

Reducing anxiety and depression symptoms in pregnancy: Case report of maternal mental health from Indonesia

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ABSTRACT

Mental health is neglected in antenatal care in Low- and Middle-Income Countries, whereas the prevalence of anxiety and depression symptoms in pregnant women is increasing yearly. Mindfulness is a new recommended method to prevent and reduce symptoms of anxiety and depression, but it is still rarely practised in Indonesia. This case report aimed to explore mindfulness-based interventions reducing anxiety and depression in pregnant women. The subjects of this study were two pregnant women who had symptoms of anxiety and depression. The research was conducted at the Community Health Centers from April to May 2023. The results were that mindfulness-based interventions built with husbands' involvement can help reduce anxiety and depression symptoms in pregnancy. Mindfulness-based interventions are a practical and inexpensive program. Based on our findings, mindfulness programs should be taken into strategies to prevent mental health disorders in antenatal care. Health professionals can teach this method during pregnant women's antenatal care visits or in pregnant women's classes.

Keywords: anxiety; depression; mental health; mindfulness; pregnant women

ABSTRAK

Kesehatan mental sering diabaikan dalam perawatan antenatal di Negara-negara Berpenghasilan Rendah dan Menengah, padahal prevalensi gejala kecemasan dan depresi pada wanita hamil meningkat setiap tahun. Kesadaran penuh (mindfulness) adalah metode baru yang direkomendasikan untuk mencegah dan mengurangi gejala kecemasan dan depresi, namun masih jarang dipraktikkan di Indonesia. Laporan kasus ini bertujuan untuk mengeksplorasi intervensi berbasis kesadaran penuh dalam mengurangi kecemasan dan depresi pada wanita hamil. Subjek penelitian ini adalah dua wanita hamil yang memiliki gejala kecemasan dan depresi. Penelitian dilakukan di Pusat Kesehatan Masyarakat dari bulan April hingga Mei 2023. Hasilnya menunjukkan bahwa intervensi berbasis kesadaran penuh yang dibangun dengan keterlibatan suami dapat membantu mengurangi gejala kecemasan dan depresi selama kehamilan. Intervensi berbasis kesadaran penuh merupakan program yang praktis dan tidak mahal. Berdasarkan temuan kami, program kesadaran penuh seharusnya dijadikan sebagai strategi untuk mencegah gangguan kesehatan mental dalam perawatan antenatal. Profesional kesehatan dapat mengajarkan metode ini selama kunjungan perawatan antenatal wanita hamil atau di kelas-kelas ibu hamil.

Kata kunci: kecemasan; depresi; kesehatan mental; kesadaran penuh; wanita hamil.

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INTRODUCTION

Maternal mortality is high in low- and middle-income countries, with 94% of maternal deaths occurring (World Health Organization, 2019). Mental health disorders, especially anxiety disorder and depression, contribute to maternal mortality. The Maternal Mortality Review Committees (MMRCs) in 36 states examined 1,018 pregnancy-related deaths; 987 of those deaths had an underlying cause of death. Mental health issues accounted for nearly 23% of the fatalities (22.7%) (Trost, et al., 2022).

Untreated anxiety disorder and depression in pregnancy can lead to suicide. Suicide is one of the leading causes of maternal death in the United Kingdom and the United States. There is a rising rate of suicide during pregnancy or up to six weeks after. Compared to the years 2017–19, women were three times more likely to die by suicide in 2020 (Trost, et al., 2022), (Knight, et al., 2018), (Cantwell, R., 2021). Untreated anxiety disorder and depression in pregnancy also have other negative impacts on both mother and child. These disorders can increase the risk of preeclampsia, preterm labour, low birth weight, postpartum depression, and disability (Knight, et al., 2018), (Jahan, et al., 2021), (Zaharatos, et al., 2018), (Umuziga, et al., 2020), (Dadi, et al., 2020), (National Collaborating Centre for Mental Health, 2018).

