

Differences in Knowledge Before and After Instructions on Washing Hands During the Covid-19 Pandemic in the Social Services of the Elderly Management Year 2020

Nur Masdalifah

Efarina University, Simalungun, Indonesia

Article Info

Article history:

Received December 12, 2021

Revised December 22, 2021

Accepted January 06, 2022

Corresponding Author:

Nur Masdalifah

Efarina University,

Simalungun, Indonesia

Email:

nurmasdalifah@gmail.com

ABSTRACT

COVID-19 or Coronavirus Disease 2019 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). COVID-19 is thought to spread between people through respiratory droplets produced when coughing and splashes from someone who is sneezing and obtained from contaminated surfaces that then accidentally touch someone's face. One of the groups most vulnerable to being infected with COVID-19 is the elderly (elderly) aged 60 years and over. One way to prevent COVID-19 is to wash your hands. Hand washing is an inexpensive and easy routine, is important in infection control procedures, and is the best method of preventing the transmission of microorganisms. This study examines the differences in knowledge before and after counseling about hand washing during the COVID-19 pandemic. The research design is a One-Group Pretest-Posttest Design study. This is a form of Pre-Experimental Design. The population and sample in this study were 30 elderly people. The results of the pre-test get an average value of 2.37 while the results of the post-test get an average value of 9.67. Based on the SPSS test that has been carried out ($P = 0.000; = 0.05$) H_a (alternative hypothesis) is accepted because the p-value is 0.005 so H_0 is rejected with a price level of significance (α) = 5% so that the alternative hypothesis is accepted. Thus the conclusion of this study is that there is a difference in knowledge before and after counseling about hand washing during the COVID-19 pandemic at the Pematangsiantar Elderly Social Service.

Keywords:

COVID-19, Elderly, Washing hands, Counseling

This article is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).



1. INTRODUCTION

COVID-19 or better known as the corona virus is the most discussed topic in all countries in the world today. How not, the presence of the COVID-19 pandemic has changed the lifestyle of almost everyone, whether directly or indirectly affected. Lifestyles that have changed drastically and are quite extreme include social interactions that are suddenly restricted due to the implementation of *social distancing*; limited physical movement due to *physical distancing rules* and healthy lifestyles such as washing hands properly with antiseptic soap; cleaning the body and other objects with disinfectants and so on which was not used to be done [30]. COVID-19 is thought to spread between people through respiratory droplets produced when coughing and splashes from someone who is sneezing and obtained from contaminated surfaces that then accidentally touch someone's face. COVID-19 is highly contagious when the sufferer experiences symptoms, although it is possible that the spread occurs before symptoms appear (Wikipedia Coronavirus Pandemic, 2020). One way to prevent the spread of COVID-19 is to maintain hand hygiene. In daily activities, hands are often contaminated with microbes, so hands can be an intermediary for the entry of microbes into the body. The simplest and most common way to maintain hand hygiene is to wash hands with soap [6]. Hand washing is one of the sanitation actions by cleaning hands and fingers using water or other liquids by humans with the aim of being clean. Hand washing behavior is an easy matter.

Formulation of the problem

Based on the background description that became the formulation of the problem in this study, how was the difference in knowledge before and after counseling about hand washing during the *COVID-19 pandemic* at the Pematangsiantar Elderly Social Service in 2020?

Theoretical Foundation

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by *Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)*. *SARS-CoV-2* is a new type of coronavirus that has never been previously identified in humans. There are at least two types of *coronavirus* that are known to cause illness that can cause severe symptoms such as *Middle East Respiratory Syndrome (MERS)* and *Severe Acute Respiratory Syndrome (SARS)*. Common signs and symptoms of *COVID-19 infection* include symptoms of acute respiratory distress such as fever, cough and shortness of breath. The average incubation period is 5-6 days with the longest incubation period being 14 days. In severe cases of *COVID-19* it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death.

