



The Influence Of Learning In Using Educational Video And CTPS Gymnastic Learning (Covid-19) On Hand Washing Implementation By Using Soap Under Flowing Water

Sudirman Burhanuddin^{1*}, Nur Amalia Saenal²

^{1,2}Physical Education and Sports, Postgraduate Program,
State University of Makassar, South Sulawesi Indonesia

^{1,2}Street. Bonto Langkasa, Makassar City, South Sulawesi Selatan KP. 90222

¹sudirman.burhanuddin@unm.ac.id, ²nuramalia0120@gmail.com

Received: January 25, 2022; **Reviewed:** January 26, 2022; **Accepted:** February 2, 2022;

Published: February 28, 2022

ABSTRACT

This type of research is an experiment that aims to improve the culture of washing hands with soap under running water for students at SD Muhammadiyah IDI Tello Baru in Makassar City. The population of the study were students at SD Muhammadiyah IDI Tello Baru in Makassar City. The sample was selected by using simple random sampling technique and obtained 60 people. The data analysis technique employed a sample paired t test and an independent t test. The results of the study reveal that there is an influence of learning using educational videos on the culture of washing hands with soap under running water for students at SD Muhammadiyah IDI Tello Baru in Makassar City with a value of Sig. (2-tailed) of $0.000 < 0.05$ or H_0 is rejected. There is an influence of learning CTPS (Covid-19) gymnastics on the culture of washing hands with soap under running water for students at SD Muhammadiyah IDI Tello Baru in Makassar City with a value of Sig. (2-tailed) of $0.000 < 0.05$ or H_0 is rejected. There is a difference between learning using educational videos and learning CTPS (Covid-19) gymnastics on the culture of washing hands with soap under running water for students at SD Muhammadiyah IDI Tello Baru in Makassar City with a value of $t = 2.150$ and Sig. (2-tailed) = $0.038 < 0.05$ or H_0 is rejected.

Keywords: Educational Videos; CTPS Gymnastics; Covid-19; Culture; Hand Washing; Water.

INTRODUCTION

Culture is a comprehensive way of life. Culture is complex, abstract, and broad. Many aspects of culture also determine communicative behavior. These socio-cultural elements are scattered, and include many human social activities (Killian, 2014). Hand washing culture must be built from childhood. Washing culture is a habit that is considered quite effective in preventing the spread of bacteria and viruses, and is part of a clean and healthy lifestyle. Cleanliness is very important for the community to create a healthy life. Education about health and various types of diseases really needs to be given to the community, especially children during this Covid-19 pandemic. Since the pandemic, in

order to avoid disease, one should understand and apply the concept of self-preservation. During the pandemic, people are required to always follow health protocols, especially washing their hands to reduce the risk of contracting the Covid-19 virus.

Based on the WHO campaign called "SAVE LIVE: Clean Your Hands", said that "Hand hygiene in the community you can play an important role in fighting COVID-19" which means that our hand hygiene plays an important role in fighting the Covid-19 virus. However, hand washing is often considered a trivial matter, even though hand washing is an important activity because it can contribute to the health status of the community. Given the lack of public awareness of hand washing, children are the most vulnerable to disease, so it is necessary to pay attention and kept healthy. Some children only know that hand washing is just rubbing between the palms, without even using soap. In everyday life, there are still many who wash their hands only with water before eating, washing hands with soap is actually done after eating. Good and correct hand washing is to use soap and running water.

In this study, the method of showing educational videos and CTPS exercises (Covid-19) will also be practiced. In addition to entertainment media, this can also be a medium for education that is easily understood by children. By showing videos and carrying out this exercise, it is hoped that children can be motivated to wash their hands with soap. By providing this hand washing exercise, students can not only get used to washing their hands, but they can also gain physical fitness through practiced gymnastic movements.

From the results of the researchers' observations, hand washing with soap under running water for students of SD Muhammadiyah IDI Tello Baru is still very lacking. This is due to the lack of knowledge of students about good and correct hand washing. Therefore, the researchers targeted their research to increase knowledge about hand washing with soap and apply it in daily life. Through this research, it can also provide an understanding of the importance of taking care of yourself as an effort to prevent disease.

