The Relationship Between Knowledge And Covid-19 Preventive Behaviors Among Pregnant Women At PMB Lasmitasari, S.ST

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ABSTRACT

COVID-19 is a disease caused by the coronavirus. The COVID-19 pandemic poses a threat to all individuals, including pregnant women. It is essential for pregnant women to possess comprehensive knowledge about COVID-19 and to implement preventive measures to mitigate the risk of exposure to this disease. This study aims to analyze the relationship between knowledge about COVID-19 and COVID-19 preventive behaviors among pregnant women at PMB Lasmitasari, S.ST in 2020. The study population comprised all pregnant women who underwent pregnancy check-ups (antenatal visits) at PMB Lasmitasari, S.ST in July 2020, totaling 172 people. The sample comprised of 60 pregnant women who underwent pregnancy check-ups at PMB Lasmitasari, S.ST during the same period. The sampling technique employed was accidental sampling, and data collection was conducted via a questionnaire. The findings revealed that the majority of pregnant women exhibited a poor knowledge about COVID-19, with less than 25 people (41.7%) exhibiting adequate knowledge. Furthermore, the highest proportion of pregnant women engaging in COVID-19 preventive behaviors numbered less than 33 people (55.0%). Importantly, a significant relationship was observed between knowledge about COVID-19 and COVID-19 preventive behaviors among pregnant women at PMB Lasmitasari, S.ST (p = 0.000). Consequently, it is recommended that healthcare professionals intensify health promotion initiatives concerning COVID-19 within the broader community, with a specific focus on pregnant women, leveraging electronic media, mass communication channels, and social media platforms.

Keywords : knowledge, COVID-19 preventive behaviors

INTRODUCTION

Coronaviruses are part of a large family of viruses known to cause diseases in both humans and animals. In humans, they can lead to respiratory tract infections ranging from mild illnesses such as the common cold to more severe conditions like Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The emergence of the coronavirus, triggering an unprecedented event, occurred in Wuhan, China, on December 31, 2019. Subsequently named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), it causes the illness known as Coronavirus Disease 2019, or COVID-19 [1]. On January 30, 2020, the World Health Organization (WHO) declared it a Public Health Emergency of International Concern (PHEIC). The escalation in the number of COVID-19 cases has been rapid, with transmissions occurring across various countries (2).

The escalation in the number of COVID-19 cases has been swift, spreading to numerous countries within a short span of time. As of July 9, 2020, the WHO reported 1,184,226 confirmed cases globally, with 545,481 deaths (resulting in a Case Fatality Rate/CFR of 4.6%). Indonesia documented its first case on March 2, 2020, followed by a rapid increase and widespread transmission throughout the country. By July 9, 2020, the Ministry of Health had reported 70,736 confirmed cases of COVID-19 in Indonesia, resulting in 3,417 deaths (CFR of 4.8%) (3). In South Kalimantan, by June 1, 2020, there were 948 confirmed cases with 87 fatalities. Notably, COVID-

19 transmission has affected two infants in Banjarbaru, where the respective mothers of these infants also tested positive for the virus.

COVID-19 poses a significant threat due to its high transmissibility, putting individuals at risk regardless of age or condition. Pregnant women, in particular, face heightened risks of COVID-19 infection, as evidenced by several studies indicating their susceptibility to even mild symptoms. According to the Centers for Disease Control and Prevention (CDC), pregnant women exhibit increased susceptibility to various respiratory infections, including influenza. This susceptibility is partly attributed to the alterations in the immune system and the physiological impact on the lungs and heart during pregnancy (4).

Pregnant women represent a special demographic at increased risk for COVID-19 (5). Pregnancy induces changes in partial immunity, rendering women more susceptible to viral exposure. Physiological and immunological alterations inherent to pregnancy further increase the likelihood of obstetric complications and respiratory infections (6). Consequently, pregnant women are at heightened risks of experiencing complications such as diminished lung capacity and cardiovascular strain, manifesting as conditions like tachycardia (5).

