TRANSMISSION PREVENTION BEHAVIORS OF COVID-19 IN PREGNANT WOMEN

Kusniyati Utami [1], Irni Setyawati [2*], Dian Soekmawati Riezqy Ariendha [3]
[1] Program of Diploma III Nursing STIKES Yarsi Mataram
[2.3] Undergraduate Program of Midwifery STIKES Yarsi Mataram
* Corresponding email: erny.gunawan07@gmail.com

ABSTRAK PERILAKU PENCEGAHAN TRANSMISI COVID-19 PADA IBU HAMIL

Latar Belakang: Virus Corona atau severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) adalah virus yang menyerang sistem pernapasan. Covid 19 banyak terjadi pada kelompok rentan, disamping itu jumlah kematian yang banyak juga terjadi pada kelompok rentanyang salah satunya adalah ibu hamil. Setiap wanita hamil dianggap sebagai orang yang berisiko tinggi terinfeksi viruscovid-19 karena kerentanan mereka akibat perubahan respons imun yang mungkin lebih tinggi, prognosis penyakit lebih parah, serta pemberian perawatan intensif yang lebih sulit

Tujuan: Mengetahui perilaku ibu hamil dalam pencegahan covid-19 berdasarkan karakteristik responden

Metode: Penelitian ini menggunakan rancangan penelitian deskriptif analitik melalui pendekatan cross sectional dimana data variable dependen dan variabel independen, diukur dan diobservasi dalam waktu bersamaan. Populasi penelitian ini adalah seluruh ibu hamil yang tinggal di desa sesela yang tersebar di 10 dusun yaitu sebanyak 334 ibu hamil, jumlah sampel ibu hamil ditetapkan dengan menggunakan teknik penghitungan rumus sampel slovin yaitu sebanyak 182 responden, responden dipilih secara proporsional dengan teknik pengambilan sampling *simple random sampling*. Analisis data pada penelitian ini dilakukan dengan 2 tahap yang terdiri dari analisis univariat untuk mengetahui gambaran distribusi frekuensi variabel penelitian dan analisis bivariat untuk melihat adanya hubungan antar variabel dependen dengan variabel independen. Analisis bivariat dalam penelitian ini menggunakan analisis uji chi square dengan SPSS 17.

Hasil:Perilaku pencegahan covid-19 pada ibu hamil dalam kategori cukup sebanyak 79%, 69% berumur 20-35 tahun, 77% primigravida, 91 % ibu rumah tangga, 79% pendidikan sekolah menengah dan 96% telah menerima informasi tentang covid-19. Hasil uji bivariat didapatkan nilai signifikansi p sebesar 0.014 menunjukkan bahwa terdapat hubungan kuat antara umur ibu hamil dengan perilaku pencegahan penularan covid-19, nilai OR 5.08 dengan IK 95% menunjukkan bahwa ibu hamil usia <20 tahun dan >35 tahun beresiko 5 kali berperilaku kurang baik dalam pencegahan penularan covid-19 dibandingkan dengan ibu hamil usia 20-35 tahun, sedangkan pendidikan, paritas, pekerjaan dan informasi covid tidak memiliki hubungan dengan perilaku pencegahan covid-19 pada ibu hamil.

Kesimpulan: Dalam studi ini perilaku ibu hamil dalam pencegahan penularan covid-19 diketahui cukup baik, umur mempunyai hubungan yang kuat dengan perilaku pencegahan penularan covid-19 sedangkan paritas, pekerjaan, pendidikan, serta informasi tentang covid-19 diketahui tidak berhubungan dengan perilaku pencegahan penularan covid-19.

Saran Edukasi dan promosi pencegahan penyebaran Covid-19 harus terus dilakukan untuk mencegah ibu hamil mengalami infeksi Covid-19

Kata Kunci: Covid-19,Ibu hamil, Perilaku pencegahan

ABSTRACT

Background: Corona virus or severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) is a virus that attacks the respiratory system. Covid 19 mostly occurs in vulnerable groups, besides that a large number of deaths also occur in vulnerable groups, one of which is pregnant women. Every pregnant woman is considered a person at high risk of being infected with the COVID-19 virus because of their susceptibility to changes in the immune response that may be higher, the prognosis of the disease is more severe, and the provision of intensive care is more difficult.

Purpose: To determine the behavior of pregnant women in preventing covid-19 based on the characteristics of the respondents.