High-income countries have standardized the definition and cause of maternal death by suicide and risk factors for perinatal suicide. Antenatal care in these countries has focused on the physical and mental health of pregnant women (ACOG, 2018), (Mugisha, et al., 2017). On the other hand, in low- and middle-income countries, maternal mental health services continue to receive insufficient attention, making it difficult to identify, diagnose, treat, and report pregnant women who exhibit signs of anxiety or depression (Baron, et al., 2016), (Saraswati, P. W., 2021).

Although Indonesia has introduced mental health screening as one of the requirements for antenatal care in 2021, the country does not yet have a standardized approach to the screening, prevention, and treatment of pregnant women exhibiting symptoms of anxiety or depression (Surjaningrum, et al., 2018), (Jha, et al., 2018).

Globally, the prevalence of anxiety and depression symptoms in pregnancy ranges from 1-37%, two to three times higher in low- and middle-income countries than in high-income countries. One in four pregnant women is estimated to experience symptoms of anxiety and depression in low- and middle-income countries (Zainiyah, et al., 2020). The prevalence of symptoms of anxiety and depression in pregnant women ranges from 42.3-59.7% in Indonesia (Sari, et al., 2022), (The America College of Obstetricians and Gynecologists, 2023).

The symptoms of anxiety and depression during pregnancy: being in a depressed mood most of the day; feeling sad or anxious often or all the time, hopeless, guilty, or worthless; being restless; changes in sleep, appetite, energy level, or concentration; thinking about death or suicide (National Institute of Mental Health, 2022), (Evans, et al., 2020). The high prevalence of pregnant women with symptoms of anxiety and depression is a public health problem that must be prevented and treated in antenatal care. Pregnant women preferred mindfulness-based interventions more so than pharmacotherapy (Dhillon, et al., 2017). A small number of randomized controlled trials (RCTs) have examined mindfulness-based therapies implemented during pregnancy and have shown promising results in reducing anxiety and depression (Pan, et al., 2019), (Wang, et al., 2023), (Pan, et al., 2023), (Lengua, et al., 2023). However, further research is required to confirm the usefulness of these interventions.

Research on mindfulness interventions in pregnant women living on low incomes is lacking. Existing studies have primarily employed mindfulness-based interventions with cognitive therapy or were associated with parenting programs (Wang, et al., 2023), (Pan, et al., 2023), (Lengua, et al., 2023), (Shapero, et al., 2018). This study provided an update on mindfulness to pregnant women with service delivery through home visitation, positive affirmations, including making a "*wishing jar*", and the significant involvement of husbands that were still rarely done in previous studies. This study aimed to explore the potential benefits of mindfulness-based interventions to reduce anxiety and depression symptoms in more detail through two case reports.

LITERATURE REVIEW

Mindfulness is a method of non-drug treatment and has no adverse effect on pregnant women. Mindfulness-based interventions involve pregnant women's thoughts and emotions to accept life experiences openly, reduce tension and fear, and increase trust without judgment (Pan, et al., 2019), (Hulsbosch, et al., 2020). When a person is anxious and depressed, thoughts tend to become negative. Mindfulness exercises can help pregnant women with symptoms of anxiety and depression increase their awareness of negative thoughts, shift their focus to feel better at the moment and train them to pay attention to the contents of the mind (Hulsbosch, et al., 2020).

Mindfulness-based interventions encourage pregnant women to recognize and accept their thoughts, emotions, and physical sensations, build tolerance to their emotions and reduce reactivity and unpleasant experiences. Pregnant women need support during pregnancy. The existence of mindfulness therapy has the potential to support pregnant women actively (Shapero, et al., 2018), (Birtwell, et al., 2019), (Kappen, et al., 2018).

Several studies on the effectiveness of mindfulness therapy for overcoming mental health disorders during pregnancy suggested that mindfulness-based interventions can help pregnant women manage anxiety, stress, depression, and preparation for childbirth (Wang, et al., 2023), (Lengua, et al., 2023), (Sun, et al., 2021), (Leng, et al., 2023). A recent systematic review by Ling et al. investigated the effects of mindfulness-based interventions effects on perinatal depression and anxiety. Twenty-five published RCTs involving 2,495 perinatal women were identified and reviewed. Mindfulness-

based interventions were superior to controls in clinical and subthreshold perinatal depression and anxiety. The effect of reducing depression was stable over time and persisted into the puerperium, whereas the maintenance effect on perinatal anxiety was inconclusive. Post-intervention effects were significantly more significant among women in low- and middle-income countries, where perinatal mental health care is less available and difficult to access (Mefrouche, et al., 2023).

