



## KNOWLEDGE, FEAR, AND PREVENTIVE COVID-19 BEHAVIOR IN PREGNANT WOMEN IN INDONESIA

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### ABSTRACT

The spread of COVID-19 is currently getting wider. It is across regions and countries, accompanied by an increase in the number of cases and many deaths every day. Circulating information affects people's knowledge about COVID-19, although this does not determine their understanding of COVID-19. Knowledge and fear will encourage a person to behave well. Good knowledge and great scare about COVID-19 can improve preventive behavior against COVID-19. The purpose of this study was to determine knowing, fears, and preventive behavior against COVID-19 in pregnant women in Simalungun Regency, North Sumatra, Indonesia. The method used in this research was a descriptive study conducted on 100 pregnant women in June-July 2021 in Tapian Dolok District, Simalungun Regency, North Sumatra, Indonesia. Simple random sampling was used in this research. Data was collected using a knowledge questionnaire about COVID-19 (15 questions), a fear questionnaire using the Fear COVID-19 Scale (FCS-19S) (7 questions), and Preventive COVID-19 Behavior Scale (PCV-19BS) questionnaire to determine preventive behavior (4 questions). The FCS-19S and PCV-19BS questionnaires used a Likert scale (1-5). The reliability of the knowledge, fears, and preventive behavior questionnaires were assessed based on Cronbach's Alpha of 0.748 each; 0.846; and 0.898, respectively. The data was presented in a frequency distribution table. The results showed that most participants (79%) had a high level of knowledge about COVID-19, most participants (72%) had a high level of fear of COVID-19, and almost all participants (95%) had a high level of preventive behavior against COVID-19. Efforts should be made to overcome fear and further research to find factors associated with fear of COVID-19.

**Keywords:** COVID-19, fear, knowledge, preventive behavior, pregnant women

### INTRODUCTION

WHO has declared the coronavirus disease (COVID-19) as a pandemic. This situation has a broad impact on almost all aspects of people's lives. The Indonesian government has taken comprehensive steps in prevention efforts through physical distancing, social distancing, procurement of personal protective equipment (PPE), and large-scale social restrictions. Although the government has set various policies to protect citizens, many confirmed cases still increased. The government set some preventive behavior, but the people didn't obey this protocol. It can be seen from the lack of public awareness to use masks and maintain distance in public places.

Correct knowledge about COVID-19 must be a guide for the community. Many information circulating in the community about COVID-19 but not all information and news are accurate (Moudy & Syakurah, 2020). This misinformation circulating can affect people's knowledge and impact people's behavior. A study by Moudy et al. on the general public in Indonesia found that 76.9% of respondents had good knowledge about Covid-19 (Moudy & Syakurah, 2020). Austrian et al. in Kenya also found that knowledge about COVID-19 in urban slum communities was high (Austrian et al., 2020). This high level of knowledge does not guarantee correct preventive behavior.

One of the psychological aspects of the COVID-19 pandemic is fear. The government should assess fears. Without knowing the level of fear of something specific, it is hard to know whether education and prevention are needed (Ahorsu, Imani, et al., 2020). Perez's research shows that women are more afraid of COVID-19 than men (Broche-Pérez et al., 2020). Fear can be considered a weakness and a strength. The weakness of fear causes panic, and its strength is to understand and manage the risks faced (Ng & Kemp, 2020).

The magnitude of public attention and the spread of various kinds of disinformation and misinformation became the basis for us to study about description of knowledge, fear, and preventive behavior against COVID-19 in pregnant women in Simalungun Regency, Indonesia. The purpose of this study was to describe the knowledge, fear, and preventive behavior against COVID-19 in pregnant women.

## **METHODS**

The design of this study was descriptive to explore knowledge, fear, and preventive behavior against COVID-19 in pregnant women. A study was done in June-July 2021 in Tapan Dolok district, Simalungun Regency, North Sumatra, Indonesia. The participants of this study were 100 normal pregnant women in all trimesters. The study used a simple random sampling technique.