Methods: This research was a descriptive analytic study with a cross sectional approach where the data of the dependent variable and the independent variable were measured and observed simultaneously. The population of this study were all pregnant women who live in Sesela village spread over 10 hamlets, with a total of 334 pregnant women. the number of samples of pregnant women was determined by using the Slovin sample formula calculation technique as many as 182 respondents, respondents were selected proportionally with simple random sampling technique. Data analysis in this study was carried out in 2 stages consisting of univariate analysis to determine the description of the frequency distribution of research variables and bivariate analysis to analyze the relationship between the dependent variable and the independent variable. Bivariate analysis in this study used chi square test analysis with SPSS 17.

Results: univariate analysis had showed that covid-19 prevention behavior in pregnant women in the sufficient category is 79%, 69% pregnant women aged 20-35 years, 77% primigravida, 91% housewives, 79% high school education and 96% had received information about covid-19.The results of the bivariate test showed ap significance value of 0.014 indicating that there was a strong relationship between the age of pregnant women and the behavior of preventing transmission of COVID-19, the OR 5.08 value with 95% CI showed that pregnant women aged <20 years and >35 years were at risk for 5 times less behavior. in preventing the spread of COVID-19 compared to pregnant women aged 20-35 yearseducation, parity , work and covid information have no relationship with covid-19 prevention behavior in pregnant women.

Conclusion: In this study the behavior of pregnant women in preventing the transmission of covid-19 is known to be quite good, age has a strong relationship with the behavior of preventing the transmission of covid-19, while parity, occupation.

Suggestion education, and information about covid-19 are known to be unrelated to the behavior of preventing transmission. covid-19 .

Keywords: Covid-19 ,Pregnant woman,Transmission

INTRODUCTION

Corona virus or severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) is a virus that attacks the respiratory system. The disease caused by this viral infection is called COVID-19 Virus is transmitted through droplet infection as well as surface contact with certain data reported describing viable virus persistence on surfaces for up to four days. Based on the available evidence , COVID- 19 is transmitted through close contact and droplets. The people most at risk of infection are those who are in close contact with COVID-19 patients.

WHO data, 2020 shows that the total number of COVID-19 cases in the world as of July 14, 2020 was 12,880,565 positive confirmed cases with 568,573 deaths. Indonesia is one of the countries affected by the COVID-19 virus and has spread to all provinces in Indonesia. The total number of positive confirmed cases in Indonesia as of July 14, 2020 was 78,572 cases with 3,710 deaths (4.7% of confirmed cases) and 37,636 recovered (47.9% of confirmed cases, while in NTB province since the first case was found on 15 March 2020 (Covid-19 Handling Committee, 2020) The number of suspected cases in West Lombok in December 2020 was 2766 with 731 confirmed cases and 50 deaths

Although the effect of COVID-19 on pregnant women remains unclear, there are concerns about its potential impact on maternal and perinatal outcomes due to suppression of the immune system during pregnancy (Zhou et al., 2020). Every pregnant woman is considered a person at high risk of being infected with the covid-19 virus because of their susceptibility due to changes in the immune response that may be higher, the prognosis of the disease is more severe, and the provision of intensive care is more difficult. All pregnant women should take extensive precautions such as hand hygiene and cleaning surfaces with ethanol over 60% and strictly adhering to social distancing measures when interacting with other people, this also applies to their partners (Donders et al., 2020).

The incubation period for COVID-19 is about 2-14 days, but infected people can transmit the virus through close contact and possible respiratory droplets even before they become symptomatic. Physiological changes in the immune and respiratory systems may make pregnant women more susceptible to COVID-19 infection during an epidemic. No effective vaccine is currently available. Therefore, it is recommended that pregnant women refrain from unnecessary travel, avoid crowds, public transportation, contact with sick people, and more importantly, practice and maintain good personal and social hygiene. Pregnant women with symptoms of fever, cough, fatigue, myalgia, sore throat, or shortness of breath should seek timely

medical help and consultation. Women with a history of travel to endemic areas and those with a clinical suspicion of infection should be isolated and investigated. Some pregnant women may experience severe anxiety and depression which requires professional psychological support to prevent adverse outcomes (Liang & Acharya, 2020).