On December 31, 2019, the WHO China *Country Office* reported a case of pneumonia of unknown etiology in Wuhan City, Hubei Province, China. On January 7, 2020, China identified the case as a new type of coronavirus. On January 30, 2020, WHO declared the incident a *Public Health Emergency of International Concern (PHEIC)* and on March 11, 2020, WHO had declared *COVID-19* a pandemic. With regard to policies for controlling infectious disease outbreaks, Indonesia has Law Number 4 of 1984 concerning Outbreaks of Infectious Diseases, Government Regulation Number 40 of 1991 concerning Control of Outbreaks of Infectious Diseases, and Regulation of the Minister of Health Number 1501/Menkes/Per/X/2010 concerning Certain Types of Infectious Diseases That Can Cause Outbreaks and Countermeasures. For this reason, in the context of efforts to prevent the early *COVID-19 outbreak*, the Minister of Health has issued a Decree of the Minister of Health Number HK.01.07/MENKES/104/2020 concerning the Determination of Novel Coronavirus Infection (2019-nCoV Infection) as a Type of Disease That Can Cause Outbreaks and Efforts to Overcome it. The determination was based on the consideration that the Novel Coronavirus Infection (2019-nCoV infection) has been declared by WHO as a *Public Health Emergency of International Concern (PHEIC)*. In addition, the widespread spread of *COVID-19* to various countries with the risk of spreading to Indonesia related to population mobility, requires efforts to overcome the disease.

2. METHOD

The research design is a *One-Group Pretest-Posttest Design study*. *One-Group Pretest-Posttest Design* is a form of *Pre-Experimental Design*. It is said to be *Pre-Experimental Design* because there are still external variables that also influence the formation of the dependent variable. So the experimental results which are the dependent variable are not solely influenced by the independent variables. This happens because there is no control variable, and the sample is not chosen at random. In this design there is a pretest, before being given treatment. Thus the results of the treatment can be known more accurately, because it can be compared with the situation before being given treatment [33]. Based on Sugiyono, the research design is as follows:

O1 = *Pre-test score* (before being given counseling)

O2 = *Post-test score* (after being given counseling)

O1 is a measurement of initial knowledge (*pre-test*) which is carried out before being given counseling. (X) is a lecture method related to *COVID-19 prevention*, namely by counseling about hand washing, while O2 is a knowledge measurement (*post-test*) which is carried out after being given counseling. After knowing the results of the *pre-test* and *post-test scores* before and after counseling about hand washing during the *COVID-19 pandemic* at the Pematangsiantar Elderly Social Service in 2020, it can be seen the difference in knowledge scores between before and after being given counseling. The place of this research was carried out at the UPT Social Services for the Deaf, Speech and Elderly Social Service in Pematangsiantar which is located at Jalan Sisingamangaraja No. 68, Pematangsiantar, North Sumatra. This study uses two types of data, namely primary data and secondary data. The primary data of this study were obtained from interviews with the elderly and direct observations in the field with the help of research instruments in the form of questionnaires. The primary data of this research are respondent characteristic data, *pre-test* and *post-test result data* as well as to see the level of knowledge. While secondary data obtained from other sources and references.

3. RESULTS AND DISCUSSION

The location of this research was carried out at UPT. Social Services for the Deaf, Speech and Elderly Social Service Office in Pematangsiantar which is located at Jalan Sisingamangaraja No. 68, Pematangsiantar, North Sumatra. The Elderly Social Service has a building area of 65,500 M², which has facilities including male and female dormitory rooms for speech deaf and the elderly, dining room, office, hall, assessment room, study room, sewing skills room for boys and girls, beauty saloon, carpentry, sports facilities, polyclinic, library room, official residence, mess, land for gardening activities for the elderly.