Preventive behaviors are crucial for everyone, particularly pregnant women who are more susceptible to infections and their associated complications. These behaviors include maintaining hand hygiene through the use of hand sanitizer and regular handwashing with soap, wearing masks, observing physical distancing of at least 1 meter, and adhering to proper coughing or sneezing etiquette by covering the nose and mouth with the inside of the upper arm (2). This recommendation is reinforced by findings, such as those by Liu H. et al. (2020), which indicate that pregnant women face heightened risks of severe illness and hospitalization (7).

A preliminary survey conducted through interviews with 10 pregnant women undergoing pregnancy check-ups (antenatal visits) at PMB Lasmitasari, S.ST revealed concerning findings. Only four participants exhibited knowledge aboout the causes and prevention of COVID-19, while the remaining six had poor knowledge about preventive measures and transmission routes of the virus. Additionally, observations indicated instances where pregnant women failed to wash their hands with soap before entering the PMB Lasmitasari, S.ST facilities.

The most effective strategy for mitigating the spread of COVID-19 involves breaking the chain of transmission through enhancing the knowledge of pregnant women. When pregnant women possess adequate knowledge about COVID-19, they are better equipped to adopt preventive measures, thereby reducing their risk of exposure to the disease and safeguarding both their own health and the well-being of their future offspring. Given this context, conducting a study on knowledge about COVID-19 and COVID-19 preventive behaviors among pregnant women at PMB Lasmitasari, S.ST in 2020 becomes imperative. The primary objective of this study is to investigate the relationship between knowledge about COVID-19 and COVID-19 preventive behaviors among pregnant women at PMB Lasmitasari, S.ST in 2020.

METHODS

This study employed a quantitative research design with a cross-sectional approach. The population comprised all pregnant women who underwent pregnancy check-ups at PMB Lasmitasari, S.ST in July 2020, totaling 172 people. The sample comprised of 60 pregnant women who underwent pregnancy check-ups at PMB Lasmitasari, S.ST during the same period. Accidental sampling was employed as the sampling technique. The research instrument consisted of a questionnaire that had been developed based on predefined parameters and had undergone prior validity and reliability testing. The questionnaire comprised 15 questions aimed at assessing pregnant women's knowledge about COVID-19 and 10 questions aimed at assessing their COVID-19 preventive behaviors. Research data included both primary data (pertaining to

knowledge, information sources, and COVID-19 preventive behaviors) and secondary data (pertaining to age and education level). Bivariate analysis was conducted using the chi-square test.

RESULTS AND DISCUSSION

Respondent Characteristics

Respondent characteristics (age and education level) and information sources can be seen in the following Table 1 :

Tabel 1. Ditribusi Frekuensi Karakteristik Ibu Hamil di PMB Lasmitasari, S.ST

Characteristics	f	%
Age		
Teenager (17- 25)	34	56.7
Early adulthood (26 - 35)	20	33.3
Late adulthood (36 - 45)	6	10.0
Total	60	100
Education		
Elementary	23	49.4
Secondary	20	33.3
Tertiary	17	28.3
Total	60	100
Information Sources		
Health workers	21	35.0
Electronic media (TV)	9	15.0
Internet (social media)	30	50.0
Total	60	100

Source: Primary Data 2020

Table 1 shows that the majority of respondents were teenagers (17 – 25 years old), totaling 34 people (56.7%). Furthermore, the majority of respondents had an elementary education level, totaling 23 people (49.4%). The primary information source about COVID-19 for the majority of respondents was the internet (social media), totaling 30 people (50%).

Respondents' Knowledge

Table 2 shows that the respondents' knowledge about COVID-19 is poor, with 25 people (41.7%) exhibiting limited understanding. The three questions most frequently answered incorrectly pertain to the parameters for preventing COVID-19, specifically question items number 9, 11, and 1. Respondents' knowledge about COVID-19 can be seen in the following Table 2:

Tabel 2. Frequency Distribution of Pregnant Women's Knowledge about COVID-19 at PMB Lasmitasari, S.ST

Knowledge	f	%
Poor	25	41.7
Adequate	20	33.3
Good	15	25.0
Total	60	100

Source: Primary Data 2020

Numerous factors influence respondents' knowledge about COVID-19. According to

Notoadmodjo (2012), these factors include education, age, employment, and other external influences (9).

