

Relationship Level Of Community Knowledge About Covid-19 Vaccination On Covid-19 Events In Polonia Medan Puskesmas 2021-2022

Heppy Jelita Sari Batubara

Fakultas Kedokteran, Universitas Muhammadiyah Sumatera Utara, Jl. Kapten Muchtar Basri No.3, Glugur Darat II, Kec. Medan Tim., Kota Medan, Sumatera Utara 20238

ARTICLE INFO

Keywords:

Knowledge;
Covid-19 Vaccination;
Covid-19.

ABSTRACT

The purpose of this study is to describe the distribution of characteristics of the people of Medan Polonia Village, to describe the public's knowledge about the COVID-19 vaccine, and to describe the public's knowledge about the importance of the COVID-19 vaccine at the Polonia Health Center, Medan Polonia District. cross sectional ie data collection is done only once on each respondent through a questionnaire as research data. The population in this study were all people who came to the Polonia Health Center to vaccinate against COVID 19. The sample in this study was the Medan Polonia District Community. The sampling technique in this study is total sampling. Total sampling is a sampling technique where the number of samples is the same as the population. Data processing is carried out in the following stages: Editing; coding; Data entry; Cleaning; Savings. the results of the research conducted at the Polonia Health Center regarding the Relationship between the Level of Public Knowledge About Vaccination against the Incidence of COVID-19 at the Polonia Health Center for the period February - March 2022, it was concluded that: the most common age group was the general public (18-49 years); the most common gender is female; the last education is high school; occupation, namely self-employed; personally exposed to COVID-19, i.e. never been exposed to as many as 79 people; personal COVID-19 vaccination, namely 88 people have been vaccinated; willing to be vaccinated as many as 102 people.

E-mail:

heppyjelbata@gmail.com

Copyright © 2022 Science Midwifery.

1. Introduction

Knowledge is the result of human sensing or the result of someone knowing the object from the senses it has which are strongly influenced by the intensity and perception of the object. This happens after someone has sensed an object. Sensing occurs through the five human senses, namely, the senses of hearing, sight, smell, feeling and touch. Some human knowledge is obtained through the eyes and ears. Knowledge is a result of curiosity through sensory processes, especially in the eyes and ears of certain objects.

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 diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

The increase in the number of cases took place quite quickly, and spread to various countries in a short time. As of July 9, 2020, WHO reported 11,84,226 confirmed cases with 545,481 deaths worldwide (Case Fatality Rate/CFR 4.6%). Indonesia reported its first case on March 2, 2020. Cases

are increasing and spreading rapidly throughout Indonesia. 1 The number of Medan Polonia people infected with COVID19 from February 2021 to November 2021 was 314 people.

The World Health Organization (WHO) Emergency Committee on January 30, 2020 declared a global health emergency or Public Health Emergency of International Concern (PHEIC) based on the increasing notification rate of cases in China and international locations. WHO officially declared the coronavirus outbreak a pandemic on March 11, 2020 . The best way to prevent this disease is to break the chain of spread of COVID-19 through isolation, early detection, implementing health protocols, namely: using masks, washing hands with running water and soap or using hand sanitizers, keeping a distance of at least 1 meter from other people, increase body resistance and clean and healthy living behavior as well as vaccinate all elements of society. The vaccination aims to reduce transmission or transmission due to COVID-19, and to achieve herd immunity.

The number of people in the world who have been vaccinated is 10.91 billion. The number of Indonesian people who have been vaccinated until March 2022 is 208,265,720 people. With a total of people who have been vaccinated with dose 1 of 192,263,704 or approximately (91.32%), dose 2 of 148,587,718 or approximately (71.35%), dose 3 of 12,847,312 or approx. (6.17%). The number of people in North Sumatra who have been vaccinated is 10.2 million from the set target of 11.42 million people or has reached 89.28% of the target. The number of people in Medan Polonia who have received the vaccination is 4,493 people.

