

## Effectiveness of Prenatal Gentle Yoga on Improvement Level of Depression in Pregnant Women Age <20 and >35 Years

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### ABSTRACT

This study aims to analyze the effectiveness of prenatal gentle yoga on depression problems in pregnant women aged <20 and >35 years.

This research was carried out at the Bara Baraya Health Center, Antang Health Center, Kapasa Health Center, and Mamajang Health Center. The research design used in this research is Quasi Experiment with a Nonequivalent Control Group Design approach. Sampling used a purposive sampling technique. The instrument used was the Beck Depression Inventory (BDI) questionnaire. The sample in this study consisted of 24 respondents, 12 intervention groups and 12 control groups.

**Criteria in this research:** pregnant women <20 years and >35 years, pregnant women in the II-III trimester with gestational age  $\geq 20$  to <31 weeks, pregnant women without complications in pregnancy.

**Results:** The mean ranks value for the intervention group was 6.50 in the pre test-mid test and mid test-post test respectively. Meanwhile in the control group the mean ranks value was 5.61 in the pre test-mid test, and the mean ranks value was 4.50 in the mid test-post test. This shows that the intervention group experienced a significant decrease in the level of depression in the BDI – II (Beck Depression Inventory-II) score compared to the control group. And a comparison of post test data from the intervention group and the control group obtained a p-value of 0.005 ( $< \alpha$  0.05).

**Conclusion:** There was a difference in BDI-II (Beck Depression Inventory -II) scores in the intervention group and the control group after being given Prenatal Gentle Yoga treatment.

**KEYWORDS:** Depression; Pregnancy; Prenatal Gentle Yoga.

### ARTICLE DETAILS

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### INTRODUCTION

Depression in pregnant women is influenced by several factors, apart from hormonal levels, it is also influenced by the mother's age during pregnancy. Mothers with pregnancies aged <20 years are very vulnerable to psychological disorders that can trigger complications in pregnancy. Complications during pregnancy are one of the leading causes of death among women aged 15-19 years (WHO, 2004). Meanwhile, the risks for pregnant women over 35 years of age, especially primigravidas, are related to medical risks with an aging reproductive system and an aging body. (Lampinen, Vehviläinen-Julkunen, & Kankkunen, 2009). During pregnancy, the mother experiences significant changes in her physiological and psychological functions. This process of adjusting to her new

situation then causes psychological disorders. Pregnancy is a period of crisis that involves deep psychological factors, which occur due to very large somatic changes. This is caused by hormonal changes which also cause the mother's emotions to become unstable. Apart from physical factors, psychosocial factors can also increase the psychological burden on pregnant women. And includes information about birth experiences (Maravilla, Betts, & Alati, 2019). To determine the level of psychological problems in pregnant women, the BDI measurement scale is used (Carvalho Bos et al., 2009). The Beck Depression Inventory, Second Edition (BDI-II) is a 21-item multi-item rating scale to assess the severity of depressive symptoms including cognitive (psychological) and somatic (physical) symptoms. The patient is asked to consider each question statement related to

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his feelings during the last two weeks. The BDI has demonstrated good psychometrics in pregnant populations. According to research by the American College of Obstetricians and Gynecologists Committee Opinion No. 453, it is an appropriate screening tool in the patient population of pregnant women (Ragland & Payakachat, 2012)

Management in midwifery that is carried out to reduce depression and childbirth is physical exercise, such as pregnancy exercise, the Lamazze method, meditation or prenatal yoga or yoga relaxation. Pregnancy exercise is a form of exercise programmed by the health service technical implementation unit as an effort to prevent pregnancy complications. However, according to research (Fitriani, 2018) that pregnancy yoga which is more effective between pregnancy exercise and pregnancy yoga in reducing back pain is pregnancy yoga. It can be seen from the mean value of pregnancy yoga which is greater than the mean value of pregnancy exercise. This is also in line with research conducted by (Field et al 2014) which states that yoga has a more positive effect on pregnant women in reducing stress, anxiety and sleep disorders in pregnant women. In line with research conducted by (Rao et al, 2015) a systematic review of yoga is effective for reducing anxiety, depression and acute and chronic pain in the adult population without side effects. Yoga intervention improves psychological health (anxiety, depression, depression, stress) and can improve the quality of life.

## RESEARCH METHODS

The research design used in this research is Quasi Experiment with a Nonequivalent Control Group Design

## RESULTS

**Table 1. Wilcoxon Hypothesis Test Results Comparison of BDI-II Pre, Mid, and Post Intervention and Control Groups**

Intervention Group		N	Mean Ranks	Sum of ranks	<i>p-value</i>
Midtest-Pretest	Negative Ranks	12	6.50	78.00	0.002
	Positive Ranks	0	.00	.00	
	Ties	0			
		12			
Posttest-Midtest	Negative Ranks	12	6.50	78.00	0.002
	Positive Ranks	0	.00	.00	
	Ties	0			
		12			
Control Group					
Midtest-Pretest	Negative Ranks	6	3.50	21.00	0.027
	Positive Ranks	0	.00	.00	
	Ties	6			
		12			
Posttest-Mid Test	Negative Ranks	9	5.61	50.50	0.018
	Positive Ranks	1	4.50	4.50	
	Ties	2			
		12			

approach. This design involves two groups, namely the intervention and control groups, each of which was tested 3 times, namely pre-test, mid-test, and post-test. The Beck Depression Inventory (BDI) questionnaire was used. The sample in this study consisted of 24 respondents, 12 intervention groups and 12 control groups. Criteria in this research; pregnant women <20 years and >35 years, pregnant women in the II-III trimester with gestational age  $\geq 20$  to <31 weeks, pregnant women without complications in pregnancy. Research Place

This research was conducted in January-June 2020 and has received a recommendation for ethical approval with protocol number UH20020334. The research was conducted at four health centers in the city of Makassar, namely this research was carried out at the Bara Baraya Health Center, Antang Health Center, Kapasa Health Center, and Mamajang Health Center.