Knowledge is the product of cognition, emerging after an individual perceives an object (8). Mubarak (2012) highlights age as one such influencing factor. The majority of respondents were teenagers (17 – 25 years old), totaling 34 people (56.7%). This age group encompasses late adolescence, during which individuals undergo physical and psychological changes associated with maturation. Psychologically, the cognitive faculties of individuals in late adolescence become increasingly developed (10). Consequently, the respondents' age being in late adolescence, characterized by psychological immaturity, likely contributes to their poor knowledge about COVID-19. However, these findings contradict the study conducted by Wulandari et al., which found no significant relationship between age and knowledge about COVID-19 prevention ($p = 0.386 > 0.05$). This discrepancy may arise because a substantial proportion (69.1%) of teenage respondents in their study exhibited adequate knowledge (11).

Another theory posits that knowledge is influenced by the education level (8). The education level of the majority of respondents in this study was elementary, totaling 23 people (49.4%). These findings align with the aforementioned theory. However, it is important to note that individuals with low education levels may not necessarily possess lower levels of knowledge. While education level can impact knowledge attainment, it is not the sole determinant. A high education level is often associated with better knowledge about COVID-19, whereas a low education level may result in lesser knowledge. Nonetheless, findings indicate that individuals with low education levels can still possess adequate knowledge about COVID-19. It is crucial to emphasize that low education does not equate to low knowledge. Knowledge acquisition is not exclusively confined to formal education settings but can also be acquired through informal means such as interactions with others or exposure to mass media including television, magazines, newspapers, and radio (9).

The primary information source about COVID-19 for respondents was the internet (social media), rather than health workers. However, reliance on incorrect sources of information on the internet (social media) may lead to misinformation among respondents, contributing to their poor knowledge. Furthermore, at PMB Lasmitasari, S.ST, there is a lack of health education materials such as posters about COVID-19. This may also impact respondents' levels of knowledge, exacerbating their poor knowledge. This finding is consistent with a study conducted by Nwafor et al., which exhibited that pregnant women who received formal education from health workers exhibited better knowledge compared to those who did not (12). However, this finding differs from that of Chidebe C et al., whose study indicated that mass media was the primary information source for pregnant women about COVID-19 (13).

The reality is that despite COVID-19 being a newly emerged disease and rapidly spreading pandemic, there exists an abundance of information regarding its transmission and prevention. However, the abundance of information, often conflicting, may contribute to the lack of knowledge among most respondents. Additionally, the provision of information by health workers, particularly concerning healthcare facility services, remains inadequate. Direct counseling sessions targeting pregnant women are notably absent, further contributing to their limited understanding of COVID-19 prevention measures.

Another potential contributing factor could be the respondents' lack of information about COVID-19 and its prevention methods. Therefore, knowledge plays a pivotal role in prompting action, such as adopting COVID-19 preventive behaviors. Education significantly influences individuals' levels of knowledge, particularly in this context, pertaining to COVID-19 prevention.

Individuals possessing adequate knowledge tend to exhibit better health maintenance behaviors. This aligns with Rogers' (2002) theory, which suggests that behavior congruent with knowledge tends to last longer compared to behavior incongruent with knowledge. In the context

of this study, knowledge refers to pregnant women's knowledge about COVID-19 preventive behaviors. Pregnant women can mitigate the risk of COVID-19 transmission by familiarizing themselves with and adhering to preventive practices, including consistently wearing masks outside the home, avoiding crowded areas, practicing proper coughing and sneezing etiquette, practicing thorough hand hygiene with soap and water or alcohol-based hand sanitizers, refraining from handshaking, and maintaining a balanced and nutritious diet.