Some of the risks found in pregnant women who suffer from Covid-19 include premature rupture of membranes, premature labor, fetal tachycardia, and fetal distress when infection occurs in the third trimester of pregnancy. All pregnant women should take extensive precautions such as adhering to social distancing measures when interacting with others (PP POGI, 2020). Based on the conditions above, prevention in the course of the COVID-19 outbreak is very important for pregnant women. Because behavior can play a key role in preventing infectious diseases, this study was conducted on a statistical sample of pregnant women living in West Lombok, a district directly adjacent to Mataram city which is the capital city of West Nusa Tenggara province, to find out their behavior towards preventing the transmission of COVID-19. 19

RESEARCH METHODOLOGY

The analytical descriptive research design used a cross sectional approach where the dependent variable data (behavior of pregnant women in preventing the transmission of COVID-19) and independent variables (respondent characteristics including age, gravida, occupation, education and information) were measured and observed at the same time using a questionnaire that have been tested for validity and reliability.

The population of this study were all pregnant women living in Sesela village spread over 10 hamlets, namely 334 pregnant women, to obtain samples that could represent the population, the number of samples of pregnant women was determined by using the slovin sample formula calculation technique, namely 182 respondents, then respondents selected proportionally with a sampling technique using a *simple random sampling approach.*

Based on the research objectives, this study was conducted by distributing questionnaires to pregnant women when carrying out ANC examinations at the Sesela village auxiliary health center, to find out. In this study, descriptive demographic data of pregnant women consisted of the age of pregnant women, gravity, occupation, education, information about Covid-19 while the preventive behavior for pregnant women is not shaking hands, washing hands, keeping a distance, avoiding contact with animals, not visiting infected countries and seeking the right information. The inclusion criteria for pregnant women were set as follows, namely carrying out pregnancy checks at the Sesela Health Center, and pregnant women who had filled out the *informed* consent form, pregnant women who agreed to fill out the questionnaire then filled out the consent form to become respondents.

Data analysis in this study was carried out in 2 stages consisting of univariate analysis to determine the description of the frequency distribution of each research variable and bivariate analysis to see the relationship between the dependent variable and the independent variable. Bivariate analysis in this study used chi square test analysis with SPSS 17.

RESEARCH RESULT

Univariate analysis

Based on the results of the research that has been done, the frequency distribution of the respondents' characteristics is as follows:

Table 1
Frequency Distribution of Respondents Characteristics

Characteristics of respondents	n	%
Age		
<20 yrs old	24	13
20-35 years old	126	69
>35 years old	32	18
Gravida		
Primigravida	34	19
Multigravida	141	77
Grande	7	4
Occupation		
Housewife	165	91
Employed	17	9
Education		
Primary School	32	18
Middle School	144	79
Higher Education	6	3
Information		
Received	8	4
Did not receive	174	96
Total	182	100

Table 3
Analysis of the behavior of pregnant women in preventing the transmission of Covid-19 based on the characteristics of the respondents

Variables and Categories	Women's Behavior in The Prevention of Covid-19						P Value	OR (IK 95%)
	Poor		Satisfactory		Good			
	n	%	n	%	n	%		
Age								
<20 yrs old	4	16,7	20	83,3	0	0		
20-35 years old	4	3,2	96	76,2	26	20,6	0,014	5,08 (1,46-17,67)
>35 years old	4	12,5	28	87,5	0	0		
Gravida								
Primigravida	4	11,8	28	82,4	2	5,9		
Multigravida	8	5,7	109	77,3	24	17	0,335	2,33 (0,66-8,25)
Grande	0	0	7	100	0	0		
Occupation								
Housewife	12	7,3	132	80	21	12,7	0,524	0,93 (0,89-0,97)
Employed	0	0	12	70,6	5	29,4		
Education								
Primary School	0	0	32	100	0	0		
Middle School	8	5,6	112	77,8	24	16,7	0,207	1,09 (1,04-1,14)
Higher Education	4	66,7	0	0	2	33,3		
Information								
Received	0	0	8	100	0	0	0,968	1,07 (1,03-1,12)
Did not receive	12	6,9	136	78,2	26	14,9		

From table 1 above, it can be seen that 126 respondents are mostly aged 20-35 years (69%), gravida status of most respondents, namely 141 are multigravida pregnant women (77%), 165 respondents are housewives (91%), the highest level of education respondents are secondary education, as many as 144 people (79%), and as many as 174 respondents have received information about how to prevent the transmission of Covid-19 (96%).

Covid-19 prevention behavior

From table 2 above, it can be seen that 12 respondents have bad behavior about how to prevent Covid-19 transmission (7%), 144 respondents have quite good behavior about how to prevent Covid-19 transmission (79%) and 26 respondents have good behavior about how to prevent Covid-19 transmission (14%).

