Original Article

Need Asseesment on Maternal Mental Health Care for Perinatal Mothers during COVID-19: A Qualitative Study

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Abstract

Background: During COVID-19 pandemic, the isolation, socialization, and extreme changes in daily life have some potential mental health consequences which should be recognized as a critical public health concern, especially for perinatal mothers. Therefore, it is very important to assess the needs for maternal mental health care in perinatal mothers during COVID-19 pandemic. This study aimed to explore mothers' needs for maternal mental health care in the perinatal period during COVID-19 pandemic. **Material and Methods:** Realistic phenomenological approach was carried out in this qualitative study. The study was conducted at five community health centers in the city of Tangerang, Indonesia. In-depth interviews were conducted to 11 mothers who were pregnant, in labor, during puerperium and two months after giving birth with purposive sampling. Data were collected from May to August 2021. Interviews were conducted face to face, audio recorded, and transcribed verbatim. Data were analyzed by using Van Manen's phenomenological method. **Result:** Initial finding revealed 254 codes, which were then reduced to 122 codes, 98 sub-categories, 22 categories, and 5 themes. There were five themes related to mothers' needs for mental health care during COVID-19, *i.e.*, health protocol during pandemic, psychological support, health education, simple coping mechanism, and support system. **Conclusions:** The needs can be fulfilled by the closest people the mothers have and healthcare system for perinatal mental health. Vaccination, health protocol, and psychological resilience should be delivered to mothers during COVID-19.

Keywords: *COVID-19, maternal health services, mental health, pregnant women*

Introduction

An increase in anxiety, fear, stress, and worry can be experienced by (20-50%) of women in pregnancy,[1,2] (50-80%) of women in delivery,[3] and (15-20%) of women in the puerperium,[4,5] and it may occur simultaneously with other health problems. The World Health Organization (WHO) mentioned that, in developing countries, (15.60%) of pregnant women and (19.80%) of postpartum women experienced mental health problems during the perinatal period (pregnancy and postpartum).[6] Indonesia maternal Perinatal Mental Health (PMH) is not routinely screened. A lot of mothers have risk factors but have not identified that they have moderate to poor welfare as a determinant of mental health.[7] The opportunity to detect anxiety, fear, worry, and stress is often missed by health workers during examination. This is evidence that PMH for mothers has not yet received great attention from health workers and health system,[8] whereas poor PMH can cause other physical health problems, *e.g.*, dizziness, nausea,[9] decreased appetite, reduced breast milk production, and sleeplessness. A pregnant woman who has uncontrolled anxiety will increase the prevalence of hypertension in pregnancy and pre-eclampsia, increase the incidence of low birth weight, stunted fetal growth, and premature birth,[10] while postpartum mothers who experience high anxiety or worry, especially which lead to depression, will result in cognitive and behavioral disorders of the mother,[11] that can hinder the mother's daily activities, household activities, and social interactions, loss of interest and happiness, reduced energy resulting in decrease in maternal activity,[12] where in the long term will affect the exclusive breastfeeding program,[13] infant immunization, bonding attachments,[14] increase in infectious diseases in infants, malnutrition and

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stunting, and the non-optimal growth of infants in the future.[15]

Since the time when WHO declared the novel coronavirus disease (COVID-19) pandemic in March 2020, all levels of society are facing new lifestyle changes.[16] The prevalence of anxiety and depression in perinatal mothers has significantly increased after the spread of COVID-19 throughout the world.[17] Isolation, wearing a mask, social distancing, frequent handwash, new public policies, changes in perinatal health care, fear of COVID-19 exposure, and shortage of health workers due to COVID-19 infection can increase the extreme stress experienced by mothers.[18] Another study in Wuhan showed that seven percent from 285 mothers have post-traumatic stress symptoms. Mothers suffer more re-experiencing, negative alterations in cognition or mood.[19] Other problems which are faced by mothers during COVID-19 are lack of social support, overload of domestic burden, potential COVID-19 infection risk for mother and their fetus, and fear of COVID-19 exposure.[20] Previous studies conducted in Iran, Japan, Poland, and Turkey showed that the prevalence of anxiety experienced by pregnant mothers was between (21.1%) to (64.5%) during COVID-19 pandemic, and this was continued in labor and postpartum periods.[17,21–23]

