Mindfulness Based Cognitive Therapy on the Anxiety Reduction in 3rd Trimester of Pregnant Women

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ABSTRACT

Background: Untreated pregnancy anxiety can have a significant impact on the pregnancy and postpartum outcomes. Causing mental disorders during pregnancy has an increased risk and adverse effects on the mother and fetus. Mindfulness Based Cognitive Therapy (MBCT) can increase awareness about the function of thought patterns in daily activities and is able to control awareness of thoughts, feelings and body gestures that can affect anxiety levels and cortisol hormones in the body. This study aimed to examine the effect MBCT to reduce anxiety in 3rd trimester of pregnant women.

Subjects and Method: This was a randomized controlled trial. A sample of 20 pregnant women divided into two groups. Intervention group was MBCT with 8 sessions for 30 minutes each session within a period of 2 weeks. The control group was health education and usual care. The dependent variable was anxiety. The independent variable was MBCT. Anxiet was measured using HARS questionnaires. Difference of anxiety between groups were tested using independent t-test.

Results: Mean of anxiety score in the MBCT group (Mean= 16.40; SD= 4.01) was lower than in the control group (Mean= 23.60; SD= 7.37), and it was statistically significant ($p = 0.015$).

Conclusion: MBCT is effective to reduce anxiety in 3rd trimester of pregnant women.

Keywords: Mindfulness Based Cognitive Therapy, pregnancy, anxiety.

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BACKGROUND

Hormonal changes during pregnancy cause the mother's emotions tend to change so that for no apparent reason, feeling sad, irritable, angry, or just the opposite feeling very happy (Wulandari et al., 2019). Pregnancy anxiety is a condition of the emergence of feelings of worry and anxiety towards objects that are not clearly related to the health condition of the mother and the baby conceived. Pregnancy anxiety that is left can have a negative impact on the process of pregnancy and the period after delivery. Anxiety has a relationship with increased

hypertension making it dangerous for pregnancy. Pregnancy anxiety is also a predictor of high stress in the first three months after birth (Mangrasih, 2019).

Factors that trigger uncomfortable conditions cause an imbalance to accept or reject various changes in the process of pregnancy. Maternal anxiety in the 3rd trimester of pregnancy is mostly experienced anxiety both in primigravida and multigravida 3 mothers (Runjati et al., 2017).

Anxiety and depression in developing countries are around more than 20%, in Indonesia there are 373,000,000 pregnant women experiencing anxiety. As many as 107,000 (28.7%) of them pregnant women experience anxiety facing childbirth. Anxiety results in the risk of prolonged labor, labor by action, cesarean section, miscarriage, fetal growth disorders, under-term labor, low birth weight, risk of allergies and decreased immune system (Robiyanto, 2019).

As many as 10% of pregnant women worldwide experience a mental health disorder, with the most common forms being anxiety and stress. In developing countries the prevalence is 15.6% during pregnancy and 19.8% after birth (WHO, 2020). Since 2019 the incidence of mental health disorders has increased, anxiety symptoms increased from 10% to 37% and depressive symptoms increased by 25% to 57% (Lebel et al., 2020). The prevalence of mental health disorders in Indonesia reaches about one in five population, meaning that around 20% of the population in Indonesia has potential mental health problems (Biro Komunikasi dan Pelayanan Masyarakat, 2021). The three highest provinces in Indonesia that received the highest services to residents over 15 years old due to mental health disorders, achieved by Jambi Province at 5.17%, West Java at 4.25%, and Yogyakarta at 4.15% (Kementerian Kesehatan Republik Indonesia, 2019).

Nearly 1 in 5 women will experience a mental health condition during pregnancy or in the same year after giving birth. Among women with perinatal mental health conditions, 20% will experience suicidal thoughts or commit acts of self-harm. Neglecting mental health not only harms women's health and overall well-being, but also impacts the physical and emotional development of babies (WHO, 2022). Other consequences that can be caused by mental disorders during pregnancy are an increased risk of congenital abnormalities in the form of failure to close the palate gap, the risk of cesarean section, delivery with tools, premature birth, giving birth to babies with low birth weight (BBLR) and in the long term related to emotional behavior disorders of children (Sukandar et al., 2009). In addition to adversely affecting the conceived baby, it also adversely affects pregnant women, namely physical strain on pregnant women, early contractions during pregnancy, hyperemesis gravidarum, abortion, increased blood pressure, eclampsia, stomach acid rise, heavy breathing or tightness, emotional changes, and increased heart rate (Nuryati and Handayani, 2022).