Table 2
Frequency distribution of pregnant women's behavior in the prevention of covid-19

Behavior In The Prevention of Covid-19	Frequency	
	n	%
Poor	12	7
Satisfactory	144	79
Good	26	14
Total	182	100

Bivariate analysis

Behavior of pregnant women in preventing Covid-19 based on characteristics

The distribution of the frequency and behavior of pregnant women in preventing the transmission of Covid-19 is illustrated in the table below:

From table 5.3 it is found that 24 respondents aged <20 years 4 people have less knowledge (16.7%) and the remaining 20 people have fairly good behavior (83%). 4 people (3.2%), 96 people have fairly good behavior (76.2%) and 26 people have good behavior (20.6%) while pregnant women aged >35 years show 4 people have poor behavior (12.5 %), and the remaining 28 people had fairly good behavior (87.5%). P value <0.05 indicates that age has a significant relationship with the behavior of pregnant women in preventing the transmission of Covid-19, the OR value is 5.08.

Of the 34 primigravida mothers as many as 28 primigravida have fairly good behavior (82%) and 2 people have good behavior (5.9%), while from 141 multigravida it is known that 109 pregnant women have quite good behavior (77.3%) and at least 8 people have less behavior (5.7%).

A total of 17 respondents who worked showed that 12 people had fairly good behavior (70.6%) and 5 people behaved well in preventing covid-19 (29.4%). 19. Meanwhile, from 165 pregnant women who did not work, it was found that as many as 132 pregnant women had quite good behavior in preventing covid-19 (80%), 21 respondents had good behavior in preventing covid-19 (12.7%) and the remaining 12 people have bad behavior in preventing covid-19 (7.3%).

All respondents with basic education as many as 32 people have behavior that is quite good in preventing covid-19, from 55 respondents with secondary education, 8 people have bad behavior (5.6 %), 112 people have quite good behavior (77.8%) and 24 people have good behavior (16,7%). 6 respondents have higher education, 4 of whom have poor behavior (66.7%) and the rest have good behavior (33.3%). Based on whether or not respondents have received information, all respondents, 8 people who did not receive information had good enough behavior in preventing covid-19, while 174 respondents who received information about covid-19, 12 of them had bad behavior about preventing covid-19 (6, 9%), 136 respondents have fairly good behavior (78.2) and the remaining 26 people have good behavior (14.9%).

DISCUSSION

In this study, a behavioral survey of the prevention of COVID-19 transmission was conducted on pregnant women in West Lombok who did a pregnancy check-up. This study describes the prevention of COVID-19 transmission in pregnant women. The results of the study showed that most of the respondents were pregnant women aged 20-35 years. most of the pregnant women are multigravida who do not work with a high school education level and almost all respondents have received information about preventing the transmission of covid-19.

The preventive behavior of pregnant women in this study is the preventive behavior of keeping a distance, showing that most of them are in the sufficient category, in a study conducted by Dewi in Bandung City, it showed that more than half of pregnant women behaved well, but the rest were also in the category of average behavior or quite good in prevent the transmission of covid-19. The results of the study showed that almost all pregnant women (96%) had received information about preventing the transmission of covid-19 from family, community leaders, religious leaders, social media, and electronic media. A study in Ghana also found that more than half of pregnant women received information about preventing COVID-19 from health facilities. Preventive behavior in pregnant women can be influenced by family, community and information media that convey information related to COVID-19. A person's behavior is influenced by predecessor factors which include knowledge, attitudes, beliefs, beliefs, values and traditions (Dewi et al., 2020). However, good knowledge about preventing the transmission of covid-19 is not always accompanied by good behavior to prevent transmission of covid-19, this is evidenced by the many study results which state that good knowledge of pregnant women is not always followed by good behavior to prevent transmission of covid-19 In a study in Ghana it was found that more than 8 out of every 10 pregnant women had adequate knowledge about COVID-19, but less than half of the participants were engaged in good COVID-19 prevention practices (Kumbeni et al., 2021).