Respondents' Behaviors

Table 3 shows that the majority of respondents exhibited poor COVID-19 preventive behaviors, totaling 33 people (55.0%). An individual's behavior is shaped through interactions with various factors, resulting in complex behavioral patterns that may not always be consciously recognized. Before individuals can modify their behavior, it is essential to understand the underlying reasons for such behavior (14). The findings of this study align with a study conducted by Dian Kurniasih (2013) concerning patient behaviors related to preventing transmission in the pulmonary clinic at Prof. Dr. Sulianti Saroso Hospital, Jakarta Utara, where 100% of respondents did not adhere to pulmonary TB prevention measures (15). Conversely, these findings contrast with a study conducted by Nwafor et al., which indicated that pregnant women were more proactive in adopting COVID-19 preventive behaviors (12). Also, contrast with a study conducted by Mujiburrahman (2020), which indicated that the majority of respondents exhibited quite good behaviors (43.2%). Instances of observed behaviors include maintaining social distancing, consistently practicing thorough hand hygiene with soap or hand sanitizer, wearing masks outside the home, and refraining from physical contact such as handshakes. An individual who possesses pertinent information is better equipped to assess and decide on appropriate actions. In essence, when individuals are well-informed about COVID-19, they are more capable of determining their response to the situation (9). Respondents' COVID-19 preventive behaviors can be seen in the following Table 3:

Table 3. Frequency Distribution of Pregnant Women's COVID-19 Preventive Behaviors at PMB Lasmitasari, S.ST

Behavior	f	%
Poor	33	55.0
Good	27	45.0
Total	60	100

Source: Primary Data 2020

The majority of pregnant women exhibit lacking COVID-19 preventive behaviors, indicating a widespread lack of adherence to recommended preventive measures. Researchers attribute this inadequacy to the novelty of the disease, as individuals are still acclimating to implementing the prescribed preventive behaviors advocated by governmental and expert guidelines, such as wearing masks outside the home and practicing hand hygiene. Among the ten questions concerning COVID-19 preventive behaviors, the most commonly observed behaviors among pregnant women are wearing masks outside the home and avoiding crowded places. Conversely, the least observed behaviors include handwashing and refraining from handshaking with others (they still handshake with others). These findings are consistent with those of Devi Pramita Sari, which revealed varying levels of adherence to mask-wearing protocols among residents of RT 03/RW 08 Ngronngah, with 46 respondents (74.19%) adhered to the protocols while 16 respondents (25.81%) did not (16).

According to the social cognitive theory, an individual's behavior is influenced not only by internal factors such as motivation, goals, and willpower but also by external factors, including the

environment. Additionally, various other factors play a role in shaping behavior, such as learning, self-affirmation, self-control, emotional intelligence, observational learning, and motivation/reinforcement. Furthermore, behavior is influenced by three primary factors: predisposing factors, driving factors, and reinforcing factors. Predisposing factors consist of an individual's knowledge, beliefs, attitudes, socio-demographic characteristics, and personal values, which contribute to the formation of behavior. Driving factors consist of environmental factors, access to healthcare facilities, and specific supportive resources. Meanwhile, reinforcing factors serve to strengthen behavioral patterns and may include community leaders and particular social groups (17).

Behavior is a responsive action observable in individuals, whether consciously or unconsciously, triggered by stimuli originating internally or externally. According to Suryono (2004), human behavior is influenced by both internal and external factors. Internal factors encompass elements such as race, gender, physical traits/characteristics, personality, and intelligence, while external factors include environmental factors (physical, biological, and social), education, religion, belief systems, social culture, and economic conditions. Behavior exhibited by individuals is fundamentally shaped through three mechanisms: habituation, behavior and knowledge formation, and behavioral modeling. Habituation (conditioning) serves as one method for shaping behavior. Through repeated exposure to desired behaviors, individuals eventually internalize and adopt behaviors (17).

