of interventions with the course review horay and video methods has an effect on respondents by showing the value increases from pretest to posttest. Health learning using the course review horay method has characteristics that are fun, entertaining, arouse the interests and desires of health education participants to participate in health education well. Thus, the concentration of participant respondents during health education on health education materials became good too. The use of the course review horay method can test respondents' understanding of health education through questions given by researchers and for groups who get the correct answer they must first shout "hooray!" Or display their group's yells. This method is fun and can improve the ability of respondents to compete positively in learning, while also being able to develop the ability of critical thinking of respondents, and help respondents to memorize concepts learned easily (Liu et al., 2019). This study is in accordance with previous research (Astuti, 2014), states there is an influence of the course review horay method on the behavior of PHBS school-age children. According to (Hardiani and Rahmawati, 2016), that learning while playing in the course review horay method can increase knowledge.

4.2 Analysis of the Effect of Course Review Horay Method and Video Media on Personal Hygiene Attitudes

The treatment group's posttest showed that all respondents experienced an increase in positive attitude as indicated by the highest value of the answers that were often answered correctly by the respondent namely in the attitude aspects of the
importance of washing hands with soap, HAND HYGIENE time, HAND HYGIENE objectives, HAND HYGIENE steps and dental care and none respondents who are in a negative attitude. That is because the respondent was given an intervention in the form of a course review horay and video method. The horay review course method given by the researcher can influence the attitude of the respondent where in the method the respondent is given the opportunity to justify or give the right answer to the question given to the respondent who is still wrong in answering or determining his choice (Rahma, 2015). Research (Fauziah, 2015) shows that health education using the horay course review method can increase positive attitudes. This was also explained in the research (Halawany et al., 2018) that health education using the horror course review method can influence one’s attitude.

According (Lim et al., 2016) knowledge and attitude are interconnected where education means guidance given by researchers to children in order to understand something. The higher or more health education provided by researchers to respondents, the easier it is for children to receive information and in the end the more knowledge they have. Conversely, if a child has a low level of education or lack of exposure to health information, it will hinder the development of the child’s attitude towards the receipt of information and values that are newly introduced.

4.3 Analysis of the Effect of Course Review Horay Method and Video Media on Hand Hygiene Practices

The treatment group in the pretest of all respondents had a level of practice less. Not all respondents have the availability of complete hand hygiene facilities at home. This is as explained by (Susanto et al., 2016) that the relationship between practice and the availability of supporting facilities. While after being given an intervention, the results of the posttest showed that the majority of respondents experienced an increase in their ability to wash their hands properly and correctly and there were no respondents who were still in the poor category. This is because in the course review horay method, researchers provide a retest related to material that has been delivered previously in the form of a practice where the respondent conducts a hand hygiene demonstration according to the steps requested by the researcher. According to (Lina, 2018) the use of the course review horay method in learning can channel messages and intentions to students so as to stimulate thoughts and feelings. Thoughts that are stimulated through stimuli from the senses of sight and hearing make feelings stored in the memory of the brain and cause actions to be carried out at once believed by individuals.

4.4 Analysis of the Effect of Course Review Horay Method and Video Media on Tooth Brushing Practices

The treatment group after the posttest was given intervention showed that all respondents experienced an increase in the level of practice that is in the good category that is in accordance with the correct brushing procedure starting with pouring toothpaste into a toothbrush until the respondent made a mouth rinse and put a toothbrush in the position of the toothbrush head above and there are no respondents who are still in the level of lack. Concrete operational thinking can involve physical actions so that respondents can do the same according to what was taught before. These results have shown that respondents know how to brush their teeth properly and correctly according to existing guidelines and do it at the right time. Practice is more oriented to the implementation or behavior of individuals which results from information that is passed through the cognitive and affective domain so that, the assessment is better to use direct observation. The increase in the level of knowledge increased significantly through the health education program provided so that it had an impact on positive action (Mukimah, Istiarti and BM, 2016).

5. CONCLUSION

The conclusions in this study revealed that health education with a course review horay method and video media increased knowledge, attitudes and practices regarding hand hygiene and brushing of teeth in school-
age children at ES A of Surabaya and ES B of Surabaya.

6. ACKNOWLEDGEMENT
The researcher would like to express of heartfelt thanks with a sincere heart. For the parties and participants who helped to complete this research

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