METHOD

The type of research used by the researcher is experimental research. In Payadnya and Jayantika (2018, p.2) according to Hadi, experimental research is research conducted to find out the consequences of a treatment given intentionally by the researcher. Furthermore, according to Sugiyono, the experimental method is a research method used

to find the effect of certain treatments on others under controlled conditions. In this study using a true experimental design. The researcher used this research design to determine the differences in knowledge, attitudes and actions of elementary school children regarding washing hands with soap under running water properly before and after treatment. Researchers used three class groups, namely two experimental class groups and control class groups. In the experimental class using CTPS (Covid-19) gymnastics learning and educational videos.

Table 1.
 Research design

Group	Pre-Test	Treatment	Post-Test
A	O ₁	X ₁	O ₂
B	O ₃	X ₂	O ₄
C	O ₅	-	O ₆

Information:

A = Experimental group (Educational Video)

B = Experimental group (CTPS Gymnastics)

C = control group

O₁ = Pre-test for the experimental group (Educational Video)

O₂ = Post-test for the experimental group (Educational Video)

O₃ = Pre-test for the experimental group (CTPS Gymnastics)

O₄ = Post-test for the experimental group (CTPS Gymnastics)

O₅ = Pre-test for the control group

O₆ = Post-test for the control group

X₁ = Treatment for the experimental group (Educational Video)

X₂ = Treatment for the experimental group (CTPS Gymnastics)

RESULTS AND DISCUSSION

Result

Group A Descriptive Statistics Results (Educational video learning)

Table 2.
 Group A Descriptive Statistics Results (Educational video learning)

Group	N	Min.	Max.	Mean	Standard Deviation
Pre-Test Experiment (A)	20	1	8	4.10	2.024
Post-Test Experiment (A)	20	3	9	5.85	1.814

Descriptive Statistical Results of Group B (Learning Handwashing Gymnastics)

Table 3.

Results of Group B Descriptive Analysis (Learning using hand washing exercises)

Group	N	Min.	Max.	Mean	Standard Deviation
Pre-Test Experiment (B)	20	1	8	4.20	1.735
Post-Test Experiment (B)	20	4	9	6.95	1.395

Descriptive Statistical Results of Control Group

Table 4.

Results of Descriptive Analysis of the Control Group

Group	N	Min.	Max.	Mean	Standard Deviation
Pre-Test Control	20	1	7	4.10	1.553
Post-Test Control	20	1	8	4.30	1.838

Normality Test of Experimental Group A (Educational Video Learning)

Table 5

Normality Test Results of Experimental Group A Data (Educational video learning)

Group	Kolmogorov-Smirnov Statistics	Sig	α	Keterangan
Pre-Test Experiment (A)	0.120	0.200	0.05	Normal
Post-Test Experiment (A)	0.130	0.200	0.05	Normal

Normality Test of Experimental Group B (Learning Handwashing Gymnastics)

Table 6

Results of Normality Test Data for Experimental Group B (Learning hand washing gymnastics)

Group	Kolmogorov-Smirnov Statistics	Sig	α	Ket.
Pre-Test Experiment (B)	0.146	0.200	0.05	Normal
Post-Test Experiment (B)	0.164	0.162	0.05	Normal

Normality Test for Control group

Table 7

Control Group Data Normality Test Results

Group	Kolmogorov-Smirnov Statistics	Sig	α	Ket.
Pre-Test Control	0.126	0.200	0.05	Normal
Post-Test Control	0.165	0.158	0.05	Normal

Variance Homogeneity Test

Table 8
 Variance Homogeneity Test

Statistics Levena	df ₁	df ₂	Sig.
1.083	2	57	0.346

The First Hypothesis

There is an effect of learning using educational videos on the culture of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello. To prove the hypothesis above, using the Paired t Test. This test is used to determine whether there is a difference in the mean of two paired samples.

Table 9
 Uji Paired Sampel t Test

Group	Average	Standard Deviation	df	Sig. (2-tailed)
Experiment A Pre Test – Post Test CTPS Gymnastics Learning (Covid-19)	-1.750	1.209	19	0.000

Interpretation:

In the table above, the average difference is obtained = -1.750 which means the difference in scores between after and before being given treatment. Furthermore, the most important thing from the table above is db = 19 and the number Sig. (2-tailed) = 0.000 < 0.05 or H₀ is rejected. Thus, it was concluded that there were differences in students' learning outcomes of washing hands with soap under running water between before and after being given learning using educational video media.