Habituation serves as a means of educating individuals. Habituation facilitates ease and contentment in executing tasks. Moreover, habits ingrained from early age tend to persist into adulthood, making them more resistant to change. The objective of habituation is to cultivate, refine, or acquire habits. Various strategies can be employed for habituation, including utilizing role models to shape behavior and employing reinforcement techniques involving rewards and punishments to encourage the adoption of positive and suitable behaviors (18).

In addition to behavior formation through habituation (conditioning), behavior can also be shaped through knowledge acquisition. Cognitive learning theory underscores the significance of understanding in the process of knowledge formation. The cognitive dimension plays a pivotal role in behavior formation, serving functions such as facilitating understanding, presenting emotional responses, shaping attitudes, and providing motivation by highlighting the consequences of behavior (17).

Furthemore, behavior can also be shaped through modeling or emulation. Models or examples utilized to shape behavior may include leaders, religious figures, or role models. This approach is grounded in social learning theory, proposed by Bandura, which explains how social influences shape personality development. This theory explores how individuals undergoing socialization influence aspects such as the learning process, personality formation, and the environment. It posits that an individual's personality development is a response to social stimuli, with behavior and attitudes evolving through encouragement or reinforcement from their social milieu (Juachon, nd). Social learning theory encompasses three central concepts an individual learns through observation, an individual's mental or inner self plays a significant role in this process, and learning does not inevitably result in behavioral changes (19).

According to a study conducted by Rosmala Dewi et al., prevention constitutes a critical component of community empowerment, particularly for third-trimester pregnant women. COVID-19 prevention encompasses all efforts undertaken by community stakeholders to empower individuals and mitigate the transmission of the virus (Ministry of Health of the Republic of Indonesia, 2020). As articulated by the Task Force for the Acceleration of Handling COVID-19 (2020), prevention initiatives at the individual level, including by third-trimester pregnant women, not only safeguard their own health but also mitigate transmission to others, particularly their families and fetuses. Essential preventive measures for third-trimester pregnant women include

avoiding healthcare facilities with suspected or confirmed COVID-19 cases, frequent handwashing with soap for at least 20 seconds, utilizing alcohol-based hand sanitizers, maintaining a distance of at least 1 meter from others, refraining from touching the face, mouth, eyes, and nose, avoiding handshakes, and consuming a nutritious diet (20).

Prevention is paramount in avoiding contracting COVID-19. COVID-19 is not a typical virus; it can survive on both living organisms and inanimate objects, such as surfaces like monye, doorknobs, and clothing. Therefore, it is crucial to ensure that both pregnant women and their family members frequently wash their hands and avoid crowded places. Pregnant women can contract COVID-19 during pregnancy or while breastfeeding, so preventive measures are essential. These measures include promptly isolating newborn babies, adhering to protocols such as washing hands before holding the baby, and wearing a mask. By implementing effective prevention strategies and maintaining discipline, third-trimester pregnant women and their families can help minimize the risk of infection (20).

Relationship between Knowledge about COVID-19 and COVID-19 Preventive Behaviors

Table 4 shows that respondents with poor knowledge tend to exhibit poor COVID-19 preventive behaviors, whereas those with good knowledge predominantly display good COVID-19 preventive behaviors. The Chi Square test yielded a p-value of 0.000 with $\alpha = 0.05$, indicating that $p < \alpha$, thus rejecting the null hypothesis (Ho) and suggesting a significant relationship between knowledge and COVID-19 preventive behaviors among pregnant women at PMB Lasmitasari, S.ST. The relationship between knowledge about COVID-19 and COVID-19 preventive behaviors can be seen in the following Table:

Table 4. Cross table of the relationship between knowledge about COVID-19 and COVID-19 preventive behaviors of pregnant women at PMB Lasmitasari, S.ST

Knowledge	COVID-19 Preventive Behaviors		p
	No	Yes	
Poor	19 (31.7%)	6 (10.0%)	0.000
Adequate	14 (23.3%)	6 (10.0%)	
Good	0 (0.00%)	15 (25.5%)	

Source: Primary Data 2020

The findings affirm a relationship between knowledge and COVID-19 preventive behaviors at PMB Lasmitasari, S.ST. Specifically, higher levels of knowledge correspond to better preventive behaviors, whereas lower levels of knowledge correspond to less effective preventive behaviors against COVID-19.