RESEARCH METHOD

The design of this research was a case study. This study was done from April until May 2023 at one of the Community Health Centers in West Jakarta, Special Capital Region of Jakarta. This study was approved by The Research Ethics Commission of Universitas Respati Indonesia, Indonesia (238/SK.KEPK/UNR/V/2023). The case study recruited two primigravida pregnant women in the second trimester who had antenatal visits. The use of only 2 participants in this study, so mindfulness-based interventions could be done more focused and monitored. This study was done with intensive interaction for four weeks.

Anxiety and depression symptoms were screened with the Edinburgh Postnatal Depression Scale (EPDS) in baseline, at weeks 2 and 4 after the interventions. The cutoff scores EPDS were ≥ 13 for depression and ≥ 5 for anxiety symptoms in questions 3,4 and 5. Exclusion criteria include women who were pregnant with twins or multiples, had a mental illness, had mental treatment, and had pregnancy complications. The mother's medical record and antenatal examination results obtained the health status. The husband's support was obtained from the instrument consisting of 15 questions using a Likert scale (grades 0-3) in baseline and week four after the interventions.

The mindfulness techniques used in this study were positive affirmations and breathing relaxation. The implementation of this method involves the mother's husband. Mindfulness was carried out for one month, consisting of forming mutual trust (week 1), giving positive affirmations and making a wishing jar, as well as training in breathing relaxation techniques and mindful walking for 10-30 minutes of their day (second and third weeks), and strengthening (week 4). One positive affirmation was given via WhatsApp or telephone every day for 10-15 minutes, and face-to-face interaction was carried out at least once a week for 45-90 minutes via home visiting. Mindfulness techniques were also given by video. Participants can also communicate if they feel something important to discuss via phone or WhatsApp. Description statistics analyzed the assessment of anxiety and depression symptoms and husbands' support. Qualitative data from in-depth interviews, such as husband support, were analyzed by narrative analysis.

RESULTS AND DISCUSSION

4.1 Characteristic of participants

Case 1

We described a 22-year-old woman who was 18 weeks pregnant with her first child, who graduated from junior high school and the Batak tribe. She resided with her husband, mother, sister, brother-in-law, and two nieces. Her husband was 20 years old, graduated from junior high school, and Betawi tribe. He is a private employee with an irregular salary, about US\$ 129.67-194.5 per month, only enough for daily expenses. She took care of her sister's second child, who was six months old when her sister worked. The husband never accompanied her to check up on her pregnancy and did not help when she had trouble sleeping. She and her husband have never attended pregnant women's class, so they only get information about pregnancy and childbirth from the experiences of family members. Communication in the family was when discussing things that were considered necessary. Nutrition status and blood pressure under normal conditions, the result of an antenatal examination of the fetus in good condition appropriate at gestation.

Case 2

We described a 25-year-old woman who was 27 weeks pregnant with her first child and graduated from junior high school. She is Sundanese. She only lived alone with her husband. Her husband was 27 years old, had graduated from junior high school, and was Javanese. Her husband has a workshop with a monthly salary of US\$ 129.67-194.5, which is enough for daily necessities.

She complained of pain in her waist and knees due to a fall at home on April 9th, 2023. Her nutritional status was obesity. Her husband has sometimes accompanied her during antenatal examinations at the community health centre, taking a walk and doing morning exercise around the residence. She talked and discussed with her husband almost every day.

4.2 Symptoms

Case 1

She had been feeling anxious and depressed over the preceding weeks. She worried, scared or panicked for no reason, blamed herself, and felt so sad that she almost always cried and had trouble sleeping and could not overcome the burden

of life. Thoughts of self-harm arise pretty often. She was afraid that she would not be able to be a good mother in the future. She did not tell her family members about her anxiety and depression.