The number of officers at the Social Service for the Elderly is 26 people (male and female) consisting of the Head, Head of Sub Division of Administration, Functional Social Workers, Staff and 10 honorary staff (instructors, security guards, cooks, cleaners). **Differences in Knowledge Before and After Counseling About Hand Washing During the COVID-19 Pandemic at the Pematangsiantar Elderly Social Service in 2020**

According to [20], knowledge is a person's ability to re-express what he knows in the form of evidence of answers either verbally or in writing which is the stimulation of questions. Knowledge or cognitive is a very important domain in shaping one's actions (*overt behavior*). Measurement of knowledge can be done by interviews or questionnaires that ask about the content of the material to be measured from the research subject or respondent [21]. Knowledge *is* the result of knowing that occurs after sensing a certain object. Sensing occurs through the human senses, namely the senses of sight, hearing, touch, smell, and taste. Knowledge or cognitive domain is a very important dominant factor in shaping a person's actions, because from the results of research it turns out that behavior based on knowledge will be more lasting than behavior that is not based on knowledge [22].

The knowledge referred to in this study is knowledge before and after counseling about hand washing during the *COVID-19 pandemic* . Knowledge before counseling is what respondents know about washing hands during the *COVID-19 pandemic* which is assessed based on the ability to correctly answer questions on the questionnaire before counseling. Based on the results of the *pre-test questionnaire* with a rating scale if answering Yes = 1 and No = 0 it is known that the 30 elderly respondents have an average knowledge score before being given counseling is 2.3667 rounded to 2.37 . This is obtained from the total number of *pre-test data* divided by 30 respondents. It can be seen that the answers of the elderly are still relatively low because they have not received more information about washing their hands during the *COVID-19 pandemic* .

Based on *the post-test questionnaires* that have been distributed with a rating scale if they answer Yes = 1 and No = 0, it is known that the 30 elderly respondents have an average knowledge score after being given counseling is 9.6667 rounded up to 9.67 . This is obtained from the total number of *post-test data* divided by 30 respondents. It can be seen that the answers of the elderly have greatly increased after the counseling regarding hand washing during the *COVID-19 pandemic* . This increase in value indicates a difference in the average score of knowledge about knowledge before and knowledge after counseling about hand washing during the *COVID-19 pandemic* . Based on the SPSS test that has been carried out ($P = 0.000; = 0.05$) H_a (alternative hypothesis) is accepted because the *p-value* is 0.005 so H_0 is rejected with a price *level of significance* (α) = 5% so that the alternative hypothesis is accepted. Thus the conclusion of this study is that there is a difference in knowledge before and after counseling about hand washing during the *COVID-19 pandemic* at the Pematangsiantar Elderly Social Service.

This result is in accordance with previous research conducted by Istiqomah in her research on Healthy Behavior of Hand Washing with Soap (CTPS), which is one of the Clean and Healthy Life Behaviors (PHBS), which based on statistical tests yielded a *p-value* of 0.000 0.005. These results mean that there is an effect of handwashing counseling with poster media on students' handwashing practices at SDN Sandang Harjo Minggir. In the research of Mohamad et al., clean and healthy living behavior (PHBS) such as washing hands with soap (CCTPS) and throwing garbage in its place (BSPT) can be one way to improve public health status. Based on the results of the study obtained through the results of the pretest and post-test showing a significant level value of $p = 0.000 < 0.05$, 63, it was concluded that there was a difference between the knowledge of PHBS counseling respondents about CTPS before counseling and respondents' knowledge about PHBS cultivators about CTPS after counseling in Panti Asih Pakem Special School and Rela Bhakti I Special School in Gamping, Sleman. The same is true for the current research on the elderly at the Pematangsiantar Social Service for the Elderly. The results of the study resulted in a *p-value* of 0.005 so that the results had a statistically significant relationship.

4. CONCLUSION

Based on the results of the research on differences in knowledge before and after counseling about hand washing during the *COVID-19 pandemic* at the social service for the elderly in Pematangsiantar in 2020, it can be concluded that:

1. The value of knowledge before counseling about hand washing during the *COVID-19 pandemic* at the social service for the elderly in Pematangsiantar in 2020 was 2.3667 rounded up to 2.37 .
2. There is a difference in knowledge after counseling about hand washing during the *COVID-19 pandemic at the social service for the elderly in Pematangsiantar in 2020* , which was 9.6667 rounded up to 9.67 .
3. There is a difference in knowledge before and after counseling about hand washing during the *COVID-19 pandemic* .