Public perception of receiving COVID-19 vaccination in each province is different. During September 2020, WHO, the Indonesian Ministry of Health, ITAGI and UNICEF conducted an online survey of more than 115,000 respondents in 34 provinces in Indonesia to measure public acceptance of the COVID-19 vaccine. The survey shows that more than 70% of the public are aware of the government's discourse to carry out national vaccinations in an effort to reduce the rate of COVID-19 cases. The majority of the community (around 65%) are willing to accept the COVID-19 vaccine if it is provided by the government, while around 27% feel doubtful and a small proportion (8%) refuse. Aceh and West Sumatra are the provinces with the lowest revenues (below 50%). Meanwhile,

2. Method

2.1 Operational Definition

The operational definitions of the variables used in this study can be seen in the following table:

Table 1.
Operational Definition

Variable	Definition	Methods easuring Tools	andResults Measuring	Measuri ng Scale
Knowledge Public About Vaccine	District community knowledge Polonia Field about COVID-19 Community acceptance Medan Polonia District against COVID-19 vaccination currently being carried out by the government	Questionnaire	Questionnaire Score	ordinal
Number Incident COVID-19		Questionnaire	Questionnaire Score	Ratio

2.2 Types of research

This study uses an observational analytic method with a cross sectional approach, namely data collection is carried out only once for each respondent through a questionnaire as research data, so that the relationship between the level of public knowledge about the COVID-19 Vaccine in the community of Medan Polonia District will be obtained.

Procedure

2.3 Place and Time

This research was conducted at Polonia Health Center in February-March 2022.

2.4 Population and Sample

The population in this study were all people who came to the Polonia Health Center to vaccinate against COVID 19. The sample in this study was the Community of Medan Polonia District. The sampling technique in this study is total sampling. Total sampling is a sampling technique where the number of samples is the same as the population. Inclusion Criteria: People who will vaccinate at Polonia Health Center; People aged 12–70 years; People who are willing to become research respondents by signing an informed consent; People who filled out all questionnaires completely. Exclusion Criteria: People who did not answer all the questions in the questionnaire completely; Women who are pregnant; Asthma sufferers.

2.5 Data Collection Technique

The data collected in this study is primary data obtained using a questionnaire which was filled out directly by the respondent. The questionnaire used aims to determine and analyze the respondent's level of knowledge about COVID-19 vaccination. The data collection method is carried out following the following steps:

- Data collection was carried out in coordination with the environmental head of the Medan Polonia District. The selection of research subjects was carried out randomly on 100 people who were willing to become research respondents.
- Questionnaires were distributed to respondents in the form of 10 questions regarding public knowledge of vaccination.
- A brief explanation was given to respondents about the aims and objectives of this study on the first page of the questionnaire along with the informed consent.
- Respondents fill in the questions according to the instructions that have been given.

2.6 Variable Measurement

Knowledge is measured by the Guttman scale. Researchers use the Guttman scale if they want to get a firm answer to a problem stated as Yes-No. Assessment is given with a score of (1) for the choice of Yes and a score of (0) for the answer choice of No. The highest score for each question is 1, the number of questions is 20. Scoring for drawing conclusions is determined by comparing the maximum scores.

$$\text{skor yang diperoleh} = \frac{\text{skor maksimal}}{\text{skor maksimal}} \times 100\% \quad (1)$$

The data collected is categorized according to an ordinal scale, with the following conditions:

- 76%-100% correct answer : Very good
- 56%-75% correct answer : Pretty good
- 40%-55% correct answer : Not good
- <40% correct answer : Not good.

2.7 Data analysis method

All data collected was processed using a statistical software in accordance with the research objectives. Data processing is carried out in the following stages: Editing; coding; Data entry; Cleaning; Saving

The data will be analyzed descriptively to determine the frequency distribution of research subjects based on characteristics such as age, gender, education level, occupation, religion, income level, personal history of having been exposed to COVID-19, family history of having been exposed to COVID-19, personal history of having been vaccinated. , there is a family history of being vaccinated.

Variable analysis is a variable analysis used on two variables, namely one independent variable and one dependent variable (Mukhtar, 2011). The relationship between the level of public knowledge of the COVID 19 vaccine will use the Chi Square test for a 2 x 2 table. A significance of 0.05 has a 95% chance of being right and 5% of being wrong. If the significance number is 0.05, then the confidence level is 95%. If the probability (p-) <0.05 then H0 is rejected and H1 is accepted.

3. Results and Discussion

3.1 Research Result

This research was conducted at Polonia Public Health Center, Medan Polonia District. This type of research is descriptive analytic research. The purpose of this study is to describe the distribution of characteristics of the people of Medan Polonia Village, to describe the public's knowledge about the COVID-19 vaccine, and to describe the public's knowledge about the importance of the COVID-19 vaccine at the Polonia Health Center, Medan Polonia District. Respondents of this study were obtained from the community who will be vaccinated at Polonia Health Center as many as 102 people who were adjusted to the inclusion and exclusion criteria. And the research was obtained from interviews with respondents and by filling out the questionnaires that had been given.

