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Pandemic Covid 19, Social Psychology, and Pregnancy: Relatedness and Analysis

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A B S T R A C T

The Covid-19 pandemic is one of the sixth health emergencies of international concern. The government has implemented several adjustments to people's behavior, such as national and regional lockdowns, social distancing, and restrictions on mobility to reduce the spread of this virus. However, this action raises various adverse social psychological problems, especially for pregnant women as a risk factor for Covid-19. This study aims to determine the impact of the Covid-19 pandemic on the social psychology of pregnant women. This study uses a method. The result shows the Covid-19 pandemic has an impact on the psychology of pregnant women, both interpersonal and interpersonal. This certainly allows bad things to happen to pregnant women, such as anxiety, depression and post traumatic stress disorder (PTSD), which leads to complications during pregnancy. Several treatments with a social psychological approach can be done to prevent the impact of the pandemic on the psychosocial impact of pregnant women.

INTRODUCTION

On January 30, 2020, the World Health Organization (WHO) declared the pandemic Covid-19, a respiratory disease caused by the new coronavirus SARS-CoV-2, as the sixth health emergency of international concern (Lai *et al*., 2020; WHO, 2021). This virus is highly contagious so that almost all countries have been infected and resulted in the death of around 2 million (Worldometer, 2021). When infected with this disease, sufferers may have no symptoms or symptoms of mild upper respiratory tract infections, up to severe and fatal cases with pneumonia and acute respiratory failure (Chen *et al*., 2020). Transmission mainly occurs through contact with respiratory droplets produced by an infected person. The government is trying to anticipate and control the spread of the virus through various measures, such as national and regional lockdowns, social distancing, and restrictions on mobility (Ali and Alharbi, 2020). This problem is a major challenge for almost all countries around the world because of the rapid spread of SARS-CoV-2 and its devastating consequences for health. Nothing is free from the impact of Covid-19, including pregnant women as a risk factor (Almeida *et al*., 2020).

Pregnant women tend to have a strong desire to prepare for a good future and provide a stable environment for their future children (Craske and Stein, 2016). However, the developing pandemic situation with strict limits regarding social contact and economic instability does not create a safe and supportive situation for good fetal development. Based on current data, it seems that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) does not have an impact on severe infection in pregnant women because they are usually young and without comorbidities (Kajdy *et al*., 2020). It should be underlined that the Covid-19 pandemic is not only a public health crisis but also a social, demographic and economic crisis and has a significant negative socio-psychological effect on everyone, including pregnant women.

Although there is evidence of the social psychological impact of Covid-19 on the general population, studies that discuss its impact on pregnant women are still limited. Without this knowledge, appropriate care and support for the social psycho-

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logical health of pregnant women cannot be provided optimally in clinical practice and others. which is involved. Therefore, this study aims to determine the impact of the Covid-19 pandemic on the social psychology of pregnant women and the factors that influence them and their treatment options. This study can assist government agencies and health care professionals in maintaining the social psychological well-being of pregnant women in the face of the expansion of the Covid-19 outbreak in Indonesia and various parts of the world.

Covid-19

Coronavirus belongs to the Coronaviridae family and looks like a ring of spikes when observed through an electron microscope. Its surface is equipped with various spines, which are useful for attacking and binding living cells. This virus can cause mild to severe flu such as Middle East Respiratory Syndrome (MERSCoV) and Severe Acute Respiratory Syndrome (SARS-CoV) (Sexton *et al*., 2016; Su *et al*., 2016). The source of the virus is several animals including bats. The first Coronavirus was discovered in 1937 in birds and then began transmitting to humans around the 1960s (Coronavirus: Common Symptoms, Preventive Measures, and how to Diagnose it. Caringly Yours, 2020).

The Covid-19 outbreak that began in China in 2019 is a global health threat, and is by far the largest atypical pneumonia outbreak since the SARS outbreak in 2003. In the weeks following the initial outbreak, the total number of cases and deaths exceeded SARS (Wang *et al*., 2020). The city of Wuhan in China was the first place to be infected with this virus, namely in December 2019 (The Editorial Board, 2020) when a new strain of the corona virus was detected on December 31, 2019 (WHO, 2020). Around 219 countries and territories have been reported infected, major outbreaks in the US, China, South Korea, Italy, Iran and Japan, which have claimed an estimated 95 million patients with more than 2 million deaths worldwide (Worldometer, 2021).