The Second Hypothesis

There is an effect of learning CTPS (Covid-19) gymnastics on the culture of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello Baru Makassar City. To prove the hypothesis above, using the Paired t Test. This test is used to determine whether there is a difference in the mean of two paired samples.

Table 10
 Uji Paired Sampel t Test

Group	Average	Standard Deviation	df	Sig. (2-tailed)
Experiment B Pre Test – Post Test Learning Using Educational Videos	-2.750	1.164	19	0.000

Interpretation:

In the table above, the average difference = -2.750, which means the difference in scores between after and before being given treatment. Furthermore, the most important thing from the table above is $df = 19$ and the number $Sig. (2-tailed) = 0.000 < 0.05$ or H_0 is rejected. Thus, it was concluded that there were differences in students' learning outcomes for washing hands with soap under running water between before and after being given CTPS (Covid-19) gymnastics lessons.

Hipotesis Ketiga

There is a difference between learning using educational video media and learning the practice of CTPS gymnastics (Covid-19) on the habit of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello Baru, Makassar City. To prove the hypothesis above, using the Independent t test. This test was conducted to determine whether there was a difference in the average of the unpaired samples.

Table 11
Group Statistical Data

	Group	N	Average	Standard Deviation
Learning outcomes	Post Test of CTPS Gymnastics Learning (Covid-19)	20	6.95	1.395
	Post-Test Learning Using Educational Videos	20	5.85	1.814

Table 12
Uji Independen Test

	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	1.794	0.188	2.150	38	0.038
Equal variances not assumed				35.641	

Interpretation of Independent Samples Test

In the table above, it can be seen that: In the CTPS gymnastics learning group (Covid-19) it was 6.95 and the standard deviation was 1.395. In the learning group using educational videos, the average was 5.85 and the standard deviation was 1.814 ..

This means descriptively, learning through CTPS (Covid-19) gymnastics on the culture of washing hands with soap under running water for students at SD Muhammadiyah IDI Tello Baru Makassar City is higher and more consistent than learning using educational videos. In the Equality Variances Assumed column, $F = 1,794$ is obtained with the number $Sig. = 0.188 > 0.05$, which means H_0 is accepted. Thus it can be said that the population variance of the two groups is the same or homogeneous.

Because the data variance is homogeneous, the Equal variances assumed column will be chosen to obtain the value of $t = 2.150$, and $\text{Sig. (2-tailed)} = 0.038 < 0.05$ or H_0 is rejected.

Thus, it can be concluded that there is a difference between the average learning using educational videos and CTPS (Covid-19) gymnastics learning. In table 4.10, it can be seen that the average (mean) for CTPS gymnastics learning (Covid-19) is 6.95 and for educational video learning is 5.85. This means that the average CTPS (Covid-19) Gymnastics learning is higher than the average educational video learning.

Discussion

COVID-19 is a disease caused by the SARS-CoV-2 virus which is part of the Corona virus type. This virus can be transmitted if we come into direct contact with an infected person or with the fluids released by coughing and sneezing. Viruses can move to our bodies, if we accidentally touch these objects and then touch our face (eyes, mouth, and nose) with contaminated hands (Sianipar, HF, & Sijabat, A., 2021) Due to the Covid-19 pandemic. 19, the mayor made a circular letter to carry out learning from home which was often extended in accordance with the current pandemic conditions. In addition, a circular from the Ministry of Health of the Republic of Indonesia regarding the implementation of the Covid-19 vaccination for children aged 12-17 years. Taking into account the increasingly widespread spread of Covid-19, especially in children, children also need to get vaccinated. In addition, following up on the circular letter of the Minister of Education and Culture Number 3 of 2020 concerning Prevention of Corona Virus Diseases (Covid-19) in Education Units, it is hoped that all educational units can provide hand washing facilities with soap (CTPS) in various strategic locations and ensure that whoever is in the education unit environment, wash their hands with soap according to health protocols

Washing hands frequently and in a good and proper way is one of the most important steps to prevent infection with Covid-19. Washing hands with soap is much more effective at killing germs, bacteria, and viruses than washing hands with water alone. Proper hand washing should be done with running soap. Soap can kill germs, while running water can wash away germs on your hands. The following are the six steps for washing hands that have been determined by WHO (Ananda and Caesarina, 2021): (1) Palms; Use soap and put in the palm of the hand. Wet hands and rub the palms that have been given the soap, (2) the palms of the backs of the hands; Also rub the back of the right

and left hands. Make sure all surfaces are exposed to soap, (3) Between Fingers; Then rub the soap between your fingers. Between the fingers is one of the hiding places for germs, (4) the back of the hand; Also clean the back of the hand with interlocking movements, (5) Thumbs, Clean the right and left thumbs alternately in a circular motion. The thumb is one of the most active parts of the fingers, (6) Fingertips; Clean the fingertips in a pinched motion. The goal is to free nails from germs, and (7) Clean hands; Clean the hands that have been soaped with running water for 20 seconds and dry them.