a. Characteristics of Research Subjects

Table 2
Sample characteristic distribution

Variable	Frequency (N)	Percentage (%)
Age		
Teenager	10	9.80%
Mature	70	58.80%
seniors	32	31.40%
Gender		
Man	43	42.20%
Woman	59	57.8%
Last education		
SD	8	7.8%
JUNIOR HIGH SCHOOL	12	11.8%
SENIOR HIGH SCHOOL	51	50%
DIII/IV	9	8.80%
S1	21	20.6%
S2	1	1%
Work		
Doesn't work	23	22.50%
Self-employed	27	26.50%
Government employees	10	9.80%
Private employees	18	17.60%
Etc	24	23.50%
Personal History of Exposure to Covid-19		
Never	79	77.50%
Once	23	22.50%
Personal History of Covid-19 Vaccination		
Never	14	13.70%
Ever been	88	86.30%
Willing to Vaccine Covid-19		
Yes	102	100%
Not	0	0%

Based on table 2. it can be seen that based on age, there are 10 people (9.8%) in teenagers, 70 adults (58.8%), 32 people (31.4%). male sex as many as 43 people (42.2%), women as many as 59 (57.8%). Based on the characteristics of the latest education, people with the latest education are elementary school as many as 8 people (7.8%), junior high school as many as 12 people (11.8%), high school as many as 51 people (50%), DIII/IV as many as 9 people (8.8%), S1 as many as 21 people (20.6%), and S2 as many as 1 person (1%). Based on the job characteristics of the community who do not work as many as 23 people (22.5), self-employed as many as 27 people (26.5%), civil servants as many as 10 people (9.8%), private employees as many as 18 people (17.6%), and Others as many as 24 people (23.5%).

Based on the characteristics of the personal history of exposure to COVID-19, there were never as many as 79 people (77.5%) and once as many as 23 people (22.5%). Based on the characteristics of family history, there were never 45 people (44.1%) and 57 people (55.9%).

Based on the characteristics of the personal history of COVID-19 vaccination, there have never been as many as 14 people (13.7%) and there have been as many as 88 people (86.3%). Based on the characteristics of the family history of COVID-19 vaccination, there have never been as many as 27 people (26.5%) and there have been as many as 75 people (73.5%). Based on the characteristics of people who are willing to be vaccinated against COVID-19, 0 (0%) people are willing and 102 people are willing (100%).

Table 3.
Chi-Square Fisher Exact Test The Relationship between Knowledge Level and COVID-19 Incidence

Level Knowledge	Not Good & Not Good Fairly Good & Very Good Total	History of Exposure to Covid-19				Total		P value
		Never		Once		N	%	
		N	%	N	%			
		4	3.9	15	14.7	19	18.6	0.00
		75	73.5	8	7.8	83	81.4	
		79	77.5	23	22.5	102	100	

Based on table 3, it can be seen that at the level of knowledge that is not good and not good, there are 4 people (3.9%) who have never been exposed to COVID-19, 15 people have been exposed to COVID-19 (14.7%), and a total of 19 people. (18.6%). At the level of knowledge is quite good and very good the number of people who have never been exposed to COVID-19 as many as 75 people (73.5%) have been exposed to COVID-19 as many as 8 people (7.8%), and a total of 83 people (81.4 %).

Based on the chi-square test table above, the Fisher's Exact Test Exact Sig value is obtained. (2-sided) is 0.00 ($P < 0.05$), which means that there is a significant relationship between the level of knowledge and the incidence of COVID-19.

3.2 Discussion

Based on the results of the research above, respondents' characteristics were obtained with individual characteristics including age, gender, last education, occupation, personal history of exposure to COVID-19, personal history of COVID-19 vaccination, and willingness to be vaccinated against COVID-19. In this study, the majority of the respondents were female and worked as housewives, so that respondents had more time to view and read information. Gender is an enabling factor or a predisposing factor that influences a person's health behavior (Sari, A., Rachman, F., & Etc. 2020). In addition, women are able to get more sources of information because they often interact and are more active than men (Pupitasari, NN Y and Septimar, ZM 2020)

In this study, the education level of most of the respondents was secondary education (SMA). The level of education is basically one of the factors that influence a person's knowledge and actions because knowledge will directly affect behavior (Pupitasari, NN Y and Septimar, ZM 2020). In this study, the most common types of work are entrepreneurs where the work environment can provide knowledge or experience to someone either directly or indirectly which will also affect a person's process of receiving knowledge (Mubarak, W. 2011).