Over the past few decades, the coronavirus has been known to infect mice, rats, cats, dogs, horses, turkeys, cows and pigs. These animals can sometimes transmit the corona virus to humans. The virus can be transmitted by coughing and sneezing droplets from infected patients. A study reports that the virus can infect a person at a distance of about 6 feet (1.8 m) (Ali and Alharbi, 2020). This virus can survive up to several days in coughs and sneezing droplets that stick to a surface. However, this virus can die with common disinfectants such as sodium hypochlorite and hydrogen peroxide (Kampf *et al*., 2020). Viruses are also thought to be transmitted through the aerosolization / feco-oral route (WHO, 2021). Patients are infective as long as symptoms persist and even in clinical recovery. The incubation period varies from about 2 to 14 days. Research has identified angiotensin-2 (ACE2) receptors as a receptor for viruses to enter the respiratory mucosa and attach to lung cell receptors (Cheng and Shan, 2020).

The clinical symptoms of Covid-19 vary widely, ranging from asymptomatic to acute respiratory distress and multi-organ dysfunction. Common clinical features include fever (not all), cough, sore throat, headache, fatigue, headache, conjunctivitis, myalgia and shortness of breath. This indicates that this infection is indistinguishable from other respiratory infections. Several things increase the likelihood of experiencing Covid-19, including shortness of breath, dry cough, and someone in contact with a Covid-19 patient or traveling to an area infected with Covid-19. In such situations, clinical trials for Covid-19 must be carried out. For patients with suspected infection, a diagnostic technique that can be used is real-time fluorescence (RT-PCR) to detect SARS-CoV-2 positive nucleic acid in sputum, throat, and lower respiratory tract sample secretions. If not treated immediately, the disease progresses to respiratory failure, pneumonia and death at the end of the first week. This is associated with an extreme increase in inflammatory cytokines, such as TNFα, IL2, IL7 and IL10 (Chen *et al*., 2020). The risk of Covid-19 is greater for the elderly, children, and patients with other health problems such as lung disease, heart disease, diabetes and cancer. However, some people recover easily while others take time depending on the health condition and age of the patient (Wan *et al*., 2020).

There is still no appropriate treatment for the coronavirus at this time. Only prevention, management and supporting health care can be provided when handling Covid-19. Several approaches have been or may be used to control this disease. The first step is adequate isolation measures to prevent transmission to other contacts, patients and health workers. Minor illnesses should be treated at home with counseling about signs of danger. The general principle is to maintain hydration and nutrition and control fever and cough. Administration of oxygen via a nasal prong, facial mask, high flow nasal cannula (HFNC) or non-invasive ventilation may be indicated in hypoxic patients. Mechanical ventilation and even extra corporeal membrane oxygen support may be required. Renal implantation therapy may be required in some patients. Antibiotics and antifungals are needed if co-infection is suspected or proven. As of now, there is no approved treatment

for Covid-19. Antiviral drugs such as ribavirin, lopinavir-ritonavir have been used based on experience with SARS and MERS. In historical controlled studies of patients with SARS, patients treated with lopinavir-ritonavir with ribavirin had better outcomes than those given ribavirin alone (WHO, 2021; Chen *et al*., 2020). Patients can be discharged from isolation after having no fever for at least 3 days and undergoing two consecutive negative molecular tests at 1 day sampling interval (Singhal, 2020).