ACKNOWLEDGEMENTS

Author thank you to all the teams who have completed this article.

REFERENCES

- [1] Al-zahrani, SHM, Baghdadi, AM, 2012, Evaluation of the efficiency of Non alcoholic-Hand Gel Sanitizers products as an antibacterial, *Nature and Science.*, 10(6): 15-20
- [2] Azizah, LM, 2011, *Nursing for the Elderly*, First Edition., Graha Ilmu, Yogyakarta
- [3] Bandiah, Siti., 2015. *Elderly and Gerontic Care*, Nuha Medica, Yogyakarta
- [4] Burton, M., Cobb E., Donachie, P., Judah, G., Curtis, V., Schmidt W-P., 2011, The effect of handwashing with water or soap on bacterial contamination of hands, *Int. J. Environ Res Public Health.*, 8(1): 97-104
- [5] CDC.,2020.,CoronaVirus.,Tersediadalam<https://www.cdc.gov/coronavirus/types.html>
- [6] Chairil, Hardiana., 2017, Gambaran Perilaku Personal Hygiene Pada Lansia Di UPT PSTW Khusnul Khotimah Pekanbaru, *Jurnal Photon.*, Vol. 8 No. 1
- [7] Doremalen N, Bushmaker T, Morris DH, Holbrook MG, Gamble A, Williamson BN, et al. 2020. Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1. *N Engl J Med.* 2020 Apr 16;382(16):1564-1567. doi: 10.1056/NEJMc2004973. Epub 2020 Mar 17.
- [8] Du Z, Xu X, Wu Y, Wang L, Cowling BJ, Meyers LA. Serial interval of COVID-19 among publicly reported confirmed cases. *Emerging infectious diseases.* 2020 ;26 (6).
- [9] Eny, R., A., Prihastuti., 2019, Healthy living community movement (Germas) Washing hands using soap and running water as an effort to implement clean and healthy living behavior (PHBS) from an early age, Celebes Abdimas: *Journal of Community Service*, Vol I No. 1 Available at: <http://journal.lldikti9.id/CER/index> (Accessed on August 1, 2020)
- [10] Esse, Puji, P., 2018, Counseling on Hand Washing with Soap (CTPS) in Sinrijala Village RT 01/ RW 02 Makassar, *GESIT Journal*, Vol. I No. 1
- [11] Humayda, Lisdayanti., 2010, Description of Handwashing Behavior in Food Handlers at the Nutrition Installation of the Sekarwangi Regional General Hospital, Cibadak, Sukabumi Regency in 2009. Thesis. Syarif Hidayatullah State Islamic University, Jakarta
- [12] 67
- [13] Istiqomah., 2018, The Effect of Handwashing Counseling Using Poster Media on Handwashing Practices in Students at SDN Sendangharjo Minggir Sleman, Naska Publication. Aisyiyah University, Yogyakarta
- [14] Indonesian Ministry of Health, 2011, Guidelines for infection prevention and control in hospitals and other health facilities, Jakarta
- [15] Li, Q. et al. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *N. Engl. J. Med.* Available at: <https://doi.org/10.1056/NEJMoa2001316> (2020).
- [16] Monica, Saptiningsih, et al., 2013, Factors Associated with Handwashing Behavior in Elementary School Children 03 Kertajaya Padalarang
- [17] Mohamad, MF, Lucky Herawati., 2014, The Effect of Counseling on Increasing Motivation and Actions in Washing Hands and Disposing of Garbage in Children with Mental Requirements in Sleman
- [18] Mubarak, WI, 2011, *Health Promotion for Midwifery*, Salemba Medika, Jakarta
- [19] Muh Fajaruddin, N., 2018, The Effect of CTPS Counseling on Increasing Knowledge of SDN 169 Bonto Parang Students, Jeneponto Regency, *National Journal of Health Sciences (JNIK)* Volume 1. Issue 2 2018 ISSN: 2621-6507
- [20] Notoatmodjo, Soekidjo., 2010, *Health Promotion and Applications*, Rhineka Cipta, Jakarta
- [21] Notoatmodjo, Soekidjo., 2012, *Public Health Sciences, Basic Principles*, PT Asdi Mahasatya, Jakarta
- [22] Notoatmodjo, Soekidjo., 2012, *Health Promotion and Health Behavior*, PT. Rineka Cipta, Jakarta
- [23] Nugroho., 2012, *Gerontic and Geriatric Nursing*, EGC, Jakarta
- [24] Onder G, Rezza G, Brusaferro S. Case-Fatality Rate and Characteristics of Patients Dying in Relation to COVID-19 in Italy. *JAMA.* Published online March 23, 2020. doi:10.1001/jama.2020.4683
- [25] 2019-2020 coronavirus pandemic. Available at: https://id.wikipedia.org/wiki/Pandemi_koronavirus_2019%E2%80%932020 (Accessed 1 August 2020)
- [26] 68
- [27] Partini., 2011, *Psychology of the elderly*, UGM Press, Yogyakarta
- [28] Guidelines for the Prevention and Control of Corona Virus Disease (COVID-19) of the Indonesian Ministry of Health, July 2020, Available at: <https://covid19.go.id/p/protokol/pedoman-pentahanan-dan-penkontrolan-coronavirus-disease-covid-19-th-fifth> (accessed, 23 august 2020)
- [29] Proverawati, A., and Eni, R., 2012, *Clean and Healthy Lifestyle (PHBS)*, Nuha Medika, Yogyakarta
- [30] Putra, YM, 2020, from [Republika.co.id](https://republika.co.id) Available at: <https://republika.co.id/berita/q84alz284/kecemasan-hasil-covid19-form-adaptasinormal> (Accessed on August 1, 2020)
- [31] Riyanto., 2013, *Theory & Measurement of Knowledge of Human Attitudes and Behavior*, Nuha Medika, Yogyakarta
- [32] Suryani, Elvi & Harahap, Maryam & Siregar, Rahmah. (2022). The Relationship of Learning of ASKEB II Course Practicum Laboratory With the Achievement of Level II Students' Competence. *International Journal of Public Health Excellence (IJPHE)*. 1. 105-109. 10.55299/ijphe.v1i2.41.