In this study, there was less personal history of exposure to COVID-19, because the community had implemented COVID-19 prevention behavior. The forms of behavior shown include compliance with maintaining distance when outside the house, always washing hands with soap, obeying the use of masks when traveling and not touching/shaking hands with other people. Someone who already knows certain information then he will be able to determine and make decisions. 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).

In this study, the personal history of COVID-19 vaccination showed that more people had vaccinated, because according to a survey conducted by the Ministry of Health in 2020, the public already knew a lot about the government's plan to carry out COVID-19 vaccination actions nationally (Kemenkes. 2020). In this study, the community was willing to be vaccinated as many as 102 people (100%) in connection with a study conducted by Noer Febriyanti in 2021 whose

research results showed that as many as 81.1% of respondents agreed to be vaccinated because they believed in the benefits of the COVID-19 vaccine. 19 which is able to increase the immune system and be able to fight when exposed to the disease (Febrianti, Noer, et al. 2021).

The results showed that there was a significant relationship between the level of knowledge and a history of exposure to COVID-19 with the Fisher's Exact value of 0.00 ($p < 0.05$). According to the researcher, this happened because the COVID-19 prevention measures taken by the community were getting better so that it showed meaningful results. This is also in line with research conducted by Atni Primanadini (2021) whose research results show that there is a significant influence between knowledge and the incidence of COVID-19 (Atni primanadini, et al 2021). And this is also in line with research conducted by Sembiring and Meo (2020) which stated that there was a relationship between knowledge and the risk of contracting COVID-19 in the people of Sulawesi ($p < 0.05$) (Sembiring, Erika Emnina, & Meo, Maria Lupita Nena .2020).

4. Conclusion

Based on the results of research conducted at the Polonia Health Center regarding the Relationship between the Level of Public Knowledge About Vaccination against the Incidence of COVID-19 at the Polonia Health Center for the period February - March 2022, it was concluded that: The distribution based on age characteristics is mostly the general public (18-49 years). The distribution based on gender characteristics is mostly female. Distribution is based on the characteristics of the last education, namely SMA. Distribution based on job characteristics, namely self-employed. Distribution based on the characteristics of a personal history of exposure to COVID-19, namely never being exposed to as many as 79 people. Distribution is based on the characteristics of personal history of COVID-19 vaccination, namely 88 people have been vaccinated. Distribution based on characteristics willing to be vaccinated as many as 102 people. There is a significant relationship to the level of knowledge with a history of exposure to COVID-19 with a p value of 0.00.

Providing education or socialization to the public about the importance of vaccination, the benefits, objectives and risks that can occur if you refuse the vaccine and are not vaccinated; Enforcement of discipline with directed and firm policies so that public knowledge increases, and is able to take attitudes and actions in preventing the spread of COVID-19; Increase sensitivity and concern and work together to reduce the spread of COVID-19 by participating in the success of the vaccination program and maintaining health protocols.

References

- Kemkes RI.No HK.01.07MENKES/413/2020. Pedoman Pencegahan dan Pengendalian Coronavirus Disease 2019 (COVID-19)
- Velavan TP, Meyer CG. The COVID-19 epidemic. *Tropical medicine & International Health*.2020;25(3): 278.
- Kemkes RI. 2020, Survei Penerimaan Vaksin COVID-19 di Indonesia.
- Adejumo, O.A., et.al. 2021, Perceptions of the COVID-19 vaccine and willingness to receive vaccination among health workers in Nigeria.<https://doi.org/10.24171/j.phrp.2021.0023>.
- WHO, 2021. Coronavirus Disease 2019 (COVID 19) Situation Report-1 April 2021
- Wang, Z., Qiang, W., Ke, H. 2020, A Handbook of 2019-nCoV Pneumonia Control and Prevention, Hubei Science and Technologi Press, China.
- Korsman, S.N.J., Van Z.G., Nutt, L., Andersson, M.I, Presier, W. 2012, *Virology*. Chins:Churchill Livingston Elsevier.
- Riedel, S., Morse, S., Mietzner, T., Miller, S., Jawetz, Melnick, & Adelberg's Medical Microbiology. 28th ed. New York: McGrawHill Education/Medical.
- Zunyou. Wu and McGoogan, J. M. (2020) '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', 323(13), pp. 8–11.
- PDPI. 2020, Pneumonia COVID-19 : Diagnosis dan Penatalaksanaan di Indonesia.
- Fehr, A.R., Perlman, S. 2015, Coronavirus: An Overview of Their Replication and Pathogenesis.
- Rothan, H. A. and Byrareddy, S. N. (2020) 'The epidemeology and pathogenesis of coronavirus (COVID-19) outbreak', *Journal of Autoimmunity*, 109(January), pp. 1–4.
- Korzadeh-Kermani, E., Khalili H., Iman K. 2020, Pathogenesis, Clinical Manifestations And Complications Of Coronavirus Disease 2019 (COVID19). *Future Microbiology*, Iran.
- Kemkes RI. 2021, Petunjuk Teknis Pelaksanaan Vaksinasi Dalam Rangka Penanggulangan Pandemi Corona