Case 2

She had been feeling anxious and depressed for the past few weeks. She was almost always anxious, scared, panicked for no reason, blamed herself, and felt sad to the point of difficulty sleeping. She was worried about her increasing weight. She could tell her husband about her feelings.

4.3 Interventions

Summary of weekly mindfulness-based intervention sessions:

In the first session, we built her and her husband's trust in us. They were told the purpose of mindfulness-based intervention. She described her feelings, desires, expectations about the child, and her life goals. She was trained to think positively about everything that had happened, and nothing went wrong. Pregnant women and their husbands were given health education regarding symptoms of anxiety and depression during pregnancy. Especially in the first case, we have started providing mindfulness with positive affirmations and intensive communication for her and her husband because the results of EPDS state that she often has thought about self-harm.

In the second session, we provided positive affirmation training and breathing relaxation to pregnant women by involving husbands. The mothers were asked to write positive affirmations on paper and put them in a wishing jar. Wishing jars were expected to be used when symptoms of anxiety and depression arose. The mothers and their husbands were encouraged to communicate both verbally and touch-to-abdomen with the fetus. We provided midwifery care according to the mother's needs. The mothers were asked to do breathing relaxation techniques for 5-10 minutes of their day. The husbands were encouraged to invite their wives to do mindful walking for 10-30 minutes of their day in the morning or evening. In the first case, positive affirmations increase self-confidence as a future mother. In the second case, she was given health education on diet regulation and positive affirmations about body image. Their husbands were involved in providing positive support and comfort.

In the third session, the first case decided to work with her husband's approval. Meanwhile, the second case enjoyed fetal movement despite disturbed night sleep. Pregnant women were taught to think positively and accept everything that happens. If anxiety, sadness, and pressure arose, pregnant women were asked to affirm to their selves. They could use the wishing jar, focus their mind for 2-5 minutes, and do breathing relaxation for 5-10 minutes. Their husbands were involved by exchanging stories about daily activities, mindful walking, and giving positive affirmations when pregnant women complained of discomfort.

In the fourth session (week 4), we reviewed the intervention to encourage pregnant women to continue practising mindfulness in the future. Pregnant women listened to songs or spiritual flushes to relax and calm their minds. They enjoyed the movement of the fetus more and more. Feelings of fear, anxiety, and self-blame sometimes arise. However, they could be overcome with mindfulness techniques and the support of their husbands.

The first case had stopped working for fear of something untoward happening to her baby. Meanwhile, the second case was worried about her weight gain. For the second case, we further strengthen mothers' confidence in self-image, providing mindfulness of feeding and emotional management again. We explained that her weight gain was not excessive and within the recommended limits according to her body mass index and gestational age. Her husband was also asked to continue to support her to think positively and comfort about their weight gain.

4.4 Outcome

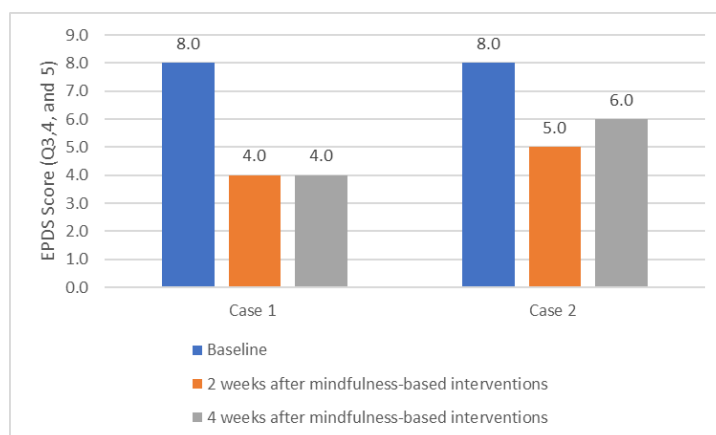


Figure 1. EPDS scores from baseline up to 2 and 4 weeks after mindfulness-based intervention of cases of pregnant women with anxiety symptoms

Before the mindfulness-based interventions, pregnant women were identified as having anxiety and depressive symptoms based on the assessment of the EPDS instrument (EPDS cutoff ≥ 13 for depression; ≥ 5 in questions 3, 4 and 5 for anxiety). In the second and fourth weeks after the mindfulness-based interventions, the reduction of depression symptoms was stable over time, but the maintenance effect on anxiety symptoms was less conclusive. The first case had no symptoms of anxiety and depression, while the second case still had anxiety symptoms. The symptoms were that she sometimes blamed herself if things did not go well, and she felt anxiety and fear or panic for no reason. EPDS scores for anxiety symptoms at baseline, weeks 2 and 4, were presented in Figure 1. EPDS scores for depression symptoms at baseline, weeks 2 and 4, were presented in Figure 2.