Our study found that almost all respondents have fairly good behavior in preventing the transmission of covid-19, this behavior is quite good on average for pregnant women aged 20-35 years, while pregnant women at risky age do not have good behavior in preventing transmission. covid-19, most

pregnant women have quite good behavior in preventing the transmission of covid-19, we found that the age of pregnant women who have good behavior is at the age of 20-35 years. although this is contrary to the results of the study presented by Kumbeni in his study in Ghana which states that older age has better preventive practices in preventing the transmission of covid-19 due to disease prevention because they are part of the risk factors for severe complications and death related to covid. -19 (Kumbeni et al., 2021). In contrast to the results of other studies which state that there is no correlation between the age of pregnant women and knowledge about COVID-19, knowledge of pregnant women aged 20-35 years has an average number that is not much different from pregnant women at high risk ages (Maharlouei et al., 2020). The results of the bivariate test obtained a significance value of p of 0.014 indicating that there is a strong relationship between the age of pregnant women and the behavior of preventing transmission of COVID-19, the OR value is 5.08 with an CI of 95% indicating that pregnant women aged <20 years and >35 years are at risk for 5 times less behavior. better in preventing the transmission of covid-19 compared to pregnant women aged 20-35 years. Prevention is the most important part so as not to contract Covid-19. Covid-19 is not an ordinary virus, even a virus that can survive both in living things and in inanimate objects such as money, for example, stuck to doorknobs, clothes and others. It is necessary to ensure that you and your family wash your hands frequently and avoid crowds (Dewi et al., 2020). Green's theory states that a person's behavior about health is determined by many things, including predisposing factors, one of which is age . Lewin mentions that individual character consists of several variables that interact with each other and then interact with the environment in determining behavior. In addition to individual factors, environmental factors have great power in determining behavior, sometimes even greater, this is what underlies the behavior assessment is more complex.

In this study, the parity status of pregnant women was not found to have a significant relationship with COVID-19 prevention behavior, this is not supported by research conducted in Ghana that primigravida pregnant women have better prevention practices than mothers who are pregnant for the first time (Kumbeni et al. al., 2021), but in another study in Iran it was also stated that parity has a relationship with the practice of preventing the transmission of covid-19, primigravida pregnant women are known to have better preventive behavior than multigravida pregnant women (Aghababaei et al., 2020).

It was found that overall the behavior of working and non-working mothers had a fairly good behavior, most of the pregnant women who worked had a fairly good behavior in preventing the transmission of covid-19, but there were no working mothers who behaved less well in preventing the transmission of covid-19 compared to with mothers who do not work, although a study conducted in Iran found that working mothers have a higher average knowledge than pregnant women who do not work (Maharlouei et al., 2020) but the results of the study conducted by Sari also found that there was no the relationship between work and behavior to prevent transmission of Covid-19 (Sari et al., 2020). This can happen possibly because almost all of the respondents are pregnant women who do not work but still take steps to prevent the transmission of covid because they are aware of the benefits of these actions, as has been mentioned by Lewin that a preventive measure against a disease will arise when someone has felt that he is susceptible to the disease, a person's actions also depend on the perceived benefits and obstacles found in taking a certain action (Notoatmojo, 2014).

Although respondents with higher education found poor behavior in preventing the transmission of COVID-19, the behavior of pregnant women with a secondary education level almost all had fairly good knowledge in preventing transmission of Covid-19, while respondents with basic education behaved quite well. Some theories state that education is needed by someone to get information, besides that the level of education can affect participation and participation in behavior. Someone with a higher education will be able to think objectively and rationally which will make it easier for someone to accept new things that are considered beneficial for him (Notoatmojo, 2014). The results of this study are supported by Kumbeni's research which shows that the behavior of pregnant women with basic education has good behavior, these results are very possible that pregnant women with basic education are more exposed to health information, especially regarding COVID-19. Pregnant women tend to take positive steps for the prevention of disease transmission (Kumbeni et al., 2021). In another study, it was also stated that there was no difference in knowledge about COVID-19 for people with secondary or primary higher education levels (Maharlouei et al., 2020).

The results of the study found that almost all respondents had received information related to preventing the transmission of Covid-19 from various sources. In the current era of industry 4.0, public information disclosure is very possible, because there are many media that can be used to support communication and government activities, which in this case is information on preventing the transmission of COVID-19 (Setiawan et al., 2021). As a means of communication, the mass media have a major influence on the formation of one's opinions and beliefs, the mass media also carry suggestive messages that can direct one's opinion, these messages can then provide an affective basis in assessing something to form a certain attitude (Azwar, 2015). Although in this study several variable indicators were not related to the behavior of preventing the transmission of COVID-19, the information that was repeatedly and continuously received by pregnant women might underlie why most pregnant women have a fairly good behavior to prevent the transmission of COVID-19.