COVID-19 preventive behaviors fall within the realm of health behavior, which encompasses an individual's responses to stimuli or factors related to health and illness. These findings align with theories asserting that behavior congruent with knowledge tends to be positive and lasting, while behavior incongruent with knowledge tends to be less favorable and transient. Prior to adopting new behaviors, individuals should possess an understanding of the significance and benefits of such behaviors, as behavioral changes are often driven by prevailing knowledge (8).

This study highlights a significant relationship between knowledge and COVID-19 preventive behaviors. Pregnant women with good knowledge exhibit a higher likelihood of engaging in COVID-19 preventive behaviors compared to those with poor knowledge. Lack of adequate knowledge diminishes the effectiveness of respondents' efforts in preventing COVID-19, potentially increasing their susceptibility to the virus. Consequently, poor knowledge may foster lacking behaviors, thereby inceasing the risk of COVID-19 exposure. These findings align with a previous study conducted by Zhang et al. (2020), which identified knowledge as a key factor in

mitigating risky behaviors related to COVID-19 (p = 0.00) [17]. Similarly, Najmeh Maharlouei et al.'s study exhibited a strong relationship between pregnant women's knowledge and their adherence to COVID-19 preventive behaviors (21).

Furthermore, these findings are also consistent with a study conducted by Devi Pramita Sari, which revealed that among the 46 respondents with good knowledge, the majority exhibited adherence to mask-wearing protocols as a preventive measure against COVID-19, with 36 respondents adhering to this practice. The analysis indicated a significant relationship between public knowledge and adherence to mask-wearing protocols in RT 03/RW 08 Ngronngah (p = 0.004) (15).

There are still many gaps in the information that respondents receive regarding COVID-19, However, significant gaps persist in the information received by respondents concerning COVID-19, particularly regarding prevention methods and transmission routes. Accurate knowledge about COVID-19 is pivotal in shaping preventive behaviors to mitigate the spread of the virus, particularly among pregnant women. Given that COVID-19 can affect anyone, including pregnant women, the role of health workers at PMB Lasmitasari, S.ST is crucial in disseminating accurate information to facilitate the adoption of effective preventive behaviors during the pandemic.

According to researchers, comprehensive health promotion initiatives targeting pregnant women during pregnancy check-ups, particularly amidst the COVID-19 pandemic, encompassing symptoms, preventive measures, transmission modes, and adherence to health protocols in daily life, would significantly facilitate the adoption of COVID-19 preventive behaviors. Siston et al. noted that pregnant women face increased risks of adverse effects upon contracting respiratory infections (22).

These findings align with a previous study conducted by Nwafor et al., which highlights that it is imperative to instill specific routine behaviors among pregnant women to minimize COVID-19 exposure. These behaviors include regular handwashing with soap or hand sanitizer, avoiding touching the eyes, nose, and mouth, maintaining a distance of at least 1 meter from others, adhering to proper coughing or sneezing etiquette by covering the nose and mouth, wearing a mask during interactions with others, and ensuring cleanliness of the household and surroundings (11).

Furthermore, these findings are also consistent with a study conducted by Mujiburrahman et al., which revealed a significant relationship between knowledge and COVID-19 preventive behaviors. Among the respondents, 86 (82.7%) exhibited good knowledge, and 53 (51.0%) exhibited adequate preventive behaviors. It underscores the notion that knowledge profoundly influences individual behavior in daily life; individuals with higher levels of knowledge are better equipped to make informed choices and decisions (9).

Researchers contend that the knowledge possessed by pregnant women about COVID-19, including its causes, prevention methods, and transmission routes, serves as the foundation for shaping COVID-19 preventive behaviors. Enhanced knowledge facilitates informed decision-making regarding preventive measures, thereby reducing the risk of exposure to the disease.