Until now, prevention is the best measure to reduce the impact of Covid-19 from the lack of effective treatment. In addition, vaccines are not yet widely available, so preventive measures are the best way to avoid exposure to the virus (Adhikari *et al*., 2020). The following steps can be taken: (1) maintaining an appropriate distance from other people; (2) avoid contact with infected people; (3) washing hands regularly with soap or disinfection with an alcohol content of at least 60% using a mask; 4) not touching the eyes, nose and mouth with unwashed hands; (5) cover coughs and sneezes with a tissue (Di Gennaro *et al*., 2020). WHO also issued detailed guidelines regarding the prevention of the spread of the virus including: (1) Routinely washing hands with soap and water or with an alcohol-based hand rub; (2) Avoid touching eyes, nose and mouth; (3) Practice covering your mouth and nose with your bent elbow or tissue when coughing or sneezing; (4) If fever, cough and difficulty breathing, seek medical examination immediately; (5) Follow the latest information and advice from your health care provider; (6) Prioritize keeping a distance of at least 1 m (3 feet) (WHO, 2021).

Increasing the body's immune system is also important in efforts to prevent Covid-19. Healthy people should consume lots of citrus fruits which contain various vitamins. Some dried fruits (almonds, walnuts, and dates) are also beneficial for boosting the immune system. However, both parents and patients can take zinc and iodine vitamins and supplements in consultation with a medical practitioner. Important vitamins are A, C, D and E. Other actions that can be taken are avoiding stress, doing regular exercise, not smoking and avoiding other narcotic products. Adequate sleep is also important for boosting the immune system. (Ali and Alharbi, 2020).

Covid-19 has affected everyday life, business, disrupting trade and the movement of the world at a very fast pace. Most countries have experienced drastic economic downturns. Various industries and sectors are affected by this disease, including the pharmaceutical industry, solar power sector, tourism, information and electronics industries. This virus creates significant indirect effects on the daily lives of citizens, as well as the global economy (Haleem *et al*., 2020). The government's national isolation measures aim to reduce the spread of this virus. However, this causes emotional well-being problems in society. Living like a lockdown can have long-term negative consequences for human behavior and mentality. News about the spread of the virus and the number of deaths easily increasing every day will cause sadness and discomfort in human life. The fear of Covid-19 combined with deception about the source of infection, symptoms and mode of transmission will encourage many people to be belittled and also commit social disgrace (Kumar, 2020).

Social psychology

Social psychology is best defined by Gordon Allport (1954) as the science that uses scientific methods to understand and explain how an individual's thoughts, feelings and behavior are influenced by the actual presence, imagination, or implied presence of another human being. creature. Myers and Spencer (2006) define social psychology as the scientific study of how people think, influence, and relate to one another. Barron and Byrne (2007) define social psychology as a scientific field that seeks to understand the nature and causes of individual behavior and thinking in social situations (Baron and Branscombe, 2008).

The individual is the realm of social psychology. Social psychology is different from sociology which focuses on social groups. Anthropology is the study of human culture. Most anthropologists will study a particular culture in depth by observing it in detail; conversely, social psychologists will study individuals in different cultures using alternative research methods such as experiments or surveys. Lastly, clinical psychology focuses on helping people with mental illness or who have unhealthy thoughts and behaviors while social psychology studies everyday thoughts and behaviors throughout life, including negative behaviors (such as discrimination or aggression) and positive behaviors (such as helping or cooperating) (Mitchell, 2009).

Social psychology was pioneered by Kurt Lewin as "the father of social psychology". Lewin was a Jew who was deeply influenced by World Wars I and II, and when he immigrated to the United States, he devoted his academic career to understanding social dynamics. Lewin famously suggested that everyone's social behavior is influenced by personality and social environment. Many other influential social psychologists have followed in his footsteps (Haynes, 2018).

According to previous practice, social psychology has often focused on individual cognitive isolation such as interpersonal interactions. Since

the social cognition movement in the 1970s, social psychology has emerged as the main headwater for studying three intrapersonal phenomena that are somewhat dependent on the "presence of others": (a) the structure of self-knowledge; (b) attitudes and their influence on one's choices; and (c) subjective experiences of emotions (Mitchell, 2009).

Some philosophers consider social psychology to indicate the discovery of the meaning of a person's life in relation to the social life he has. An extensive research program shows that humans use three dimensions to understand meaning in their social lives; influence (affect), cognition and behavior. The influence dimension shows that social interactions are related to positive (good) or negative (bad) feelings and reactions that a person has towards social stimuli and social interactions. The second dimension reflects the cognition we have towards the object of interest. The third dimension considers the actual behavior we have towards stimuli. These three things are interrelated so that the meaning of the individual's life can be found (Fiske *et al*., 2007).

