

## DIFFERENCES IN LEVELS OF KNOWLEDGE AND BEHAVIOR OF COVID-19 PREVENTION BETWEEN MEDICAL PERSONNEL AT CUT NYAK DHIEH GENERAL HOSPITAL AND HARAPAN SEHAT HOSPITAL

Yennita<sup>1</sup>, Imran<sup>2</sup>, Mudatsir<sup>3</sup>

<sup>1</sup>Disaster Science Masters Study Program

<sup>2</sup>Department of Neurology, Faculty of Medicine, Universitas Syiah Kuala, Banda Aceh, Indonesia

<sup>3</sup>Faculty of Medicine, Universitas Syiah Kuala, Banda Aceh, Indonesia

Corresponding E-mail: [yennita0204@gmail.com](mailto:yennita0204@gmail.com)

### Abstract

*The role of health workers is the most important part in tackling the Covid-19 pandemic. All coping policies affect the services provided in hospitals so that they have a negative impact on the health care sector. To reduce the transmission rate, good knowledge and behavior is needed for health workers. The purpose of this research is to know the difference level of knowledge and behavior of Covid-19 prevention among medical staff at Cut Nyak Dhien Hospital and Harapan Sehat Hospital. The type of method in this research is quantitative. The data collection technique used a questionnaire with a total sampling technique and the number of samples was 128 people. The analysis used is the chi square test and Independent Sample T-Test. The results showed that there was a relationship between the level of knowledge and behavior of Covid-19 prevention at Cut Nyak dhien Hospital and Harapan Sehat Hospital with scores  $P$ -value = 0.068 and 0.001 ( $p < 0.05$ ) while the Independent Sample T-Test showed that there was a significant difference between the knowledge of health workers at Cut Nyak Dhien Hospital and Harapan Sehat Hospital with a  $p$  value  $p$ -value = (0.039)  $< 0.05$  while for prevention behavior the value is  $p$ -value = (0.009)  $< 0.05$  conclusion: There are differences in the level of knowledge and preventive behavior of medical personnel in the hospital.*

**Keywords:** *Knowledge, health workers, behavior to prevent COVID-19.*

### 1. INTRODUCTION

An epidemic is an outbreak of an infectious disease whose number increases in a certain community or area and causes havoc, for example malaria, tuberculosis, smallpox, cholera, etc., which are caused by bacteria, viruses, and others (Law No. 4 of 1984). The application of isolation rooms is quite effective in terms of reducing disease transmission rates (Kharroubi et al., 2020). The Covid-19 outbreak began in China, Wuhan (Yuliana, 2020). The rapid transmission of Covid-19 has a very broad impact on all people from countries around the world (Ian et al., 2020). The disease quickly spread within the country to other parts of China (Dong et al., 2020). This outbreak can cause death, so prevention is very necessary in this pandemic (Sohrabi et al. Corona virus or known as Covid-19 is also an infectious disease caused by a virus. The method of handling is the same as handling other infectious diseases by wearing PPE for those who work in hospitals (Apriluana et al., 2016), waste sorting, linen management, washing hands using running water, not doing activities (Lubis, 2021), processing of tools, environmental control (standard precautions according to PPI) The health team in serving Covid-19 patients must practice systematically including using and removing PPE while in the isolation room and procedure room, if not used properly it can cause skin exposure, needle sticks, or torn PPE. The doffing process is being careful in providing services when there is a high risk (Boskoski, 2020).

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Covid-19 is spreading very quickly from day to day, including in Aceh. Currently the number of cases in Aceh on January 29 2023 has reached 44885 people suffering from Covid-19 consisting of 42603 people who recovered and 2269 people who died. this is based on the lack of public awareness of implementing the health protocols recommended by the Government (Aceh responds to Covid-19). From the data obtained on March 31, 2023, there were 2087 medical workers in Indonesia who were exposed to Covid-19, while the Aceh Darussalam region was the 13th level out of 35 provinces with a total of 20 medical workers who died. The decline in the utilization of health services is influenced by several factors such as demographic factors, policies and psychological factors from both patients and health workers. things that make the immune system weak so that it is vulnerable to Covid-19 so that it is at high risk and can cause death. The availability of personal protective equipment (PPE) that protects against exposure to the corona virus also contributes to the death of health workers (Ari fahrizal syam 2020).