Learning that imparts good knowledge does not inevitably result in behavioral changes. Despite acquiring comprehensive knowledge through various media on preventing the transmission of COVID-19, individuals may not necessarily engage in behaviors aimed at preventing such transmission. The process of behavior formation, as outlined by social learning theory, typically progresses through several stages: attention, retention, reproduction, and motivation. Motivation plays a pivotal role in sustaining behavior, as it propels individuals to persist in their actions. Therefore, individuals must be adequately motivated to emulate behaviors learned through modeling (19).

Presently, diverse media serve as educational platforms for shaping behavior through knowledge dissemination. Media functions either as a facilitator for effective communication or as a hindrance (23). Moreover, behavior formation is influenced by external stimuli, including

reinforcement and punishment. Reinforcement involves the strengthening of specific behaviors through subsequent environmental consequences or changes. Skinner posited three types of stimuli following behavior: neutral stimuli, reinforcements, and punishments (24). Behaviors reinforced tend to be repeated, while punishment refers to events that weaken or discourage the occurrence of a behavior. Various factors influence behavior formation, and reinforcement plays a crucial role in habituating behaviors. External encouragement, such as strict penalties imposed by the government for violating COVID-19 prevention protocols, and stimuli from authorities, including health workers, serve as essential sources of reinforcement. Thus, knowledge not only requires adoption but also manifests in good (positive) behaviors (25).

This study aligns with a study conducted by Rosmala, which exhibited a significant relationship between knowledge and COVID-19 prevention. Nearly all respondents with good knowledge also exhibited appropriate preventive measures. The researchers' analysis reveals that access to reliable information on COVID-19 prevention empowers pregnant women to adopt effective preventive behaviors, thus reducing their risk of contracting the virus during the third trimester. According to the government, particularly the Task Force (2020), preserving immunity is paramount for pregnant women in combating COVID-19. Recommended actions include maintaining a balanced diet, engaging in physical activity, ensuring adequate rest, taking vitamin supplements, and refraining from smoking. Good knowledge about COVID-19 prevention is crucial for pregnant women in the third trimester. Coupled with access to accurate information and adequate support, this knowledge empowers pregnant women to implement optimal preventive measures against COVID-19 transmission. Consequently, pregnant women, their fetuses, and their families can avoid the detrimental effects of COVID-19. Higher levels of knowledge among pregnant women correlate with better adherence to COVID-19 prevention protocols during the third trimester (26).

Good knowledge empowers pregnant women to make informed decisions, particularly in preventing COVID-19. Acquiring accurate information entails effort, whether through reading books, watching news broadcasts, or accessing scientific journals. However, information obtained from mass or electronic media, regardless of its format, may not inevitably result in behavioral changes without proper filtration and support from various stakeholders, including family and the surrounding community. According to Rogers (2002), behavior congruent with knowledge tends to last longer compared to behavior incongruent with knowledge. The process of behavioral change, as outlined by Rogers, involves stages such as awareness, interest, evaluation, trial, and adoption. Knowledge plays a pivotal role in enhancing preventive behaviors. Notoatmodjo (2010) delineates stages of knowledge that can influence behavioral patterns: awareness, comprehension, application, analysis, synthesis, and evaluation (20).

CONCLUSION

Based on the findings, it was observed that pregnant women exhibited predominantly poor knowledge about COVID-19, which corresponded with lacking preventive behaviors. Thus, it can be inferred that there exists a significant relationship between knowledge about COVID-19 and COVID-19 preventive behaviors among pregnant women at PMB Lasmitasari, S.ST ($p = 0.000$).

SUGGESTION

It is recommended that PMB Lasmitasari, S.ST intensify education and information dissemination efforts aimed at preventing COVID-19 among pregnant women. Additionally, pregnant women are encouraged to consistently practice healthy behaviors to prevent COVID-19 transmission in their daily lives during the pandemic. This proactive approach is crucial for mitigating the spread of COVID-19.

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