Psychological interventions that can lower anxiety. Psychological interventions that can reduce anxiety, namely cognitive behavioral therapy (CBT), are effectively used to reduce anxiety (Fitri, 2017). Mindfulness in 8 sessions of exercise effectively reduces anxiety of pregnant women first trimester 3, in mindfulness intervention there are techniques that will make the individual's brain state enter an alpha wave state. When an individual's brain is on alpha wave, it results in decreased anxiety and increases feelings of calm and positivity with a $p < 0.050$.

MBCT therapy helps improve one's self-awareness and self-acceptance. This therapy can increase awareness about the

function of thought patterns in daily activities and is able to control awareness of thoughts, feelings and body gestures that can affect anxiety levels and cortisol hormones in the body (Mohamed, 2017).

MBCT can reduce anxiety in pregnant women so that it can affect tissue oxygenation, so as to prevent muscle strength, relieve pain, calm the soul and relax the body by affecting anxiety levels and cortisol 14 hormone levels (Asrina and et al, 2020). Based on the data and background description above, researchers are interested in conducting research on "Mindfulness Based Cognitive Therapy (MBCT) on anxiety levels in 3rd trimester pregnant women"

SUBJECTS AND METHOD

1. Study Design
This type of research is analytical research with true experimental methods, and with a pretest-posttest design design with control group. This research was conducted in 3 areas of the Wates Health Center from February to March 2023.

2. Population and Simple
The population in this study was pregnant women in the working area of the Wates Wates Health Center in Central Lampung amounting to 56 people. The sampling technique used simple random rampling. A total sample of 10 subject per group. MBCT interventions: 8 sessions for 30 minutes each session within a period of 2 weeks. The control group: health education about anxiety and ANC standard. The dependent

variable is anxiety and the independent variable is MBCT.

3. Operational Definition of Variables
MBCT is a type of psychotherapy that involves a combination of cognitive therapy, meditation, and the maintenance of a present-minded, non-judgmental attitude.
Anxiety is an unexpected reaction that arises as a result of high environmental guidance to a person, where hormones or the balance between brain strength and ability are disrupted.

4. Study Instruments
The research instruments used characterristic questionnaires, HARS questionnaires, SPO MBCT, and observation sheets.

5. Data Analysis
Univariate analysis describes the distribution of frequency data and bivariate analysis using the Paired Sample T Test.

6. Research Ethics
This research has been registered at the Health Research Ethics Commission of the Semarang Ministry of Health Poltekkes No. 081/EA/KEPK/2023.

RESULTS

1. Sample Characteristics
Based on table 1, it was found that the average age of mothers was 29 years. The minimum age was 18 years old and the maximum age was 41 years old. The average gestational age was 30.7. The minimum gestational age was 28 week and the gestational age was a maximum of 34 week.

Table 1. Sample Characteristics of Pregnant Women (data continue)

Variable	Mean	SD	Min	Max
Age of the mother	29.2	5.77	18	41
Gestational Age	30.7	2.5	28	34

Based on table 2, there were 3 pregnant women was worked and 17 other mothers din't work. In the educational characteristics,

there were 2 prignant mother with college, 15 mother with Senior High School, and 3 mother with Junior High School.

2. Bivariate Analysis

Table 3 above describes the results of the intervention and control groups, namely pre and post using the Independent Sample T-Test. Table 3 showed that the mean anxiety score in the MBCT group was lower (Mean= 16.40; SD= 4.01) than in the control group (Mean= 23.60; SD= 7.37), and this result was statistically significant (p = 0.015).

Table 2. Sample Characteristics of Pregnant Women (data dichotomous)

Variable	N (20)	Percentage (%)
Work		
Work	3	15
Doesn't work	17	85
Education		
College	2	10
Senior high school	15	75
Junior high school	3	15

Table 3. MBCT Analysis of the Anxiety of Trimester 3 Pregnant Women

MBCT	Mean	SD	p
Pre Intervention			
Intervention (MBCT)	24.30	5.355	0.284
Control	27.70	8.138	
Post Intervention			
Intervention (MBCT)	16.40	4.088	0.015
Control	23.60	7.367	

DISCUSSION

1. Characteristics of Subject

The age of pregnant women is generally a healthy reproductive age range, namely at the age of 20-35 years. This period is the best period for pregnancy, childbirth and breastfeeding. Mothers who are 35 years old are considered to be at risk because they have experienced a decline in function (Prawirohardjo, 2016).