Patient knowledge about Covid-19 aims to know about the disease, understand the disease, how to prevent it, and treat it (Mona, 2020). Collaboration between family or those closest to them is very important to increase preparedness and prevention behavior for COVID-19 (Volkin, 2020). In addition, health workers are also a very important source of social support in dealing with the pandemic (Sarafino & Smith, 2014). Before the pandemic occurred, the Cut Nyak Dhien Hospital and Harapan Sehat Hospital had been accredited and had special isolation rooms such as patients with respiratory problems, skin and patients with weak immunity with the same handlers as the infection prevention and control (PPI) principles in hospitals according to the Ministry of Health. No. 27 of 2017 and has a policy for handling Emerging Diseases patients.

Previous studies discussed more about differences in the knowledge and attitudes of nurses in caring for patients in the PINERE room at Zainal Abidin Hospital and Meuraxa Hospital in Banda Aceh and case studies that focused on how the relationship between knowledge and behavior of Covid-19 prevention for health workers in hospitals. All existing case studies are always guided by PPI principles according to the Ministry of Health. Based on this background, there is a difference between the level of knowledge and behavior of preventing Covid-19 at Cut Nyak Dien Hospital and Harapan Sehat Hospital.

## **2. IMPLEMENTATION METHOD**

This research used is a quantitative method. The sample size was 64 people at the Harapan Sehat Private Hospital, a total of 64 people at the Cut NyakDhien Hospital. Data collection techniques using a questionnaire. Data analysis used sciquare test and independent sample t test.

## **3. RESULTS AND DISCUSSION**

### **3.1 Research results**

#### **1. Demographic Data**

The distribution of respondent demographic data including age, gender, education at Harapan Sehat Hospital and Cut Nyak Dien Meulaboh Hospital is presented in table 4.1.

**Table 4.1 Frequency distribution of demographic data for respondents at Cut Nyak Dhien Hospital and Harapan Sehat General Hospital in West Aceh district in 2021 (n=64)**

Age	Cut Nyak Dhien Hospital		Healthy Hope	
	F	%	f	%
≤ 25 Years	3	4.7	10	15.6
26 Years - 35 Years	46	71.9	29	45.3
36 Years - 45 Years	13	20.	17	26.6
46 Years - 55 Years	2	3.1	8	12.5
<b>Gender</b>				
Man	29	45.3	33	51.6
Woman	35	54.7	31	48.4
<b>Last education</b>				
DIII	41	64.1	37	57.8
S1	22	34.4	16	25.0
S2	1	1.6	10	15.6
S3	-	-	1	1.6

Source: Primary Data, 2022

Based on the table above, it shows that the highest age percentage from the two hospitals is in early adulthood (26-35 years) with a percentage of 59%. This research is in accordance with the Ministry of Health of the Republic of Indonesia 2003 which states that the productive age is 15-54 years. The results showed that the sex of the health workers at Cut Nyak Dhien Hospital was more dominant than the female sex (54.6%). This indicated that the medical staff were female. Meanwhile, public hospitals with healthy expectations for male sex (51.6%) have better health workers because they require strong physical strength in treating Covid-19 patients. The results of this study are supported by Hungu (2016) in the fact that in the field many field workers are generally dominated by men while in the office section are generally dominated by women.

While the education of health workers at Cut Nyak Dhien Hospital was highest at the D3 Health level, there were 41 respondents with a percentage of 64%. Meanwhile, the Harapan Sehat Hospital also had the highest education level, D3 Health, with 37 respondents with a percentage of 57% for the Cut Nyak Dhien Hospital and 41 respondents with a percentage of 64% for the Harapan Sehat Hospital. The results of this research are supported by Law No. 20 of 2003 that the type of professional education is the highest education to prepare students for jobs with certain skill requirements according to specifications.