Perinatal mothers are more likely to develop anxiety and depression during COVID-19 pandemic, therefore, assessment of the needs for maternal mental health care in perinatal mothers during COVID-19 pandemic is important to determine. This is because Maternal Mental Health (MMH) is very important, and often being forgotten because many mothers prefer to keep silent for their mental health needs. This qualitative study was conducted to clearly understand what mothers need to support their PMH. The purpose of this study is to identify the needs of mothers according to their experiences on MMH care for perinatal mothers during COVID-19 pandemic.

Material and Methods

The study was conducted in the 2021, research design with qualitative with realistic phenomenological approach, to capture mothers' experiences on psychological needs in perinatal period. The researcher, who is a midwife and holds master degree in midwifery, has been working with mothers in the community and competent on maternity care. This research was conducted in five Public Health Centers (PHC) in the city of Tangerang, Banten, and Indonesia. The five PHCs were selected based on purposive sampling because they provided maternity service in the antenatal, birth, and puerperium care. Data collection was conducted from May to August 2021. Purposive sampling was used to recruit and interview participants**.** Maximum variation sampling was done to select a small number of cases and maximize diversity relevant to research question and sample characteristics. Researchers would like to understand how a phenomenon is seen and understood among different phases. Participants in this research were divided into four conditions, i.e., pregnant, in labor, after giving birth and in puerperium. There were six pregnant mothers, two mothers in labor, one mother after giving birth, and two mothers in puerperium. There were two mothers in labor and one mother in puerperium who refused to be interviewed.

In-depth interviews were conducted face to face with each participant individually and semi-structurally by using interview guidelines. Each interview was carried out at the participant's home after the interview schedule was agreed. However, for mothers in labor, the interview was conducted in maternity care setting. Informed consent process was conducted before interview and the participants provided their consent voluntarily. The interview was audio-recorded and the average duration of the interviews was about 40-60 minutes. Field notes were also used during the semi-structured interviews for recording the participants expression, behavior, and non-verbal communication, such us gestures, eye contact and body language. The interviews consisted of questions on: (1) demographic information, (2) how mothers go through their pregnancy, labor and puerperium in psychological aspect during COVID-19, (3) how mothers face the anxiety and stress in the perinatal period during COVID-19, (4) what are the causes of mothers' anxiety or stress, (5) how mothers deal with the anxiety and stress they experience, and (6) what kind of support do they need from health workers, husband, healthcare institutions and the community. After each interview with participants, the audio recording was immediately transcribed and verbatim check was done several times to improve the accuracy and comprehensiveness four mothers underwent two repeat interviews to complete the missing information. From this point, the transcribed data were the primary sources for describing the mothers' needs for PMH care during COVID-19 pandemic. The transcriptions were then translated into English by a bilingual person, with full observance of grammatical, writing, and literary tips. Finally, the transcripts were edited by a translator. Data saturation was reached after interviewing eleven participants. Data saturation is a condition where there was no more new information, new codes and the ability to obtain additional new information has been attained**.** The data were then analyzed by using Van Manen's phenomenological method.[24] Van Manen has introduced the following six activities as operational approach for hermeneutic phenomenology[25]: (1) paying attention to the nature of the mother experiences in perinatal period during COVID-19, (2) discovering a specific experience from mothers, (3) contemplating the essential themes that define the characteristics of the phenomenon, (4) describing the phenomenon by using the art of writing and rewriting, (5) establishing and maintaining a strong and conscious relationship with the phenomenon, and (6) balancing the

research context, considering the parts and the whole. After data analysis process was finished, the themes were sent to the participants for comments or feedback.

The accuracy of the qualitative findings was determined by assessing the criteria of credibility, dependability, confirmability, and transferability. To assess the credibility of the study, the transcripts were returned to the participants for them to read and comment, and to confirm whether they agree with what has been conveyed. Excerpts from the transcripts of the interviews were analyzed separately by them. In this study, an attempt has been made to ensure the confirmability of this research by an audit trail where the researcher provided details of the process of data collection, data analysis, and interpretation of the data. Dependability was assessed by participants and peer review analysis. As for transferability, the researcher tried to provide accurate and complete explanations of the research process.