Habits carried out by students of SD Muhammadiyah IDI Tello Baru Makassar City, namely: (1) Spread the soap with both palms; Although sometimes there are those who do not use soap. However, this step of washing the palms of the hands is one of the steps that students know and often do. Especially for students who are Muslim. As it is known that for Muslims, it is obligatory to perform ablution before worship. Where in the ablution movement, starting with washing hands. Therefore, washing the palms of these two hands, has often been done by students, (2) Rub the back of the right hand and vice versa; In this step, it is almost the same as the first step. This step is also easy to remember and is often done by students, (3) Rub between the fingers; In the step of rubbing between the fingers, there are still some students who miss it. This can be seen from the habits of students who wash their hands in a hurry and want to finish washing their hands quickly, (4) The back of the fingers of the right hand is rubbed on the palm of the left hand with the fingers on the inside of both hands interlocking; This step is also a step that is almost often overlooked. One of the factors is because the movement is not easy to remember and the technique is a little difficult for some students, (5) The left thumb is rubbed in a circle in the right hand and vice versa; In this movement, students also get used to doing. The remaining few students still missed this thumb rubbing motion, and (6) Rub the fingertips of the right hand in the palm of the left hand and vice versa, rinse with running water and then dry; In this step, some students also often miss the movement of rubbing the fingertips in a circular motion on the palm of the hand. Even when they finish washing their hands, there are still some students who don't rinse their hands thoroughly with water.

Overall, it can be concluded that the movements that are always carried out by students are rubbing the palms of the hands, rubbing the backs of the hands and between the fingers. While the movement that is still often overlooked is the movement of the back of the right hand finger rubbed on the palm of the left hand with the fingers on the

inside of both hands interlocking and the circular rubbing motion of the fingertips of the right hand in the left palm and vice versa.

Based on the research results of all the hypotheses that have been carried out. Then it can be stated that:

There is an effect of learning using educational video media on the habit of washing hands with soap under running water in students of SD Muhammadiyah IDI Tello Baru Makassar City. It is evidenced by the results of the calculation of the Paired Sample t Test which obtained the Sig. (2- tailed) = 0.000 < 0.05 or H₀ is rejected.

Learning using the video itself can be a motivation for students in learning, and can make it easier for teachers to present their learning. According to the opinion expressed by Daryanto quoted by Hadi, S. (2017) that video is a type of audio-visual media, which means learning media that can be seen using the sense of sight and heard using the sense of hearing. As a learning medium, video is effectively used for the learning process en masse, individually or in groups. According to Aqib (2013), this is also supported by the benefits of video media, including: (1) Learning is clearer and more interesting, (2) The learning process is more interactive, (3) Efficiency of time and energy, (4) Improves the quality of learning outcomes, (5) Learning can be done anywhere and anytime, and (6) Cultivating a positive learning attitude towards the learning process and material.

There is an effect of learning the practice of CTPS gymnastics (Covid-19) on the habit of washing hands with soap under running water in students of SD Muhammadiyah IDI Tello Baru Makassar City. It is evidenced by the results of the calculation of the Paired Sample t Test which obtained the Sig. (2- tailed) = 0.000 < 0.05 or H₀ is rejected.

As we know that at the age of elementary school children, in terms of cognitive development theory. Elementary school children enter the concrete operational stage. For elementary school children, the teacher's explanation of the lesson will be better understood if the child does it himself. Thus, teachers should design learning models that allow children to be directly involved in the learning process (Sugiyanto, 2021: p. 6). For example, it will be easier for children to remember the 6 steps of washing their hands with soap by inviting students to directly wash their hands with soap through exercise. The introduction of the 6-step handwashing exercise in rhythmic gymnastics is a very useful activity for students. With songs in gymnastics, it can be more interesting and fun for students (Zurrahmi, Hardianti and Syahasti, 2021). This activity is carried out as an

effort to improve the culture of 6 steps of washing hands with soap under running water for students properly and correctly.