### **Data collection**

Data collection was done using a questionnaire directly. The questionnaire about knowledge of COVID-19 was prepared by the researcher. This questionnaire consists of 15 questions about COVID-19. This questionnaire has been tested for validity and reliability with Cronbach alpha 0.75 for internal consistency. The level of knowledge is categorized as high if the participant's answers > 75% of the correct answers and vice versa.

The fear scale was measured using the Fear of COVID-19 Scale (FCV-19S) developed by Ahorsu, Lin, et al., (2020). This questionnaire has been translated into Indonesian by the Language Center of the University of North Sumatra. This questionnaire consists of seven question items, using a Likert scale (strongly disagree = 1; strongly agree = 5). The total score ranges from 7 to 35. The results of the reliability test of this questionnaire on Indonesians is 0.85. Fear scores were categorized into two groups, namely high if the score was between 21-35 and low if the score was 7-20.

Measurement of COVID-19 prevention behavior using the Preventive COVID-19 Behavior Scale (PVC-19BS) questionnaire recommended by WHO. This questionnaire has been translated into Indonesian by the Language Center of the University of North Sumatra. Before being given to participants, this questionnaire has been tested for reliability with Cronbach's alpha 0.84. This questionnaire consists of four questions, using a Likert scale (1=strongly disagree to 5=strongly agree). Behavioral assessment is grouped into 2 categories, namely high (score 13-20) and low (4-12).

## Data analysis

Processing and analyzing data using Statistical Package and Service Solution (SPSS) version 25.0 for Windows. Data were presented in percentage.

## RESULT

The characteristics of participants were presented in table 1.

Table 1. Characteristics of participants

Variable	Mean $\pm$ SD (n=100)	f (%)
Age (years)	24.42 $\pm$ 4.97	
Gestational age (weeks)	26.24 $\pm$ 7.7	
Gravida		
- Primigravida		31 (31)
- Multigravida		69 (69)
Education		
- Elementary school		5 (5)
- Junior High School		21 (21)
- Senior High School		66 (66)
- University/Diploma		8 (8)
Job status		
- Housewife		94 (94)
- work		6 (6)

SD= Standard deviation

Table 1 showed that the mean age of the participants was 24.42  $\pm$  4.97 years, the mean gestational age was 26.24  $\pm$  7.7 weeks, the most of the participants were multigravida (69%), graduated from senior high school (66%), and housewives (94%).

Table 2. Frequency distribution of the fear scale for COVID-19

Item	Fear of COVID-19 scale (n=100)				
	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
I am most afraid of Corona	4	5	15	46	30
It makes me uncomfortable to think about Corona	5	8	21	45	21
My hands become clammy when I think about Corona	10	38	21	27	4
I am afraid of losing my life because of Corona	5	15	26	34	20
When I watch news and stories about Corona on social media, I become nervous or anxious.	6	13	30	38	13
I cannot sleep because I'm worrying about getting Corona.	8	29	36	15	12
My heart races or palpitates when I think about getting Corona.	7	24	41	20	8
Total	6.43	18.86	27.14	32.14	15.43

Based on table 2, it can be seen that 32.14% of participants agree with the statement that COVID-19 was scary.

Table 3. Frequency distribution of preventive COVID-19 behavior scale

Item	Preventive of COVID-19 Behavior scale (n=100)				
	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
To prevent the transmission of COVID-19, I often wash my hands	1	0	4	52	43
To prevent the spread of COVID-19, I stay at home if I feel unwell	3	3	1	56	37
To prevent the spread of COVID-19, I wear a mask when I leave the house	2	2	3	51	42
To prevent the transmission of COVID-19, I keep my distance if I am in a crowd	4	1	3	46	46
Total	2.5	1.5	2.75	51.25	40

Table 3 showed there were 51.25% of participants agree with preventive COVID-19 behavior.

Table 4. Frequency distribution of participants' knowledge about COVID-19, level of fear of COVID-19, and preventive COVID-19 behavior

Variable	f (n=100)	%
Level of knowledge about COVID-19		
- Low	21	21
- High	79	79
Level of fear of COVID-19		
- Low	28	28
- High	72	72
Preventive COVID-19 Behaviour		
- Low	5	5
- High	95	95

Based on table 4, it was known that most (79%) of participants have high knowledge about COVID-19, the level of fear of COVID-19 was high (72%), and almost all (95%) the participants have a high prevention behavior.