## 2. The relationship between knowledge of health workers at Cut Nyak Dhien Hospital and Harapan Sehat Hospital

Based on the p-valuevalueBetween the two hospitals there is a difference in average values which can be seen in the table below

Variable	RSU CND RSU HS		N
	F value	F value	
Knowledge Hub And preventive behavior	0,,039	0.000	128

Based on the output table above on the chi square test, it is known that the Asymp.Sig (2-sided) value on the Pearson chi square test is 0.039. Because the Asymp.Sig (2-sided) value is  $0.039 < 0.05$ , based on the basis for making the decision above, it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted, which means that there is relationship between knowledge and behavior of medical staff at Cut Nyak Dhien Hospital.

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Based on the output table above on the chi square test, it is known that the Asymp.Sig (2-sided) value on the Pearson chi square test is 0.000. Because the Asymp.Sig (2-sided) value is  $0.000 < 0.05$ , based on the basis for the decision above, it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted, which means that there is relationship between knowledge and behavior of medical personnel at Harapan Sehat Hospital. This is supported by research conducted by Annisa with the title "Relationship of Online Learning Systems in the Covid-19 Era to the Mental Health of Elementary School Teachers: Chi-Square Test and Dependency Degree". The results of this study indicate that the teacher's ability to use technology is related to mental health with a dependency level of 21.875% and the effectiveness of online learning is also related to the mental health of teachers with dependency levels 37.5% (Annisa et al., 2020)

**3. Differences in Knowledge of Medical Staff at Cut Nyak Dhien Hospital and Harapan Sehat Hospital**

From the questionnaire statement for the level of knowledge of Cut Nyak Dhien Hospital, the highest total score was 30 and the lowest total score was 8 so that the average value obtained was 77.6%, while the Harapan Sehat Hospital had the highest score of 30 and the lowest score was 0 so that the average value -the average obtained is 86.3% This value can be interpreted that the average knowledge of medical staff at Harapan Sehat Hospital is higher when compared to the knowledge of medical staff at Cut Nyak Dhien Hospital.

	Hospital	Means	Q	P-Value
Knowledge	Cut Nyak Dien Hospital	77.6 %	2.1	0.039
	Healthy Hope Hospital	86.3 %		

The value is determined based on the Independent T-Test test

Based on the results of the independent sample T-Test at the hope of a healthy hospital, the value of  $T_{count} = 2,083$  and the sig. (2-tailed) is 0.039. The value of the distribution of  $T_{table}$  seen based on  $df = 126$  with a significant level of  $\alpha = 0.05$  is 1.657. because the value of  $T_{count} > T_{table}$  ( $2.083 > 1.657$ ) and the sig. (2-tailed)  $0.039 < 0.05$ , so there is a difference between the level of knowledge of health workers in preventing Covid-19 at Cut Nyak Dhien Hospital and Harapan Sehat Hospital. This research is in line with research conducted by Rauzah entitled "Knowledge and Attitudes of Nurses in Caring for Covid-19 Patients at Banda Aceh City Hospital: A Comparative Study". Data analysis used Independent sample t-test. The results showed that there was no difference in nurses' knowledge of caring for COVID-19 patients ( $p\text{-value } 0.554 > 0.05$ ) and there was no difference in nurses' attitudes in caring for COVID-19 patients ( $p\text{-value } 0.163 > 0.05$ ) in both the Pinere room (Rauzah et al., 2022).

The higher the level of one's education will affect the level of mastery of the material that must be mastered. As for the purpose, the very good knowledge possessed by health workers will influence the actions or behavior that will be applied to other people, so that services can run according to predetermined service standards (Bayu Seno Aji, 2021). The results of this study are in line with Sitrisno's theory (2014) that knowledge is information that a person has in a particular field. Knowledge is also a complex competency and is a very important domain in shaping one's actions (overt behavior). From the knowledge level questionnaire there are several indicators consisting of understanding, prevention, mode of transmission, symptoms, causes. From the graph in statement no. 22 (unfereble) with prevention indicators with a percentage difference of 19% where patients who experience severe illness with respiratory problems do not need to be treated in a special care room (isolation).