Ethical consideration

This research was granted ethical clearance number 144/LPPM-STIKES YATSI/V/2021 on May 29, 2021, by the Ethics Committee of Yatsi Nursing and Midwifery College. Researcher ensures the quality and integrity of the research, provided informed consent, respects the confidentiality, and anonymity of participants.

Results

Demographic information of the participants is shown in Table 1. In-depth interviews with 11 mothers showed that there was an increase in maternal anxiety and stress in perinatal period during COVID-19 pandemic. The themes obtained from this qualitative study can be seen in Table 2. Initial finding revealed 254 codes, which were then reduced to 122 codes, 98 sub-categories, 22 categories, and five themes. Five themes related to maternal needs for mental health services during the perinatal period include health protocol during pandemic, psychological support, health education, simple coping mechanisms, and support system.

Table 1: Characteristics of the Participants

Code	Participant	Gravida/ Parity	Gestational age/ Phase
R1	Pregnant	Primigravida	20 weeks
R2	Pregnant	Primigravida	28 weeks
R3	Pregnant	Primigravida	37 weeks
R4	Pregnant	Multigravida	24 weeks
R5	Pregnant	Multigravida	39 weeks
R6	Pregnant with anxiety	Primigravida	34 weeks
R7	Labor/Spontaneous	Multigravida	Stage 1-4 in Labor
R8	Labor/Caesarean surgery	Multigravida	Stage 1
R9	Puerperium	Multipara	2 weeks
R10	Puerperium	Multipara	6 weeks
R11	After giving birth	Multipara	2 months after giving birth

Health protocol during pandemic

The first theme that researcher defined is health protocol during pandemic. This theme contains 19 sub-categories and 4 categories. Categories for this theme are "early detection," "screening test," "treatment," and "public policy."

Early detection

"Early detection" is divided into "COVID-19 symptoms," "reduce COVID-19," "severe symptoms in pregnancy," and "transmitting disease." Most participants felt worry if they have COVID-19 symptoms that are almost similar to common flu infection. There was negative information going around in the community, and hence, the participants tried not to get infected by COVID-19. A participant stated that "*Being pregnant during the pandemic is very stressful for me, I was worried about my condition and my baby, COVID symptoms was similar symptoms between usual flu and COVID-19*" (Participant 2).

Screening test

"Screening test" is a category which was arranged according to the experiences of the participants when they did COVID-19 diagnostic examination. This is a new thing for them, and the scarcity of "diagnosis tools," "cost of the test," "difficult access to test" become sub-categories. In addition, the fact that not all health facilities have it made the participants stressed in doing screening test for COVID-19. "*I had difficulty in doing COVID-19 screening test before Caesarean surgery, I need to wait for almost 24 hours to undergo the test*," said a participant (Participant 8).

Treatment

"Isolation," "therapeutic drugs," "difficult drugs procurement," "self-quarantine," and "vaccination" are sub-categories of "treatment." At that time participant, experiences more difficulties to get some treatment for COVID-19 or to do antenatal care. "*For the reason to prevent transmission of COVID-19, the antenatal care for mothers is minimized, only mothers with complications or emergencies will receive the treatment,*" said a participant (Participant 1). Another participant was asking about vaccination, "*Is the COVID-19 vaccine safe for pregnant women?*" (Participant 3).