Social psychology, like psychology or general sociology, is a science because it studies the social aspects of human behavior through scientific methods. This science deals with the ways in which a person's behavior and disposition is influenced by the behavior and dispositions of others. Along with the study of individual behavior, social psychology also studies group dynamics. The purpose of social psychology is to find out how someone affects others and vice versa. This involves a fact-finding process to build a relationship between cause and effect and then use it to solve concrete social problems (Avais *et al*., 2014).

Covid 19, Social Psychology, and Pregnancy

The Covid-19 pandemic has caused more than 2 million deaths by early January 2021. The pandemic has limited social livelihoods so that the virus does not spread more widely. Viruses that are transmitted through direct person-to-person contact or droplets which are spread by sneezing or coughing from an infected person (Caparros-Gonzalez, *et al*., 2020). Lockdown and social distancing are terms that appear along with real prevention efforts to reduce the spread. Social activities must be limited. Social distancing measures encourage people to avoid crowds and maintain a minimum distance of one and a half meters (five feet) from each other and, in more severe cases, lockdowns are recommended, meaning that people cannot leave their homes (Almeida *et. al*., 2020). This action is important to take to reduce transmission of the virus between individuals, keep infected or possibly infected people from people who are asymptomatic or healthy so as to avoid uncontrolled transmission of the new virus.

This isolation and restriction of movement can cause adverse social psychological problems, especially for pregnant women as a risk factor for Covid-19. During pregnancy, women experience several biological adaptive changes that increase their susceptibility to certain viral infections including severe acute respiratory syndrome (SARS) (Luo & Yin, 2020). As Slade *et al*. (2009) explain that pregnancy is not an ordinary time in a woman's life. At no other point in her life would it be so much about her changing in such a short amount of time, or would the nature and qualities of her adaptation have such far-reaching implications for the physical and psychological health of herself and her child. This illustrates that there are various changes in body processes, both biological and psychosocial, that occur during pregnancy. In addition, adjusting to a sudden severe situation, such as the current pandemic, is certainly more difficult for pregnant women.

Although there are some similarities between the SARS-CoV-2 virus and other respiratory infections, the current pandemic certainly has its own characteristics. This allows changes in people's thoughts, feelings and behavior as well as social psychological crises. Humans are instinctively social and tend to come together as a mechanism for coping with high stress levels and a way to increase resilience. A person's thoughts, feelings, and behavior are influenced by the real and imaginary presence of other humans. This is the scope of social psychological science. With this science, we can identify the psychological processes that affect social phenomena. There is no doubt that there may be few social events that have an impact on human psychology such as the Covid-19 pandemic, mainly because of the number of people it affects, as well as the areas of our lives that are affected (Miguel *et. al*., 2020; Smith and Gibson, 2020).

Isolation and limited movement can result in pregnant women experiencing a lack of social support from friends, relatives and partners, economic difficulties, working from home and potentially living in a crowded house. In addition, pregnant women face an increased risk associated with intimate partner violence because during lockdown women have to live with potential assailants. The suggestion to stay at home also has the potential to reduce the number of antenatal and postnatal appointments and restrictions related to partner participation during pregnancy (RCOG, 2021; Holmes *et al*., 2020).

The Covid 19 pandemic has resulted in negative societal behaviors, such as loneliness, frustration, excessive worry and uncertainty. Experiences

of isolation, fear of being trapped, and rumors spread on social media can all result in increased social anxiety and panic (Usher *et al*., 2020). Fear before childbirth is very common in some parts of the world (Koc *et al*. 2020) and can increase when a woman has no family support, is unfamiliar with the medical team, and worries that the baby will catch the virus during pregnancy or childbirth or that she will be separated. of the baby after birth. In addition, research shows a significant relationship between social isolation (i.e., lack of interaction with other people or the wider community) and loneliness (i.e., feelings of absence of social networks or companions) (Leigh-Hunt *et al*. 2017). During social isolation, the support connections for pregnant women are reduced, because other family members who do not live at home and friends are no longer physically present (Almeida *et al*., 2020).