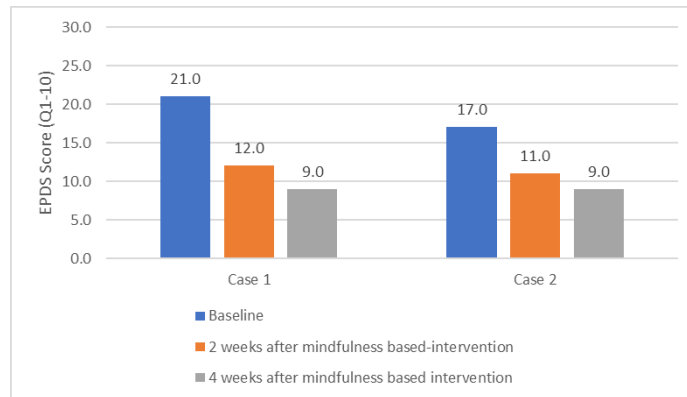


Figure 2. EPDS scores from baseline up to 2 and 4 weeks after mindfulness-based intervention of cases of pregnant women with depression symptoms

The husbands’ support for the mother’s pregnancy before the intervention was quite good. After four weeks of the husbands’ involvement in mindfulness-based intervention, husband’s support score has improved. The involvement of husbands who experience changes for the better includes wanting to help wives when they have difficulty sleeping, doing mindful walking, listening to wives’ complaints by giving positive responses, and not being reluctant to praise wives. The husbands’ support scores at baseline and week four were presented in Figure 3.

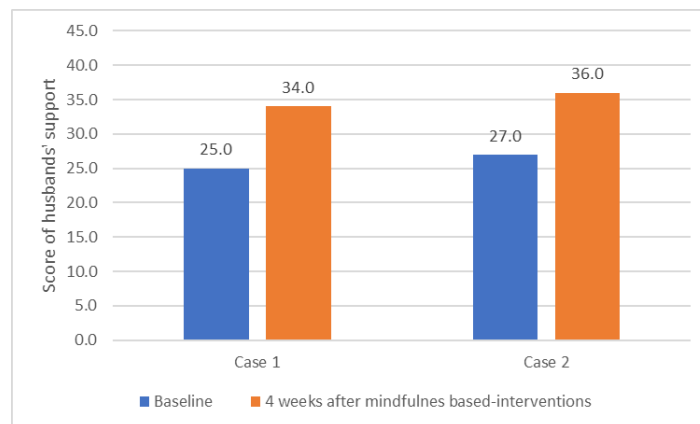


Figure 3. Husbands' support score from baseline up to 4 weeks after mindfulness-based interventions

DISCUSSION

Benefits of mindfulness-based interventions

The purpose of this study was to examine in more detail the potential benefits of a mindfulness-based intervention for reducing symptoms of anxiety and depression using two case reports. This study’s findings support the feasibility and acceptability that mindfulness-based interventions may reduce anxiety and depression symptoms during pregnancy. However, the reduction of anxiety symptoms did not show stability after four weeks. Mindfulness refers to the mental state or ability to focus on the present moment while recognizing and accepting emotions, thoughts, and physical sensations (Birtwell, et al., 2019), (Kral, et al., 2022), (Leutenegger, et al., 2022). In our study, mindfulness techniques can be used to train more stable emotional management and adaptation coping strategies. Although we could not meet in person daily, participants could still communicate via WhatsApp. Furthermore, both pregnant women entered their practice time and status into WhatsApp, which might have made it easier for them to recall and continue practising

consistently (Kappen, et al., 2018). Based on our research, it is essential to keep reminding expectants to continue practising mindfulness after the four-week program is over in order to promote their mental health.