## DISCUSSION

This study aims to determine the level of knowledge about COVID-19, fear, and COVID-19 prevention behavior in pregnant women. Our study found the majority of participants (79%) had high knowledge about COVID-19. At this research was conducted, the COVID-19 pandemic had entered its second year. Since it was the first announcement, various information about COVID-19 has spread to all levels of society through mass media, electronics, and social media. Much information spread and accepted by the community allows respondents to have high knowledge. Moudy also explained that the study results were almost the same, namely, 76.9% of participants had good knowledge (Moudy & Syakurah, 2020). The results of this study were in line with Austrian et al. in Nairobi, Kenya in March 2020 found that knowledge about COVID-19 was high (Austrian et al., 2020). Almost the same results were found by Hamadneh et al. in April 2020 on Syrian female refugees in Jordan. In this study, participants generally know about the prevention and transmission of COVID-19 (Hamadneh et al., 2021).

A different study reported by Degu et al. at Debre Tabor Northwest Ethiopia General Hospital was conducted in June 2020 where 52.1% of pregnant women respondents were well informed about COVID-19 (Degu et al., 2021). The results of another study at the Zona Guraghe hospital in Ethiopia in July-August 2020 also reported that the level of knowledge of pregnant women



about COVID-19 was 54.84% (Fikadu et al., 2021). There were variations in participants' knowledge level about COVID-19 from several studies. It is supposed by many factors, including the many sources of information and education from the government about COVID-19, the respondent's education level, and the respondent's desire to find another news.

In our study, there are 72% of participants with a high level of fear of COVID-19. These results were in line with a study conducted by Salehi et al. at Kamali Hospital in Alborz Province, Iran (Salehi et al., 2020). Another study found women had a higher COVID-19 fear score than men (Broche-Pérez et al., 2020). Fear of COVID-19 may be due to novelty and uncertainty about how bad the current outbreak is (Asmundson & Taylor, 2020). Fear can be a source of positive power. In general, we respond to fear rationally and irrationally. The rational response is by understanding and managing the threats or risks that occur, while the irrational response that arises is panic. Fear and panic reduce our ability to fight the virus itself. When fear creates panic and social crisis by stimulating antisocial behavior and decisions and actions that go against the best medical and scientific advice, the virus becomes "more powerful" (Ng & Kemp, 2020). Therefore, much remains to be learned, and some efforts are needed to overcome this coronaphobia (Asmundson & Taylor, 2020).

Almost all of the participants (95%) have good preventive behavior. This result was in line with Fikadu et al. found that 76.2% of pregnant women had good prevention practices, 90.6% of respondents complied with restrictions by the government related to the pandemic (Fikadu et al., 2021). Velikonja et al.'s research conducted in March 2020 in Slovenia found that participants' adherence to handwashing and coughing etiquette was 97%, avoiding crowds by 93.5%, avoiding people at risk of infection by 89.6%, and two-thirds of respondents prefer to be yourself at home. In addition, 89.9% of respondents also disinfected their hands and objects (70.8%), almost 60% provided food supplies for at least two weeks, and a quarter of respondents used masks (Velikonja et al., 2020).

Moudy et al.'s research in 2020 also found that preventive behavior was good. There were 91.7% of respondents washed hands using water and soap, avoided direct contact with sick people (83.6%), covered mouth and nose with a tissue when sneezing or coughing (81.3%), and used a mask when experiencing symptoms of respiratory distress (78.5%) (Moudy & Syakurah, 2020). This behavior can not be separated from the government's efforts to disseminate information on COVID-19 prevention at any time since the beginning of the positive confirmed case to date. Information from social media, mass media and electronic media also has a positive impact on preventive behavior.

In addition, the implementation of government policies in services also supports preventive behavior, for example, the people not served in health services and other public services if they do not wear masks, avoid crowds and maintain distance in public places. The government and community also provide handwashing facilities in the general public area. However, there are still people who have not complied with this COVID-19 prevention protocol.