This research is in line with (akbar shiddiq 2020) that most people, around 80% recover without needing special treatment, but some people who have co-morbidities experience severe symptoms must need special treatment. Statement no 15 (foreuble) with an indicator of the mode of transmission with a percentage difference of 15% where if we travel and have direct contact with someone who has symptoms, it is possible to be infected and must be quarantined. The results of this study are in line with (Dalinama Telaumbanua 2020) that the government in order to take action to overcome and prevent threats that are easily transmitted by means of quarantine.

#### 4. Differences in the Behavior of Medical Personnel at Cut Nyak Dhien Hospital and Harapan Sehat Hospital

From the questionnaire statement for the level of prevention behavior at Cut Nyak Dhien Hospital, the highest score was 119 and the lowest score was 51 so that the average value obtained was 78.5%, while the Harapan Sehat Hospital had the highest score of 120 and the lowest score of 55 so that the average score -the average obtained is 84.3% This value can be interpreted that the average behavior of medical staff at Harapan Sehat Hospital is higher when compared to the behavior of medical staff at Cut Nyak Dhien Hospital,

	Hospital	Means	t	<i>P-Value</i>
Behavior	Cut Nyak Dien Hospital	78.5 %	2.6	0.009
	Healthy Hope Hospital	84.3 %		

The value is determined based on the Independent T-Test test

Based on the results of the independent sample T-Test at the healthy hope hospital, the value of  $T_{count} = 2.642$  and the sig. (2-tailed) has a value of 0.009. The distribution value of  $T_{table}$  seen based on  $df = 126$  with a significant level of  $\alpha = 0.05$  is 1.657. because the value of  $T_{count} > T_{table}$  ( $2.642 > 1.657$ ) and the sig. (2-tailed)  $0.009 < 0.05$ , there is a difference between the behavior of COVID-19 prevention at Cut NyakDhien Hospital and Harapan Sehat Hospital. This research is in line with what was conducted by Nadia Octariani Putri, entitled the difference in knowledge and attitudes of being infected with Covid-19 between rural and urban communities. Data analysis using the independent simple T test showed that there was a difference between the knowledge of rural and urban communities in efforts to deal with Covid-19 ( $p \text{ value} = 0.017 < 0.05$ ) and there was no difference between the attitudes of rural and urban communities in handling Covid-19 ( $p \text{ value} 0.8799 > 0.05$ ).

Good behavior can be an effort to prevent transmission of COVID-19 (Audria, 2019). Health behavior is influenced by many factors, including knowledge, perceptions, emotions, motivation, and the environment (Rahayu, 2014). Someone who already knows about certain information, then he will be able to determine and make a decision how he should deal with it. In other words, when a person has information about COVID-19, he will be able to determine how he should behave towards COVID-19 (Ahmadi, 2013). This is in line with the theory of infection prevention and control (PPI 2017) which is an effort used to reduce, prevent and control the spread of infectious diseases that occur in health care facilities.

From the preventive behavior questionnaire there are several indicators consisting of hand hygiene, PPE, environmental control, linen handling, waste management, safe injection practices, tool processing, respiratory hygiene. From the graph in statement no.11 with environmental control indicators with a percentage difference of 8% where overall environmental cleaning must use detergent and use 0.05% chlorine. This is in line with WHO guidelines for cleaning and disinfecting environmental surfaces in the context of COVID-19, namely the principle of environmental cleaning and disinfection is an important first step in the disinfection process.

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Cleaning with water, soap (neutral detergent) and certain forms of mechanism (brushing or scrubbing, cleaning and reducing dust, debris and other organic materials such as blood, secretions and excretions but do not kill microorganisms. Meanwhile, alcohol and 0.05% chlorine solution are most stable for more than 30 days after cleaning to kill any remaining microorganisms. The results of this study are in accordance with (Elisabeth 2022) that during the Covid-19 pandemic it was necessary to disinfect surfaces to prevent further transmission.