Lack of adequate physical and emotional support can have an impact on the mental health of pregnant women (Issalillah and Wisnujati, 2020). The risk of anxiety, depression and post traumatic stress disorder (PTSD) is also much higher in this situation (Yu, 2018). Interestingly, a study surveyed pregnant women in Italy and found that more than half of the women had severe psychological effects of Covid19, and about two-thirds reported higher than normal anxiety. In addition, women in the first trimester have potentially more severe levels of anxiety than those who become pregnant in the final trimester. Symptoms of anxiety and depression in the mother during pregnancy are associated with shorter gestation periods, low birth weight babies, and poor fetal and child neurodevelopment (Usher *et al*., 2020). A recent study adds that depression and anxiety experienced by antenatal women are significantly associated with suicidal thoughts (Binti Mohd Arifin and Hassan, 2020).

The psychosocial aspect of pregnant women can also be affected through the economic aspect during the Covid-19 pandemic. Salaries often decline and many people lose their jobs which causes difficulties in paying bills and loans, as well as problems with daily living costs (Kajdy *et al*., 2020). A study among pregnant women in China reported increased financial stress, increased stress from work and home among pregnant women. In addition, pregnant women are also at risk for mental health problems caused by external factors including the stress they face from work, home and financial problems, especially during this difficult period (Liu *et al*., 2020).

Pregnant women are at a higher risk of experiencing intimate partner violence (IPV) during this pandemic. This includes physical or sexual abuse, emotional abuse and stalking. This incident is the leading cause of death due to homicide for women (Mazza *et al*., 2020). Several risk factors have been identified: low income, social isolation, loss of cushion, tight space, loss of loved ones, fear of death, difficulty in accessing medical and social services, inability to escape, increased consumption of addictive substances, etc. All of the risk factors usually associated with family violence increase during the epidemic. For example, after the Fukushima disaster, pregnant women were not immune to physical violence because physical violence against pregnant women was four times greater in this region compared to other Japanese provinces at the same time, which was around 1.5 percent (Sakurai *et al*., 2017). In the same way, data from Hubei province in China, especially those affected by the coronavirus epidemic, show three times as many reports of intrafamilial violence in February 2020 during confinement as compared to February 2019 (Wanqing, 2020). These numbers may reflect only the worst cases. More complex forms of violence can also develop when the perpetrator can restrict access to psychosocial services and support from pregnant women. Exposure to Covid-19 can pose a threat. Violators can also take advantage of women's inability to ask for help or to run away; women can even be expelled on the road without shelter (Roesch *et al*., 2020).

The statements previously mentioned prove that the Covid-19 pandemic has a major social psychological impact on pregnant women. Settlement using a social psychological approach can prevent these effects. In addition, biological and psychological approaches can also be used. First, the stress that occurs due to a pandemic can be suppressed by the mindset of pregnant women. To deal with a global pandemic, avoiding stress is simply not an option. Past research has shown that thinking patterns about stress can be changed with brief and targeted interventions. These interventions do not focus on viewing stressors (such as viruses) as non-threatening. Instead, they invite people to recognize that we tend to emphasize the things we really care about and can harness the stress response for positive gain. In addition, a more adaptive mindset about stress can increase positive emotions, reduce negative health symptoms and improve physiological function under acute stress (Crum *et al*., 2017; Crum *et al*., 2020).

Second, social support is an important component of good physical and psychosocial qualities, especially when a woman takes on new responsibilities and roles, such as pregnancy. In this situation, support may not be obtained directly so that support is

virtually directed, both from family and health workers (Telehealth). Virtual support can be extended across a person's natural support system. For example, if a pregnant woman has to attend an ultrasound alone and it is important for the partner to participate, the couple can find a way for the partner to be present virtually or for the mother to record an important part of the appointment (e.g. record a short audio clip of the fetal heartbeat) (Diamond *et al*., 2020). Supportive social relationships directly affect the mental health of pregnant women by encouraging positive health feelings and behaviors and increasing emotional regulation and indirectly reducing the incidence of intimate partner violence (IPV) and physiological stress responses (Friedman *et al*., 2020; Lebel *et al*., 2020).