CONCLUSION

In this study, the behavior of pregnant women in preventing the transmission of COVID-19 is known to be quite good, age has a strong relationship with the behavior of preventing the transmission of COVID-19, while parity, occupation, education, and information about COVID-19 are known to be unrelated to the behavior of preventing transmission of COVID-19. 19.

SUGGESTION

Based on the results of the study, it is necessary to provide information that can change behavior according to the age group of the mother (less than 20 years old , 20-35 years old and more than 35 years old). Information can be provided through electronic media, social media and direct education to pregnant women.

REFERENCES

Aghababaei, S., Bashirian, S., Soltanian, A., Refaei, M., Omidi, T., Ghelichkhani, S., & Soltani, F. (2020). Perceived risk and protective behaviors regarding COVID-19 among Iranian pregnant women. *Middle East Fertility Society Journal* , *25* (1). https://doi.org/10.1186/s43043-020-00038-z

Azwar, S. (2015). *Human Attitudes* (3rd ed .). Student Library.

Dewi, R., Widowati, R., Indrayani, T., Study, P., Applied, S., Jakarta, UN, Study, P., Applied, S., Jakarta, UN, Study, P., Applied, S., & Jakarta, UN (2020). *HIJP: HEALTH INFORMATION RESEARCH JOURNAL Knowledge and Attitudes of Third Trimester Pregnant Women towards Covid-19 Prevention* . *12* .

Donders, F., Lonnée-Hoffmann, R., Tsiakalos, A., Mendling, W., De Oliveira, JM, Judlin, P., Xue, F., & Donders, GGG (2020). ISIDOG recommendations concerning COVID-19 and pregnancy. *Diagnostics* , *10* (4), 1–23. https://doi.org/10.3390/diagnostics10040243

COVID-19 Handling Committee. (2020). *Health Handling* . covid19.go.id

Kumbeni, MT, Apanga, PA, Yeboah, EO, & Lettor, IBK (2021). Knowledge and preventive practices towards COVID-19 among pregnant women seeking antenatal services in Northern Ghana. *PLoS ONE* , *16* (6 June), 1–11. https://doi.org/10.1371/journal.pone.0253446

Liang, H., & Acharya, G. (2020). Novel corona virus disease (COVID-19) in pregnancy: What clinical recommendations to follow? *Acta Obstetricia et Gynecologica Scandinavica* , *99* (4), 439–442. https://doi.org/10.1111/aogs.13836

Maharlouei, N., Asadi, N., Bazrafshan, K., Roozmeh, S., Rezaianzadeh, A., Zahed-Roozegar, MH, Shaygani, F., Kharmandar, A., Honarvar, B., Hemyari, C. , Omidifar, N., Zare, M., & Lankarani, KB (2020). Knowledge and attitude regarding COVID-19 among pregnant women in southwestern Iran in the Early period of its outbreak: A cross-sectional study. *American Journal of Tropical Medicine and Hygiene* , *103* (6), 2368–2375. https://doi.org/10.4269/ajtmh.20-0608

Notoatmojo, S. (2014). *Behavioral Health Sciences (* 2nd ed .). Rineka Cipta.

PP POGI. (2020). Recommendations for Handling Corona Virus Infection (Covid-19). *March* , 1–28.

Sari, AR, Rahman, F., Wulandari, A., Pujianti, N., Laily, N., Anhar, VY, Anggraini, L., Azmiyannoor, M., Ridwan, AM, & Muddin, FII (2020). Covid-19 Prevention Behavior Judging from Individual Characteristics and Community Attitudes. *Indonesian Journal of Public Health Research and Development* , *1* (1), 32–37. https://journal.unnes.ac.id/sju/index.php/jppkm

Setiawan, A., Saputra, HA, & Atmojo, ME (2021). The Effectiveness of Disseminating Covid-19 Information Through Twitter Media, the Ministry of Health of the Republic of Indonesia and the National Disaster Management Agency. *Journal of Academia Praja* , *4* (1), 89–106. https://doi.org/10.36859/jap.v4i1.210

Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B., Gu, X., Guan, L., Wei, Y., Li, H., Wu, X., Xu, J., Tu, S., Zhang, Y., Chen, H., & Cao, B. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *The Lancet* , *395* (10229), 1054–1062. https://doi.org/10.1016/S0140-6736(20)30566-3