There is a difference between learning using educational video media and learning the practice of CTPS gymnastics (Covid-19) on the habit of washing hands with soap under running water in students of SD Muhammadiyah IDI Tello Baru Makassar City. It is proven by the calculation results of the Independent Samples Test:

In the experimental group A (Educational Video Effect) got an average of 5.85. In the experimental group B (Effect of CTPS exercise) it was 6.95. This means descriptively, between learning using educational video media and learning the practice of CTPS gymnastics (Covid-19) on the culture of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello Baru Makassar City, there is a difference.

Both of these experiments can improve the culture or habits of students to wash their hands with soap properly and correctly. However, CTPS (Covid-19) exercise has a higher and more consistent effect than learning using educational videos.

There are several things that make learning using educational videos less influential, one of which is boredom in students. Moreover, at the time of the research, the school implemented a level 4 community activity restriction (PPKM) instructed by the Minister of Home Affairs (Inmendagri) Number 31 of 2021. The teaching and learning process had to change from the previous one that could be face-to-face between students and teachers, but at PPKM level 4 this can't be done.

This causes the research to be carried out using BDR (Learning From Home), which means that learning is carried out online. Although the research process carried out remotely is not easy for students and researchers, this activity must still be carried out. So that in learning using educational videos, students will stare at the cellphone screen for too long while the educational video is showing. According to (Merisa, 2021) the condition of those who have to constantly sit in front of the cellphone affects the quality of children's attention to learning material. Many children feel bored and tired, and end up not focusing on the material. Learning becomes monotonous and less fun. As stated (Sobron and Bayu, 2019) that monotonous learning will make students feel bored and pay less attention to the learning that is being delivered. While in learning with hand washing exercises, it allows students to be better able to remember the steps for washing hands with

soap by demonstrating directly. Even though learning is done online, students are still enthusiastic and enthusiastic in this learning.

In addition, because in this study using gymnastics where the movement of washing hands with soap is accompanied by rhythm or singing music. According to Campbell (2002) music has a significant effect on concentration, health, memory, creativity and thinking power.

The rhythm, beat and harmony of music can affect human physiology, especially brain waves and heart rate, in addition to evoking feelings and memories. So music can help students work better and remember more (Bobbi De Porter, 2005). This makes students more enthusiastic. Remembering also, in the quote Desmita (2012) School-age children have different characteristics from children who are younger. He likes to play, likes to move, likes to work in groups, and likes to feel or do things firsthand. Therefore, teachers should develop a learning process that links games with lessons, then teachers can also make children move or move, children are also taught how to work or study in groups, and teachers provide opportunities to be directly involved in learning.

It can be concluded that this hand washing exercise with soap is one of the effective ways to increase the culture of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello Baru Makassar City because it is able to motivate and increase student enthusiasm through movement and music in the gymnastics. With this hand washing exercise with soap, students move and remember hand washing movements more easily. One of the important things is that the school where the research takes place has implemented hand washing exercises with soap regularly every week. This activity takes place after the research process is completed. This is because the practice of washing hands with soap is considered to be able to improve the culture or habit of washing hands with soap under running water for students. This gymnastics activity can support a healthy lifestyle, one of which is the habit of washing hands with soap under running water.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the results of the research and discussion that have been explained, the following conclusions can be drawn: (1) There is an effect of learning using educational videos on the culture of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello Baru Makassar City with a value of Sig. (2-tailed) of $0.000 <$

0.05 or H₀ is rejected; (2) There is an effect of learning CTPS (Covid-19) gymnastics on the culture of washing hands with soap under running water for students of SD Muhammadiyah IDI Tello Baru Makassar City with a value of Sig. (2-tailed) of 0.000 < 0.05 or H₀ is rejected; and (3) There is a difference between learning using educational videos and learning CTPS gymnastics (Covid-19) on the culture of washing hands with soap under running water for students at SD Muhammadiyah IDI Tello Baru Makassar City with a value of t = 2.150 and Sig. (2-tailed) = 0.038 < 0.05 or H₀ is rejected.

Suggestions

From the conclusions above, the suggestions that can be given are: For teachers in schools, to improve the habit of washing hands with soap in students, they can use the two experiments that have been carried out by researchers. Be it by showing educational videos or CTPS (Covid-19) exercises regularly. However, what is more recommended is to do CTPS (Covid-19) gymnastics. The school facilitates facilities and infrastructure for washing hands with soap at school. And for those who want to do further research, it is recommended to involve other variables that are relevant to this research, using a wider population and sample.