- [33] Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R., 2020, Covid-19 infection: origin, transmission, and characteristics of human coronaviruses. Available at: <https://doi.org/10.1016/j.jare.2020.03.005>
- [34] Siregar, Rahmah. (2022). Factors Which Influence Incident Hypertension on Pre-Elderly. *International Journal of Public Health Excellence (IJPHE)*. 1. 117-121. 10.55299/ijphe.v1i2.66.
- [35] Sugiyono., 2017, *Quantitative, Qualitative, and R&D Research Methods*, Alfabeta, Bandung
- [36] Siregar, Rahmah & Yusuf, Susi & Fernaldy, Devrich. (2022). The Relationship between Physical Conditions of the House and the Incidence of Tuberculosis. *International Journal of Public Health Excellence (IJPHE)*. 1. 01-05. 10.55299/ijphe.v1i1.2.
- [37] Siregar, Rahmah. (2021). Factors Related to Low Motivation of Motivation to Carry Baby / Baby to Posyandu. *International Journal of Multidisciplinary Research and Analysis*. 04. 10.47191/ijmra/v4-i6-11.
- [38] World Health Organization (WHO). 2009. *WHO Guidelines on Hand Hygiene in Health Care (Advanced Draft): A Summary*. Switzerland: WHO Press.
- [39] Wulan, Wita., 2010. *Factors Affecting Health Behavior of Pregnant Women at RSU Dr. Pirngadi Medan*. Thesis. University of Northern Sumatra
- [40] Wu Z, McGoogan JM. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. *JAMA*. 2020 ;323 (13):1239–1242. doi:10.1001/jama.2020.2648