It is important to note that our findings on the benefit of mindfulness-based interventions are consistent with those of several Randomized Controlled Trials (RCTs), meta-analyses, and review studies conducted in pregnant women with anxiety and depression symptoms (Pan, et al., 2019), (Wang, et al., 2023), (Pan, et al., 2023), (Shapero, et al., 2018), (Gambrel, L. E., & Piercy, F. P., 2015). Nevertheless, recent studies did mindfulness-based interventions for 6-8 weeks (Wang, et al., 2023), (Shapero, et al., 2018), (Leng, et al., 2023), (Gambrel, L. E., & Piercy, F. P., 2015). According to a recent study, practising mindfulness for at least 22 minutes a day for several months may cause structural alterations in the amygdala, a crucial area of the brain linked to feelings of fear and anxiety (Leutenegger, et al., 2022).

Role of husbands' support

A study states that the husband's involvement in mindfulness is one intervention method called mindfulness-based relationship enhancement. Studies on this method still need to be made. The results of this study showed that there had been mutual openness in communicating, creating comfortable and happy conditions in daily life such as mindful walking when the couple felt bored, doing mindful touching and eye gazing involving touching the partner and the baby.

Our findings on the role of spousal support in mindfulness-based interventions are consistent with studies by Gambrel and Piercy (2015) and Kappen et al. (2018) that the success of the mindfulness-based intervention was also inseparable from the husband's support. The benefits of husband's involvement can be felt individually (increased optimism, improved relaxation and reduced distress) and in couples (enhanced relationship satisfaction, improved relatedness, and increased acceptance of each other) (Sun, et al., 2021).

Implication for low- and middle-income countries

Symptoms of anxiety and depression experienced by two cases in this study can overlap with symptoms of pregnancy, so diagnosing anxiety and depression in pregnant women can be challenging (National Institute of Mental Health, 2022), (Evans, et al., 2020). Therefore, screening for symptoms of anxiety and depression is the first step to preventing and early treatment of mental health problems in pregnancy (ACOG, 2018), (Saraswati, P. W., 2021).

In this study, pregnant women and husbands had low incomes with an indeterminate amount every month. Interventions that can be recommended for mothers are effective interventions that are easy, inexpensive, and safe. The mindfulness-based interventions conducted in this study empowered pregnant women and their husbands without spending much money and time. Participants were eager to do mindfulness because they had realized its benefits individually and in couples. This finding is consistent with research showing that mindfulness-based interventions are feasible among pregnant women in low- and middle-income countries, where mental health in antenatal care is less available and accessible (Shapero, et al., 2018), (Hulsbosch, et al., 2020).

Limitation

There are several limitations to this study. The number of samples was minimal, with only two participants, so the results of this case study could not be generalized to all pregnant women with anxiety and depression symptoms. The absence of a control group meant the study could not compare the outcomes of mindfulness-based interventions with standard care or other methods.

Despite the study's limitations, it had some strengths that indicated potential avenues for further research. The participants' different cultural and social characteristics suggest that mindfulness-based interventions are acceptable in various societies. Active participation of mothers and husbands in mindfulness, intensive communication via WhatsApp, and home visits were methods to validate mothers doing mindfulness correctly and not being absent. Future studies should continue the results of these studies with longitudinal studies, more extensive and more varied samples, and observing the benefits of mindfulness more sharply and in detail.

CONCLUSIONS AND SUGGESTIONS

The results of our study demonstrate that pregnant women who completed mindfulness intervention for four weeks had lower levels of anxiety and depression symptoms. These results provide empirical support for the idea that mindfulness-based interventions help pregnant women with anxiety and depression symptoms. Therefore, primary health facilities are responsible for providing mental health screening during antenatal services. Health professionals can teach mindfulness methods to pregnant women and their husbands individually and in mother's class groups. The target of health promotion is not only aimed at pregnant women, but currently, maternal health service providers are also expected to intensively involve pregnant women's husbands and potential partners of health workers to improve the mental health of pregnant women.

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