Data source

The data collected is demographic data (age, education and employment) and data on respondents' levels of depression questionnaire sheet in the form of the Beck Depression Inventory-II (BDI-II) Scale.

Data collection technique

The researcher gave a questionnaire sheet in the form of the Beck Depression Inventory (BDI) Scale and the data obtained was then documented on an observation sheet.

Data analysis

The analysis and statistical tests carried out depend on the variables will be analyzed. Test the comparative hypothesis for numerical variables with non-normal data distribution using the Wilcoxon test.

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Intervention and Control Groups					
Post BDI Intervention-Post	Negative Ranks	10	7.45	74.50	0.005
BDI Control	Positive Ranks	2	1.45	3.50	
	Ties	0			
		12			

\*Wilcoxon Signed Rank Test

### DISCUSSION

In the table, the Wilcoxon Post Test Results for the Intervention and Control Groups obtained a p value of 0.005 ( $<\alpha 0.05$ ) so that it can be concluded that there is a difference in the BDI-II (Beck Depression Inventory -II) scores in the intervention group and the control group after being given Prenatal Gentle treatment Yoga. After giving Prenatal Gentle Yoga treatment for 8 times, we could see a very significant difference in BDI-II (Beck Depression Inventory) scores between the intervention and control groups. Even though both groups experienced a decrease in BDI-II scores, the number of respondents who experienced a decrease in scores remained different. The number of respondents in the intervention group who experienced a decrease in BDI-II scores was higher than the control group. The mean ranks value for the intervention group was 6.50 in the pre test-mid test and mid test-post test respectively. Meanwhile in the control group the mean ranks value was 5.61 in the pre test-mid test, and the mean ranks value was 4.50 in the mid test-post test. This shows that the intervention group experienced a significant decrease in the level of depression on the BDI – II (Beck Depression Inventory-II) score compared to the control group. So, it can be concluded that there is an effect of providing gentle yoga prenatal treatment on improving the level of depression in pregnant women aged <20 and >35 years.

Depression is the leading cause of mental disability and is a major contributing disease worldwide. Globally, the prevalence of depression and depressive symptoms has increased in recent decades. Depression is one of the most common disorders affecting women during pregnancy (Coll et al., 2017). The perinatal period of motherhood is a challenging period, involving significant psychological, social and biological changes, and has been considered a window of increased vulnerability for the development of mental illness (MacLeod Hall et al., 2019). Depression is a complex mood disorder in pregnant women. Prenatal depression can negatively affect the physical and mental health of the mother and fetus. Antidepressant therapy can reduce symptoms of prenatal depression, but has a negative impact on the body. Antidepressants can increase the risk of postpartum bleeding and have a negative impact on the fetus. Therefore, yoga is currently being developed in pregnancy, with the aim of restoring the body's physiological functions by regulating the balance between body and mind (Taso et al., 2014).

The decrease in the BDI-II (Beck Depression Inventory-II) score was due to the provision of Prenatal Gentle Yoga treatment. Yoga movements include a combination of physical postures and spiritual practices which aim to relax the body so that the body and mind become calm and comfortable.

*Prenatal Gentle Yoga*, a form of yoga designed to be safe, gentle, and especially helpful for pregnant women, is a viable strategy for the treatment of maternal depression. One way of prenatal yoga is to increase attention, empower and focus on the well-being of the pregnant mother's mind (L. Sheng, M. Christopher, 2016). Previous research by (Tiffany Field, Miguel Diego, Jeannette Delgado, 2008) have mentioned the positive impacts of yoga for pregnant women namely; reduced stress, reduced anxiety and physical complaints during pregnancy, reduced pregnancy discomfort, minimized labor pain with pregnancy yoga physical exercises, and accelerated the opening of the birth canal during delivery. Prenatal Gentle Yoga, is considered to improve the nervous system regulation and physiological system functions (immune, endocrine, neurotransmitter, and cardiovascular) and improve well-being to achieve balance between mind and body, thereby reducing complications such as hypertension in pregnancy, premature labor, and reducing Sectio Caesarea births (SC) (Curtis, Weinrib, & Katz, 2012).

### CONCLUSION

Providing Prenatal Gentle Yoga classes is effective in reducing depression levels in pregnant women <20 years and >35 years. This is shown by the results of the BDI-II (Beck Depression Inventory-II) scores before treatment, 4 weeks after treatment (mid test), and 8 weeks after treatment (post test) pregnant women experienced a decrease in depression levels.

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