Public policy

All healthcare protocols, including maternity care, are affected by "public policy" during the pandemic. "Large scale social restriction," "limited service provided by public health center" because the health worker was infected by COVID-19, "social distancing," "minimal interaction," and "availability of personal protective equipment" are sub-categories which appeared during the interviews. "*During contractions, I sometimes need to talk to my*

Table 2: Themes and Categories of the Needs for Maternal Mental Health in Perinatal Period

Sub-categories	Categories	Themes
COVID-19 symptoms	1 Early Detection	1. Health Protocol during pandemic
Reduce COVID-19		
Severe symptoms in pregnancy		
Transmitting disease		
Worries when PCR	2. Screening test	
Antibody test		
Diagnostic tools		
Cost of test		
Difficult access to test		
Time consuming		
Isolation	3. Treatment	
Therapeutic drugs		
Difficult drugs procurement		
Self-quarantine		
Vaccination		
Large scale social restriction	4. Public policy	
Limited care of public health center		
Social distancing		
Minimal interaction		
Availability personal protective equipment		
Husband support	1. Support from family	2. Psychological Support
Mother's support		
Psychological support		
Friends support		
Lack of support from midwives	2. Support from health workers	
Minimal communication		
Poorly understood		
Fear transmitted		
Midwives support		
Marital tension	3. Psychosocial problems	
Double burden		
Working mothers		
Housewife		
Domestic violence		
Poverty		
Caring	4. Reduce psychological distress	
Peer group support		
Good relationship		
Ability to solve the problems		
Have clearly activities	5. Improve daily function	
Focus on maternal and baby's health		
Positive hope for future		
Thinking healthy		
Unstable emotionally	1. The needs of mental health education	3. Health Education
Have an anxiety		
Feel worry in pregnancy		
Confused with pandemic		
Stress with domestic problem		
Not receiving information	2. Lack of information	
Minimal socialization about mental health		
Lack of information from general media		
Not yet to promote		
Do not know impact stress during pregnancy	3. Lack of knowledge	
Not receiving guidance anxiety when labor		
Hiding their unhappiness		
Fear judgmental		
Do not understand about mental health	4. Not up to date	
Minimal exposed about maternal mental health		
Lack of reading culture		
Want to relaxation	1. Coping mechanism for mothers	4. Simple Coping Mechanism
Often crying or angry		
Breathing		
Silent		
Hiding the problems		
Hypertension	2. Complication during pregnancy	
Pregnancy discomfort		
Baby's condition		
Post traumatic previous pregnancy		
Prolonged active phase	3. Complication during labor	
Sectio caesarea unplanned		
Fetal distress		
Poor contraction		
After pain postpartum	4. Complication during postpartum	
Breastfeeding problems		
Baby blues		
Trauma perineal		
Acceptance	5. Positive behavior	
Share problems with others		
Looking professionals help		
Focus on problems		
Replace negative thinking		
Public health care	1. Healthcare support in mental health	5. Support System
Mental public health care		
Facilities and infrastructure		
Policies		
Attention of policymakers	2. Stakeholders' roles	
Good willingness		
Provide standard care		
Collaborative working		
Time from health workers	3. Involvement of health workers	
Competences of health workers		
Awareness from health workers		
Relationships with health worker		
Standard operational procedures	4. Policy system	
Integrate with maternal care		
Structural support system		
Community mental health care		

Contd...

midwife, but I could not do that because they minimize the interaction with me. They only came when my amnion fluids broken," said a participant (Participant 7).

Psychological support

The second theme defined by the researcher is "psychological support." It consists of "support from family," "support from health workers," "psychosocial problems," "reduce psychological distress," and "improve daily function."

Support from family

The most powerful support came from their husband and followed by support from biological mother. However, this has become difficult due to COVID-19 pandemic. One of the reasons was they could not visit each other. A participant said, "*Since COVID-19 pandemic my husband has been laid off. He is confused because our baby will be born soon. This situation resulted in poor communication between us, and my mother could not visit me because worry of COVID-19 transmission*" (Participant 11).

Support from health workers

Support from health workers is equally important for mothers. A participant said, "*We very much depend on the services of midwives. However, this pandemic situation aggravates the relationship between us. All of us are worried about COVID-19 transmission, so we talk less*" (Participant 5).

Psychosocial problems

Based on interviews, many mothers said that they have another burden in their home, such as financial, substance domestic abuse, low self-efficacy, poor relationship with others, and family problem. These conditions add to their burden. A participant said, "*Last month my husband was fired, the due date is near, I am very confused, every night I could not sleep, thinking about how our fate will be*" (Participant 5).