REFERENCES

- Ahmad Sihabudin. 2013. *Komunikasi Antar Budaya satu perspektif multidimensi*, Jakarta : PT Bumi Aksara.
- Ananda, R. and Caesarina, H.M. (2021) 'The Awareness-Raising Program on How to Wash Hands Properly as an Effort to Prevent the Spread of Covid-19 in Tatah Belayung', *Prosiding Bamara-Mu*, 1(1), pp. 526–532.
- Anggreni, D., Safitri, C.A., 2020. Hubungan Pengetahuan Remaja tentang COVID-19 dengan Kepatuhan dalam Menerapkan Protokol Kesehatan di Masa New Normal. *Hosp. Majapahit J. Ilm. Kesehat. Politek. Kesehat. Majapahit Mojokerto* 12,134–142.
- Anggreni, D. and Safitri, C.A. 2020. Hubungan Pengetahuan Remaja tentang COVID-19 dengan Kepatuhan dalam Menerapkan Protokol Kesehatan di Masa New Normal', *Hospital Majapahit (Jurnal Ilmiah Kesehatan Politeknik Kesehatan Majapahit Mojokerto)*, 12(2), pp. 134–142.
- Banu Setyo Adi, 2008. *Meningkatkan kebugaran jasmani anak sd melalui latihan kebugaran aerobik*. PPSD FIP UNY
- Desy, Y. 2020. *Yuk, Lakukan Gerakan 3M Ekstra untuk Cegah Virus Corona*. (<https://desyusnita.com/gerakan-3-m.html>, diakses pada tanggal 08 Februari 2021)

- Dewa Gede Juliawan. 2019. *Pengaruh Pendidikan Kesehatan Dengan Bernyanyi Lagu Cuci Tangan Terhadap Tindakan Mencuci Tangan Anak Prasekolah.* (<http://ejournal.binausadabali.ac.id/index.php/caring/article/view/124/59>, diakses 16 Januari 2021)
- Dinas Kesehatan Bali. 2020. *Ayo Kita Lakukan Cuci Tangan Pakai Sabun (CTPS) Sebagai Salah Satu Upaya Pencegahan Covid19.* (<https://www.diskes.baliprov.go.id/ayokitalakukancuci-tangan-pakai-sabun-ctps-sebagai-salah-satu-upaya-pencegahan-covid19/>, diakses 14 Januari 2021)
- Hartianti, D. 2013. *E-Book Media Pembelajaran.* Universitas Pendidikan Indonesia. ([https://www.slideshare.net/dheanattasha/ebook-media pembelajaran](https://www.slideshare.net/dheanattasha/ebook-media-pembelajaran), diakses pada tanggal 17 Februari 2021)
- Helmi, Z., 2020. *Faktor-Faktor Yang Berhubungan Dengan Perilaku Cuci Tangan Pakai Sabun (CTPS) Pada Siswa SD Negeri 20 Banda Aceh Kecamatan Kuta Alam Banda Aceh Tahun 2019 (PhD Thesis).*
- Sianipar, H. F., & Sijabat, A. (2021). *Demonstrasi Pentingnya Cuci Tangan Pakai Sabun Untuk Mencegah Pertumbuhan Mikroba.* *Jurnal Altifani Penelitian Dan Pengabdian Kepada Masyarakat*, 1(1), 18-21.
- Yudianto, A. 2017. *Penerapan Video Sebagai Media Pembelajaran. Seminar Nasional Pendidikan.*
- Zulhelmi. 2019. *Faktor – faktor yang Berhubungan dengan Perilaku Cuci Tangan Pakai Sabun (CTPS) pada Siswa SD Negeri 20 Banda Aceh Kecamatan Kuta Alam Banda Aceh Tahun 2019.* Banda Aceh : Perpustakaan Universitas Muhammadiyah Aceh.
- Zurrahmi, Z.R., Hardianti, S. and Syahasti, F.M. (2021) 'PKM Pengenalan Senam 6 Langkah Cuci Tangan dan Senam Irama pada Siswa Kelas 5 dan 6 di SDN 011 Bukit Kratai Rumbio Jaya', *COVIT (Community Service of Health)*, 1(2), pp. 35–39.