## **CONCLUSION AND RECOMMENDATION**

Some efforts should be made to overcome the fear of COVID-19. We suggest further research to find factors associated with fear of COVID-19.

## **ACKNOWLEDGEMENT**

Thank you to the Medan Health Polytechnic of the Ministry of Health, Indonesia for funding this research.



## CONFLICT OF INTEREST

There is no conflict of interest in this research.

## REFERENCE

- Ahorsu, D. K., Imani, V., Lin, C., Timpka, T., Broström, A., Updegraff, J. A., Årestedt, K., Griffiths, M. D., & Pakpour, A. H. (2020). Associations Between Fear of COVID-19 , Mental Health , and Preventive Behaviours Across Pregnant Women and Husbands : An Actor-Partner Interdependence Modelling. *International Journal of Mental Health Addiction, Juni*. <https://doi.org/10.1007/s11469-020-00340-x>
- Ahorsu, D. K., Lin, C., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale : Development and Initial Validation. *Internasional Journal of Mental Health and Addiction*.<https://doi.org/10.1007/s11469-020-00270-8>.
- Asmundson, G., & Taylor, S. (2020). Coronaphobia: Fear and the 2019-nCoV outbreak. *Journal of Anxiety Disorders, 70*(January), 3.
- Austrian, A. K., Pinchoff, J., Tidwell, J. B., White, C., Abuya, T., Kangwana, B., Ochako, R., Wanyungu, J., Muluve, E., Mbushi, F., Mwangi, D., Nzioki, M., & Ngo, T. D. (2020). practices and needs of households in informal settlements in Nairobi , Kenya. *Bull World Health Organ, April*, 1–21.
- Broche-Pérez, Y., Fernández-Fleites, Z., Jiménez-Puig, E., Fernández-Castillo, E., & Rodríguez-Martin, B. C. (2020). Gender and Fear of COVID-19 in a Cuban Population Sample. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00343-8>
- Degu, A., Nibret, G., Gebrehana, H., Getie, A., & Getnet, B. (2021). Knowledge and attitude towards the current pandemic corona virus disease and associated factors among pregnant women attending antenatal care in debre tabor general hospital northwest ethiopia: An institutional-based cross-sectional study. *International Journal of Women's Health, 13*, 61–71. <https://doi.org/10.2147/IJWH.S285552>
- Fikadu, Y., Yeshaneh, A., Melis, T., Mesele, M., Anmut, W., & Argaw, M. (2021). Covid-19 preventive measure practices and knowledge of pregnant women in guraghe zone hospitals. *International Journal of Women's Health, 13*, 39–50. <https://doi.org/10.2147/IJWH.S291507>
- Hamadneh, S., Hamadneh, J., Amarin, Z., Kassab, M., Obeidat, R., & Rawashdeh, H. (2021). Knowledge and attitudes regarding Covid-19 among syrian refugee women in Jordan. *International Journal of Clinical Practice, 75*(5), 0–3. <https://doi.org/10.1111/ijcp.14021>
- Moudy, J., & Syakurah, R. A. (2020). Pengetahuan terkait usaha pencegahan Coronavirus Disease (COVID-19) di Indonesia. *Higeia Journal of Public Health Research and Development, 4*(3), 333–346.
- Ng, K. H., & Kemp, R. (2020). Understanding and reducing the fear of COVID-19. *Journal of Zhejiang Univ-Sci B (Biomed & Biotechnol), 21*(9), 752–754.
- Salehi, L., Rahimzadeh, M., & Esmaelzadeh-saeieh, S. (2020). The relationship among fear and anxiety of COVID-19 , pregnancy experience , and mental health disorder in pregnant women : A structural equation model. *Brain and Behaviour, June*, 1–8. <https://doi.org/10.1002/brb3.1835>



Velikonja, N. K., Erjavec, K., Verdenik, I., Hussein, M., & Velikonja, V. G. (2020). Association between preventive behaviour and anxiety at the start of the COVID-19 pandemic in Slovenia. *Zdravstveno Varstvo*, 60(1), 17–24. <https://doi.org/10.2478/sjph-2021-0004>