In this study, the age of the mother was 18 to 41 years old, so that the level of maternal anxiety tends to be more stable and easy to condition in some mothers who are pregnant at the age of 20 to 35 years, considering that anxiety during pregnancy that occurs will have a negative effect on the mother and fetus so that pregnant women must be able to neutralize their thoughts and themselves to the good of the mother and the fetus.

The results of the analysis on gestational age showed that the average gestational age was 30 weeks. Distribution of the gestational ages of the subject, the smallest was 28 weeks and the largest was 34 weeks.

In a study entitled the relationship between the age of pregnant women and the level of anxiety in the third trimester of pregnancy at the Bantul Health Center (Cahyaningsih, 2020) stated that the gestational age of the mother in the third trimester had a moderate level of correlation with the level of anxiety during pregnancy in facing labor. Pregnant women in the third trimester are the gestational age when anxiety can increase because the third trimester is approaching the time of delivery and the needs and preparations that must be optimized when approaching labor.

The results of the analysis on the mother's occupation show that the mother's

3 subject working and 13 subject are not working. Working mothers will have thoughts or thoughts that branch out thinking at work and thinking about pregnancy, in a study entitled the relationship between anxiety and work performance of employees of college. Kusumahadi Santosa18 the higher the level of anxiety, the lower one's work performance. This means that a person's anxiety can be seen from how a person has high morale, which has the principle that work progress or success is from self-motivation.

The results of the analysis on mother's education showed that the average education of mothers was 2 mother with college education, 15 people with high school education and 3 mothers with junior high school education.

Mother's education will go hand in hand with the mother's ability to manage the mother's anxiety level, education is closely related to knowledge, so that with good knowledge the mother will be able to condition her psychological state during pregnancy because it focuses on the goodness of the mother and baby.

This is in line with research entitled the relationship between the level of knowledge and the level of anxiety about Covid-19 in adolescents at SMA Advent Balikpapan 19 which explains that the better a person's level of education and knowledge, the lighter and smaller the level of anxiety.

2. Analysis of MBCT on the Anxiety of Third Trimester Pregnant Women

The results of this study showed that the results of the intervention and control groups using the Independent Sample T-Test, p-value in the MBCT group showed a significant relationship (p= 0.015) while the control group showed no significant relationship (p= 0.284).

MBCT results in increased awareness of the present moment, decentering, and acceptance. In addition, it reduces maladaptive cognitive processes such as judgment, reactivity, rumination, and suppression of thoughts and is able to reduce anxiety.

Anxiety in pregnant women is a reaction of pregnant women to changes in themselves and their environment which brings feelings of discomfort or discomfort caused by suspicion of danger or frustration that threatens, endangers a sense of security, balance or the life of an individual or social group (Amin, 2022).

In a study entitled The Effect of MBCT on Reducing Social Anxiety in Anxiety Medical Students, the results obtained were p=0.000 and it was concluded that MBCT can reduce anxiety in medical students and research with the title Effect of soaking feet using warm water on anxiety in hypertensive patients (Yanti et al., 2021).

The MBCT intervention given was in the form of positive affirmations and resulted in an increase in present awareness and emphasis on thoughts that when the post assessment was taken it could have been that pregnant women had returned to being anxious considering that pregnant women are in the 3rd trimester where psychological and physiological factors are very easy to change. The body produces a surge of hormones when it is in a stressful situation. These hormones temporarily increase blood pressure by causing the heart to beat faster and blood vessels to constrict, thus stimulating the body in a state of stress or anxiety. In this situation, researchers assume that thinking stimulation or MBCT and hormones have more effect on hormones because hormones are chemical signals released by the body after being stimulated directly with warm water therapy while mind stimulation or MBCT is thought stimulation given to different subject. because everyone has a personality mindset that is easy to change depending on the circumstances that occur,

and has their own way of adapting and solving problems. So that the body's response can be different in terms of thoughts and warm stimuli given.

AUTHOR CONTRIBUTION

Sundari as the principal investigator and contributed about funding during the research. Runjati as midwifery material consultant. Mardiyono as a consultant for research methods and statistics.

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CONFLICT OF INTEREST
There are no conflicts of interest.

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