Reduce psychological distress

Almost all participants said that "peer group support," and "good relationship" with husband and friends can reduce psychological distress. However, it becomes difficult to have those now due to COVID-19. "*In the third trimester, I have severe anxiety, I was worried about my labor during pandemic. Usually I can meet up with my friends, but during the pandemic it could not be done,*" said a participant (Participant 6).

Improve daily function

All participants said that when they have "clear activities," such as working, domestic chores, or community task, and "focus on maternal and baby's health," have "positive hope for the future," and "thinking healthy," it can improve daily function of mothers and strengthen their psychological resilience. However, they could not do it anymore. "*Actually, pregnancy makes you tired physically and psychologically. I feel discomfort both physically and psychologically, but for the sake of my baby, I try to take care of my physical and psychological health"* said a participant (Participant 1).

Health education

The third theme is "health education" which consists of "need of mental health education," "lack of information," "lack of knowledge," and "not up to date." Some said that they never had received perinatal mental health services. They conveyed the need for care to overcome maternal anxiety through education about anxiety or stress as well as explanations about what services they could receive.

The needs for mental health education

Based on interviews, many mothers said that they feel some mixed reactions during their pregnancy, with transient feelings of anxiety and fear. They did not know whether the respective feelings were normal or not. *"I do not know why in this pregnancy my mood is always bad, I often cry and feel sad. Was that normal or not?"* said a participant (Participant 2).

Lack of information

Some participants know that during pregnancy they must take care of their psychological condition. However, they do not know how to do it. There was not much information about that. "*I know that I have to be happy because my baby also feels what I feel. If I am sad, my baby is also sad. But, how to solve this? I tried to pray but then that feeling will appear again next time,"* said a participant (Participant 3).

Lack of knowledge

All participants shared their experiences that they do not know clearly about PMH. *"During this pregnancy, delivery, and postpartum check-up, I never received any services or information about psychological conditions that the midwife needed to pay attention to,"* said a participant (Participant 10).

Not up to date

"Not up to date" was the sub-category which consists of knowledge of the participants who "do not understand about mental health," "lack of exposure to maternal mental health," and "lack of reading culture." "*I have never read about maternal mental health, but I know that psychological conditions during pregnancy need to be considered,*" said a participant (Participant 4).

Simple coping mechanisms

The fourth theme is "simple coping mechanisms" which consists of "coping mechanism for mothers," "complication during pregnancy," "complication during labor,"

complication during puerperium," and "positive behavior" categories.

Coping mechanism for mothers

Some mothers said that they had difficulty dealing with anxiety and stress during the perinatal period. They needed information about simple coping mechanisms that could be done. "*The midwife or doctor should clearly explain the importance of positive psychological conditions during pregnancy, delivery, or postpartum. We should have been told how to deal with stress,"* said a participant (Participant 10).

Complication during pregnancy

Almost all participants said that when their pregnancy have complication they felt anxious and worried although they already got an explanation about the complication. "*I have hypertension during pregnancy. It makes me very worried about my baby and my pregnancy,*" said a participant (Participant 2).

Complication during labor

Some participants mentioned that they felt very sad and had negative thought when they know there was emergency with their conditions. "*I was very sad, scare and have negative thoughts when I know that my baby has fetal distress and I should undergo Caesarean surgery as soon as possible,*" said a participant (Participant 8).

Complication during puerperium

Some participants said that puerperium phase was a complicated period. Recovery phase, new role, and having complication made them feel that this phase is more difficult than their pregnancy. *"I cannot speak, my postpartum period was very bad, with three children, I had a new baby, then there were sore nipples, makes me dizzy, I often cry alone in the bathroom,"* said a participant (Participant 10).

Positive behavior

Based on the interviews, almost all participants found that "positive behavior" helped them to face bad conditions in pregnancy, labor, puerperium and two months after giving birth during pandemic. The sub-categories are "acceptance," "share problems with others," "looking for professional help," "focus on problems," and "replace negative thinking." "*I was patient and accepting all the difficulties that I faced during my pregnancy, labor and postpartum period, if I push myself, I was going to be crazy, I could not face it alone,*" said a participant (Participant 11).