Third, regular physical exercise has a role in minimizing feelings of anxiety and stress in individuals in addition to improving mood, self-esteem and well-being. In times of stress, such as the current pandemic, staying active is beneficial for the body and mind (De Oliveira Neto *et al*., 2020). Based on clinical guidelines in Spain, general recommendations are for a minimum of 150 minutes of moderate exercise, preferably distributed throughout the week. These guidelines also establish specific medical contraindications in exercise in pregnant women, such as persistent bleeding, cardiovascular disease, cervical insufficiency, multiple pregnancy, preeclampsia or hypertension due to pregnancy, and rupture of membranes (Evenson *et al*., 2014). Therefore, professional guidance by a physiotherapist or physical education tutor is required to suit each pregnant woman's condition.

Fourth, psychotherapy and pharmacotherapy are also useful for preventing stress that leads to symptoms of anxiety and depression in pregnant women. Having potentially serious physical and psychological consequences requires interventions to reduce symptoms and build resilience. Psychological interventions to prevent and treat depression and anxiety in pregnancy are effective, with cognitive behavioral therapy (CBT) as first-line treatment and online interpersonal therapy (IPT) potentially providing additional benefits for reducing depression and increasing social support (O'Connor *et al*., 2019; Manber *et. al*., 2019).

Apart from psychotherapy, pharmacological interventions are also useful in the treatment of psychological disorders. Selective serotonin reuptake inhibitors (SSRIs) are first-line drugs with minimal side effects and overdose safety compared to tricyclic antidepressants which have a significant adverse side effect profile (Yonkers *et al*., 2017). During pregnancy, sertraline or escitalopram is recommended because of the lower risk of adverse events in the fetus and neonatal abstinence syndrome (Latendresse *et al*., 2017). Pregnant and lactating women need special consideration in the use of drugs because they pose a risk to the fetus and baby. The majority of pregnant women use medication during pregnancy. Despite increasing availability of information about teratogenic risks, medication use during pregnancy still causes uncertainty and concern among pregnant women and their health care providers (Bakker *et al*., 2006). Although it is difficult to estimate the real risk of medication use during pregnancy, unrealistic perception of risk among pregnant women may lead to poor adherence, discontinuation of treatment, and even abortion of otherwise wanted and healthy infants (Widnes *et al*., 2013). Counseling enables a more balanced decision on the use of medication during pregnancy. However, the manner in which information is presented can make a substantial difference to people's responses. For example, providing pregnant women with positively framed information will lower risk perceptions significantly. In addition, women's perception of the benefits of medication use may have a major influence on the acceptance of risks. Careful consideration of the risks, benefits, expected results, and alternatives to drug use must be included. Risk and benefit analysis must be done carefully.

CONCLUSION

The Covid-19 pandemic has created social psychological problems for pregnant women. Social distancing policies result in pregnant women experiencing a lack of social support from friends, relatives and partners, economic hardship and facing increased risks related to intimate partner violence because during lockdown women have to live together with potential assailants. It is also associated with reduced numbers of antenatal and postnatal appointments and restrictions regarding partner participation during pregnancy. If these problems are not treated promptly, anxiety disorders, depression, and post traumatic stress disorder (PTSD) can all affect pregnancy. Social, psychological, psychological and pharmacological treatment can help prevent negative social psychological impacts on pregnant women during the Covid-19 pandemic.

This study shows that the Covid-19 pandemic has a socio-psychological impact on pregnant women and can lead to complications. However, deeper research needs to be done to determine the deeper social psychological impact of pregnant women so that the most effective treatment is created.

In addition, this study provides a new perspective on the problems posed by Covid-19 from a social psychological perspective. Prevention programs and interventions related to this problem must be implemented to improve the psychosocial health burden of pregnant women from Covid-19. This can be done maximally if every related party, such as pregnant women, families, communities, health personnel and the government, supports and cooperates in its implementation.

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