From the graph in statement 14 with the implementation of linen with a percentage difference of 9% where the place for linen is separated according to its type. The results of this study are in line with (farina gustina 2021) that the management of hospital X linen is in accordance with the guidelines and transportation, sorting and placement of linen is carried out according to its type.

#### 4. CONCLUSION

1. there is a relationship between knowledge and behavior to prevent Covid-19 in hospitals, this means that the education level of all health workers is specifically educated in the health sector so that actions are in accordance with the education they receive.
2. there are differences in the level of knowledge of medical staff in placing patients in isolation rooms and in the quarantine process
3. There are differences in the level of preventive behavior of medical personnel in the process of cleaning surface disinfection and handling of linen after patients go home.

#### REFERENCES

- Aceh tanggap COVID-19. 2023 <https://covid19.acehprov.go.id/>
- Aji, B. S., Wulandari, F., Yusriyah, G., Annisa, I. R., & Widhy, L. R. (2021). Perilaku Penerapan Protokol Kesehatan Covid-19. 1(2), 112–124.
- Amelia, A. R., Ismayanti, A., & Rusydi, A. R. 2020. “Pengelolaan Limbah Medis Padat Di Rumah Sakit Umum Daerah Mamuju Provinsi Sulawesi Barat.” *Window of Health: Jurnal Kesehatan*. 3, 1. Fakultas Kesehatan Masyarakat Universitas Muslim Indonesia, Makassar.
- Apriluana, Gladys, Khairiyati, Laily, Setyaningrum, Ratna. (2016). Hubungan Antara Usia, Jenis Kelamin, Lama Kerja, Pengetahuan, Sikap dan Ketersediaan Alat Pelindung Diri (APD) dengan perilaku Penggunaan APD Pada Tenaga Kesehatan. *Jurnal Publikasi Kesehatan Masyarakat Indonesia*. 3(3), 1-7
- Bedford, J., Enria, D., Giesecke, J., Heymann, D. L., Ihekweazu, C., Kobinger, G., Lane, H. C., Memish, Z., Oh, M. don, Sall, A. A., Schuchat, A., Ungchusak, K., & Wieler, L. H. (2020). COVID-19: towards controlling of a pandemic. *The Lancet*, 395(10229), 1015–1018. [https://doi.org/10.1016/S0140-6736\(20\)30673-5](https://doi.org/10.1016/S0140-6736(20)30673-5)
- Buana, D. R. (2020). Analisis Perilaku Masyarakat Indonesia dalam Menghadapi Pandemi Virus Corona (Covid-19) dan Kiat Menjaga Kesejahteraan Jiwa. National Research Tomsk State University, Universitas Mercu Buana
- Burhan, E., Isbaniah, F. and Sutanto, A., dkk. 2020. Pneumonia Covid-19 Diagnosis & Penatalaksanaan di Indonesia. *Perhimpunan Dokter Paru Indonesia (PDPI)*, [online] Available at: [https://www.persi.or.id/images/2020/data/buku\\_pneumonia\\_covid19.pdf](https://www.persi.or.id/images/2020/data/buku_pneumonia_covid19.pdf)