Support system

The fifth theme is "support system" which consists of "health care support in mental health," "stakeholders' roles," "involvement of health workers," and "policy system" categories.

Healthcare support in mental health

Some mothers reported that it is difficult to seek help when they experienced confusion, fear, anxiety, or stress during pregnancy, delivery, and the puerperium. They said that talking to their husband, other family members, or health workers was still constrained by shame, lack of confidence, or fear of burdening others with their problems. They need clarity clear guidance where to seek for help if the mother is experiencing anxiety or stress. "*We have a lot of thoughts and get stressed when we are taking care of a baby, but we do not know how to solve it, who should we ask for help,"* said a participant (Participant 9).

Stakeholders' roles

"Stakeholders' roles" is a category which consists of the following sub-categories: "attention of policymakers," "goodwill," "mental public healthcare," "facilities and infrastructure," and "policies." "*As far as I know, there is no program for our mental health, there are many programs for physical health, however, it is (mental health program) that is very important for us, I hope the government will give attention to this,*" said a participant (Participant 6).

Involvement of health workers

Almost all participants indicated that "involvement of health workers" is very important. They are convinced that health workers understand about their need on psychosocial support for mothers, but sometimes hampered by work overload, pandemic, and other responsibilities. "*We understand that maybe the midwife has a lot of work so they does not pay attention to our psychological condition, especially with this (COVID-19) pandemic situation,*" said a participant (Participant 10).

Policy system

Some participants said that the need for MMH should be fulfilled at PHC. "*There should be a maternal mental health services in community public health care for mothers, during the pandemic many people are stressed,*" said a participant (Participant 5).

Discussion

The purpose of this study is to identify the needs of mothers based on their experiences on MMH care for perinatal mothers during COVID-19 pandemic. COVID-19 pandemic has an impact on psychological condition of participants, almost all participants experienced increased anxiety, stress, and worry about the condition of their pregnancy. This study found that health protocols during pandemic, such as early detection, screening test, treatment, and public policy should be clearly applied to fulfill the healthcare needs of the participants. They need psychological support, health education, simple coping mechanism, and support system during pregnancy, birth, puerperium, and time after giving birth. All participants

have experienced unstable emotion, anxiety, worries, and stress with domestic problems, reproductive problems, psychosocial problems, and COVID-19 pandemic. The majority experienced psychological difficulties in the first trimester, third trimester, labor, and puerperium. Participants also experienced lack of support from other family members due to social distancing and unable to be visited by others. This condition occurs due to prevention of COVID-19 exposure, and it influenced the mood of mothers. This result is consistent with a study conducted in the United States, Turkey, and China, where the respective study showed that the most commonly reported worries were related to pregnancy and delivery, including family being unable to visit after delivery (59%), the baby contracting COVID-19 (59%), lack of supportive person during delivery (55%), and COVID-19 causing changes to the delivery plan (41%). Greater worries related to children and missing medical appointments were associated with significantly higher odds of post-traumatic stress, anxiety/depression, and loneliness.[26] Another study in Turkey showed that about 35.4% of pregnant women have score higher than 13 in Edinburgh Postpartum Depression Scale (EPDS).[27] A study in China reported moderate-to-severe stressful impact among Chinese pregnant women. They recommended for appropriate measures to be taken to address the maternal mental health issues.[28] This phenomenon needs appropriate action to solve this problem, it is necessary to identify how perinatal mothers experience their reproduction phase during COVID-19.

Other main result of this study is participants' needs psychological support. This result is consistent with a study conducted in China, where they suggested that the medical staff should encourage family support and use social resources to guarantee the accessibility of medical services and living materials to decrease the pregnant women's stress and further improve their psychological health.[29] Psychological support will help to stimulate good psychological condition of perinatal mothers and help them feel better to face the reproductive phase during COVID-19 pandemic.