- Virus Disease 2019 (COVID-19), Jakarta. Halaman 1, 2, 4-5, 35-36.
- Susmiarsih, Tri Panjiasih. Kajian DNA Rekombinan pada Vaksin DNA dan Vaksin Subunit Protein. Jakarta: Majalah Kesehatan Pharma Medika. 2018.
- Yuningsih, Rahmi. Uji Klinik Coronavac Dan Rencana Vaksinasi COVID-19 Massal Di Indonesia. Jakarta: Pusat Penelitian Badan Keahlian DPR RI. 2020
- Ophinni, Youdiil, dkk. COVID-19 Vaccines: Current Status and Implication for Use in Indonesia. Jakarta: ResearchGate. 2021.
- GOV.UK. Information for UK recipients on COVID 19 Vaccine AstraZeneca. Inggris: GOV.UK. 2021.
- FDA. Fact Sheet For Recipients And Caregivers Emergency Use Authorization (Eua) Of The Moderna COVID-19 Vaccine To Prevent Coronavirus Disease 2019 (COVID-19) In Individuals 18 Years Of Age And Older. FDA. 2020.
- Notoatmodjo S. (2012) Pendidikan dan Perilaku Kesehatan, Rineka Cipta, Jakarta.
- Notoatmodjo, S. (2010). Metodologi Penelitian Kesehatan. Jakarta: Rineka Cipta.
- Aspuah. 2013. Kumpulan Kuesioner Dan Instrumen Penelitian Kesehatan. Yogyakarta: Nuha Medika.
- Sugiono. 2007. Metode Penelitian Kuantitatif dan Kualitatif R&D. Bandung: Alfabeta.
- Ari Kuntoro, Suhaimi. 2013. Prosedur Penelitian; Suatu Pendekatan Praktik. Jakarta: PT. Rineka Cipta.
- Sari, A., Rachman, F., & Dkk. (2020). Perilaku Pencegahan COVID-19 Ditinjau dari Karakteristik Individu dan Sikap Masyarakat. *Journal of Chemical Information and Modeling*, Vol. 53, hal.1688-1699.
- Pupitasari, N. N. Y dan Septimar, Z. M. (2020). Hubungan Sikap dengan Perilaku Masyarakat terhadap Pencegahan COVID 19 di Kecamatan Karawaci Tahun 2020. *Jurnal Health Sains*, 6(2), 812-819.
- Dharmawati, I., & Wirata, I. (2016). Hubungan Tingkat Pendidikan, Umur, Dan Masa Kerja Dengan Tingkat Pengetahuan Kesehatan Gigi Dan Mulut Pada Guru Penjaskes Sd Di Kecamatan Tampak Siring Gianyar. *Jurnal Kesehatan Gigi*, Vol. 4, hal. 1-5.
- Mubarak, W. (2011). Promosi Kesehatan untuk Kebidanan. In Jakarta: salemba medika.
- Ahmadi. (2013). Kesehatan Masyarakat Teori Dan Aplikasi. Jakarta: Raja Grafindo.
- KEMENKES. (2020). Survei Penerimaan Vaksin COVID-19 di Indonesia, Jakarta. Halaman 4-5.
- Febrianti, Noer, dkk. Hubungan Tingkat Pengetahuan dan Kesiediaan Vaksinasi COVID-19 Pada Warga Kelurahan Dukh Mananggal Kota Surabaya. Surabaya : Universitas PGRI Adi Buana Surabaya. 2021.
- Atni primanadini, dkk (2021). " Pengaruh Pengetahuan dan Perilaku Gerakan 3M Terhadap Angka kejadian COVID-19. *syntax Literate. jurnal ilmiah indonesia*. ISSN 2541-0849, Vol 6
- Sembiring, Erika Emnina, & Meo, Maria Lupita Nena. (2020). Pengetahuan dan sikap berhubungan dengan resiko tertular COVID-19 pada masyarakat Sulawesi Utara. *NERS Jurnal Keperawatan*, 16(2), 75-82.