- Cong W, Poudel AN, Aihusein N, Wang H, Yao G, Lambert H. Antimicrobial use in covid-19 patients in the first phase of the sars-cov-2 pandemic: A scoping review. *Antibiotics*. 2021;10(6):1–14.
- Dong Y, Mo X, Hu Y, et al. (2020). Epidemiology of Covid-19 Among Children in China. *American Academy of Pediatrics*, DOI:10.1542/peds.2020- 0702
- Hairunisa, N., & Amalia, H. (2020). Penyakit virus corona baru 2019 (COVID-19). *Jurnal Biomedika dan Kesehatan*, 3(2), 90-100.
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Gu, X. 2020. Clinical Features of Patients Infected with 2019 Novel Coronavirus in Wuhan, China. *Lancet*. 395, 497–506.
- Ian, H., Liu, Y., Li, Y., et al. 2020. An investigation of transmission control measures during the first 50 days of the COVID-19 epidemic in China. *Science*. 368:638–42.
- Kementerian Kesehatan Republik Indonesia. (2020). Info Infeksi Emerging Kementerian Kesehatan RI [Internet]. 2020 [updated 2020 March 30; cited 2020 March 31]. Available from: <https://infeksiemerging.kemkes.go.id>
- Kharroubi, S. and Saleh, F. (2020). Are Lockdown Measures Effective Against COVID-19? *Frontiers in Public Health*, [online] 8. Available at: <https://www.frontiersin.org/articles/10.3389/fpubh.2020.549692/full>
- Kumar, C. V. S., Mukherjee, S., Harne, P. S., Subedi, A., Ganapathy, M. K., Patthipati, V. S., & Sapkota, B. 2020. Novelty in the Gut: A Systematic Review Analysis of the Gastrointestinal Manifestations of COVID-19.
- Lubis, B. (2021). Implementasi Kebijakan Penanganan Pandemi Covid-19 Di Kota Cimahi Provinsi Jawa Barat. *Pengantar Redaksi*, 27–38. [http://eprints2.ipdn.ac.id/id/eprint/422/1/Jurnal Media Birokrasi\\_Vol. 3 No. 1 April 2021.pdf#page=31](http://eprints2.ipdn.ac.id/id/eprint/422/1/Jurnal_Media_Birokrasi_Vol._3_No._1_April_2021.pdf#page=31)
- Mona, N., 2020. Konsep Isolasi Dalam Jaringan Sosial Untuk Meminimalisasi Efek Contagious (Kasus Penyebaran Virus Corona DiIndonesia). *Jurnal Sosial Humaniora Terapan*, 2(2) Vancouver
- Mona N. Konsep Isolasi Dalam Jaringan Sosial Untuk Meminimalisasi Efek Contagious (Kasus Penyebaran Virus Corona DiIndonesia). *Jurnal Sosial Humaniora Terapan*. 2020 Apr 7;2(2).
- Sarafino, E.P. and Smith, T.W., 2014. *Health psychology: Biopsychosocial interactions*. John Wiley & Sons.
- Sohrabi C, Alsafi Z, O'Neill N, et al. (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*. 76, 71-76.
- Sugiyono. 2009. *Metode Penelitian Administrasi*. Bandung. Alfabeta
- Syafrida, & Hartati, R. (n.d.). Bersama Melawan Virus Covid 19 di Indonesia. *Covid-19*. <https://doi.org/10.15408/sjsbs.v7i6.15325>
- Tosepu, R., Gunawan, J., Effendy, D.S., Ahmad, L.O.A.I., Lestari, H., Bahar, H., As fi an, P., (2020). Correlation between weather and Covid-19 pandemic in Jakarta, Indonesia. *Sci. Total Environ.*, 138436 <https://doi.org/10.1016/j.scitotenv.2020.138436>
- Volkin, S. (2020). The Impact Of The Covid-19 Pandemic On Adolescents. <https://doi.org/10.20473/jaki.v8i2.2020.51-59>
- Wati, N. M. N., Lestari, N. K. Y., Jayanti, D. M. A. D., & Sudarma, N. (2020). Optimalisasi Penggunaan Alat Perlindungan Diri (APD) pada Masyarakat dalam Rangka Mencegah Penularan Virus COVID-19. *Jurnal Empathy Pengabdian Kepada Masyarakat*1(1):1-8

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World Health Organization, Novel Coronavirus (2019- nCoV) Advice for the Public, (2020)  
Advice for the public (who.int)

Yuliana. (2020). Corona Virus Disease (Covid-19); Sebuah Tinjauan Literatur. Wellness and Healthy Magazine, 2(1), 187-192.

Kemenkes No 27 tahun 2017 tentang Pedoman Pengendalian Infeksi Rumah Sakit

Departement RI tahun 2004 Tentang Pedoman Manajement Linen Rumah Sakit