Another finding of this study was the need for health education in MMH because the participant experienced lack of information, minimal socialization, and not up to date about that. This finding is somewhat consistent with a study conducted in China, Netherland, and Italy, where it was showed that there is no significant association between education and worse maternal mental health in Italy, but in Netherland and China it can be considered. Therefore, it is very important for us to develop mental health promotion programs during COVID-19 and future pandemic.[30] In addition, regarding the needs for health education, participants also need information about simple coping mechanism. The participants did not clearly understand how to do simple coping mechanism that a mother needs when she has problems with her mental health. This finding is consistent with a study conducted in Iran, where it was showed that if the mother has negative or irrational beliefs during pregnancy, identification and information about coping mechanisms can be conveyed from the time of pregnancy.[31] Health workers should provide information through online peer group, such as prenatal class, regarding how to do simple coping when mothers feel anxious, worried, afraid and stressed.[32] Sufficient information regarding maternal mental health and the COVID-19 pandemic needs to be conveyed by health workers to every mother that they treat. Health promotion media about this should be made available in every healthcare institution.

One of the significant findings of this research was limited healthcare services provided by the public health center due to the rules from the government to face COVID-19 pandemic, difficulties to access COVID-19 screening test, and prenatal care. This result is consistent with result from a study conducted in Jordan, where it was explained that to limit the spread of COVID-19 and reduce the strain on their health, they limited the healthcare services, including antenatal care. The respective study indicated that significant disruption to antenatal services has occurred and it affected the wellbeing of pregnant women in a number of aspects, which has the potential to cause antenatal health issues that are not directly related to the spread of COVID-19, but rather as side effects of the way how the outbreak is managed.[33] Pregnant and breastfeeding mothers need to be motivated to get COVID-19 vaccination. This statement is supported by a systematic review which showed the scientific societies recommendations for COVID-19 vaccination during pregnancy and lactation, where it is particularly highly recommended for women who work on the frontline of healthcare services or those with comorbidities. Therefore, it is clear that COVID-19 vaccine could be proposed to pregnant women if the benefits outweigh the potential risks, taking into consideration the absence of randomized controlled trial (RCT) that can give more weight to the proposal for vaccination of the aforementioned categories.[34] The government should provide COVID-19 vaccination for perinatal mothers to prevent the impact of severe COVID-19 infection.

The last finding of this study is support system, which consists of healthcare support in mental health, stakeholders' roles, involvement of health worker, and policy system. This result is slightly different but related with statement that providers and administrators have climbed a steep learning curve in a short timeframe. Given that experts are projecting recurrent outbreaks, healthcare providers, and mental health administrators will want to establish decision trees for determining medical, psychiatric, and social risks to diverse community mental healthcare clients with corresponding care delivery options that balance the risks to the individual, the clinical team, and the public.[35]

Policymakers and clinical administrators should attend not only to the emergent clinical gaps of today but also ways in which COVID-related changes might inform future sustainable workflows, which will be particularly important if outbreaks are recurrent.

PMH services in Indonesia have not been clearly established, but in principle, health workers understand the importance of health and psychological wellbeing for mothers during perinatal period. However, in the United Kingdom, the National Health Service (NHS) has developed perinatal mental health service by increasing the availability of specialist Perinatal Mental Health (PMH) community care for mothers who need ongoing support from pre-conception to 24 months after delivery, increasing access to psychological-based therapies or PMH specialist.[36] Practical implication from these findings is the emerging themes that can be considered by health workers, policymakers, and the public to pay special attention for PMH care during COVID-19 pandemic. The limitation of this research is that it only captured the aspect of the needs from the mothers, and it has not included the aspects from the policies, health workers, health systems, facilities and infrastructures, and standard operating procedures. Future research can focus on other variables which related to the mental health needs of perinatal mothers and how to design integrated care for MMH during COVID-19 or after this pandemic ends.

Conclusion

Health workers who provide health services during the perinatal period need to consider the health protocol, psychological support, and mental health education for mother. The needs can be fulfilled by the closest people the mothers have and the healthcare system for PMH care. Vaccination and MMH promotion need to be delivered for mothers during COVID-19. A systematic and structured intervention is needed to integrate MMH services into antenatal care, intranatal care, and postnatal care.

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Conflicts of interest

Nothing to declare.

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