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The Difference between Conventional and Mindfulness Education on Self-Efficacy of Pregnant Women at PMB Midwife "N", SST Central Bogor District, Bogor City

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Abstract

Background: Anxiety in pregnancy is an indirect cause of death in mothers. In 2021, in West Java, there were 36.2% of pregnant women experienced anxiety in facing childbirth. Based on the results of data at PMB "N" in 2024, there were 90 pregnant women, and the number of women giving birth was as many as people. The number of mothers who experienced prolonged labor and congestion during labor was 7 (58%). **Purpose:** The purpose of this study is to determine the differences in self-efficacy in third-trimester pregnant women with the provision of conventional antenatal education and mindfulness. **Methods**: This study uses a quasi-experimental design approach. Sampling by quota sampling to get 20 third-trimester respondents who were divided equally into 2 groups, namely experimental and control groups. The intervention was given for 7 days. The research instruments used in this study included the Childbirth Self-Efficacy (CBSE-32) quiz in the Indonesian version. Data were analyzed using the Mann-Whitney Test to determine differences in influence between groups. **Result:** The results showed that there was a significant difference in the increase in self-efficacy after being given mindfulness education, with a total of 8 (80%) sure and p-value 0.001. While antenatal education with as many as 6 (60%) sure and p-value 0.044 at PMB Bd "N" SST Bogor City in 2024. The Mindfulness group showed more significant changes than the conventional group after the intervention. This indicates that the mindfulness intervention provided is more effective in increasing self-efficacy. **Conclusion:** This study provides evidence that mindfulness practice effectively increases self-efficacy in third trimester pregnant women. Thus, mindfulness is expected to be part of antenatal education for pregnant women in self-empowerment to increase self-efficacy before labor and improve the quality of medical services.

Keywords: Childbirth, mental health, mindfulness, pregnant women, self-efficacy.

Introduction

Meanwhile, Indonesia ranks as the third country with the highest MMR in Southeast Asia with an estimated MMR of 173 deaths per 100,000 live births. The largest percentage of MMR occurs during

childbirth (39%), followed by the postpartum period (31%), and finally during pregnancy (30%). And infant mortality rates. The SP2020 Long Form results showed that

Indonesia's infant mortality rate was 16.85 per 1.000 live births. Most infant deaths occur in the early birth period.[1]

Maternal mortality rate is one of the indicators to see the success of health efforts, anxiety in pregnancy is an indirect cause of death in mothers. In 2021 in West Java, 36.2% of pregnant women experienced anxiety in the face of childbirth.[2]

All of these factors can generally be prevented as early as possible. Therefore, according to WHO (2023), prioritized by improving quality antenatal care, availability of trained health workers at the time of birth, postnatal care for mothers and infants, and care for low birth weight (LBW) or sick infants.[1]

According to Siregar (2020), "The level of anxiety in third-trimester pregnant women facing childbirth". Anxiety in third-trimester pregnant women can arise up until the moment of delivery, during which time the pregnant mother feels anxious about whether her baby will be born normally or abnormally. This anxiety is due to the mother's misconceptions about the birthing process. Birth is perceived as a frightening process that causes extraordinary pain.[3]

Factors that can cause mental health issues during childbirth include worry, anxiety, fear of death, narcissism, trauma from childbirth, stress, feelings of guilt, inner conflict, restlessness, sadness, and simultaneous happiness.[4]

According to Husnul Lail, Self Efficacy is the belief of yourself or someone else that you are capable of doing something important to achieve your goals. It includes your feelings about knowing what needs to be done and also your emotional ability to carry it out.[4]

With the increase in self-efficacy among pregnant women, it is hoped that the well-being of pregnant women and childbirth will improve. Thus, it is expected to align with the WHO 2020 targets from the Sustainable Development Goals (SDGs), one of which is to ensure healthy lives and promote well-being for all at all ages by reducing the maternal mortality rate to 70 per 100,000 live births by 2030.[5]

Mindfulness (meditation) is attention and awareness directed inward with full control. This attention can reconnect individuals to the present moment, and this awareness encompasses the awareness of thoughts, emotions, and physical sensations being felt. Mindfulness-based antenatal education is an approach used in pregnancy care to help expectant mothers reduce stress and manage their moods during pregnancy and the postpartum period. This involves a series of

exercises designed to enhance the psychological awareness and readiness of pregnant mothers during the childbirth process.[6]

Based on Jumrah research in 2023 Maternal Mental Health (MMH) education in the form of Mindfulness-Based Childbirth Education (MBCE) implemented in stages using a stress and self-efficacy approach, as well as family empowerment, has a positive impact on increasing good self-efficacy and reducing stress responses in pregnant women.[7] And Hapsari's research in 2021, The intervention in the form of mindfulness training can have an effect on reducing pregnancy anxiety, but not in all participants. The decrease in pregnancy anxiety only occurred in two of the three participants who participated in the training.[8] And Anteinatal Care (ANC) is a service provided by nurses to pregnant women, such as monitoring the physical, psychological, metabolic and balance of the fetus as well as preparing for the labor and birth process so that the mother is ready to face a new life as a parent.[9]

Based on research by Demirci the There were eligible seven articles. Antenatal education had a large, positive effect on outcome expectancy and efficacy expectancy. So, substantial evidence suggested high heterogeneity.[10]

Based on data from PMB Mrs. "N", there were 7 (58%) cases of prolonged and obstructed labor among 12 mothers giving birth from January 2023 to July 2024, due to unpreparedness in facing the labor process, particularly in their confidence in dealing with pain caused by contractions. Therefore, the author is interested and intends to conduct research on "The Differences between Conventional and Mindfulness Education on the Self-Efficacy of Pregnant Women at PMB Midwife 'N', SST, Central Bogor District, Bogor City".

Method

The type of research used in this study is an experimental research design with Quasi Exsperiment Design. This study used a pretest-postest with control group design. Quasi Experiment is a type of research conducted to determine the consequences of a treatment given intentionally by researchers. Respondents were divided into either a treatment group (R1) or a control group (R2). Pre-Test (O1) Both groups underwent a pre-test before the intervention to measure their baseline characteristics or status related to the outcome of interest. Intervention (X1) The treatment group receives the experimental intervention (X1) being evaluated. The control group receives the standardized intervention or no intervention at all (XO). Post-Test (O2) Both

groups undergo a post-test after the intervention to measure outcomes and compare differences between the two groups.[11] This research uses Purposive sampling technique, participants who have special characteristics that are relevant to the research objectives.[12] The population in this study consists of all pregnant women in their third trimester at the Independent Midwifery Practice Bd. "N" S.ST in Bogor City during the period of July 2024. The sample is the part of the population to be studied or part of the number of characteristics possessed by the population.[11]

The total sample in the study is 20 pregnant women, with assessments of the pregnant women after they received the intervention. Roscoe suggests that in simple experimental research using experimental and control groups, the sample size for each group should be 10-20.[13] The researcher determined the sample size for this study to be 20 respondents, divided into 2 groups. Each group consists of 10 respondents. The data collection instrument in this study was carried out using the Child Birth Self-Efficacy Questionnaire (CBSE-32), 16 statements to obtain information related to the characteristics of the respondents. .using the Likert Scale to measure attitudes, opinions, and perceptions of individuals or groups about certain phenomena in research..[14]The Category is Less Confident with Score (0,1,2,3,4), Quite Sure (CY) with a score (5,6,7) and Very Sure (SY) with a score (8,9,10).[15] Researchers use mean values, to categorize being uncertain and confident. the questionnaire to explore respondents' self efficacy, the researcher used a questionnaire from previous research that had been declared valid and reliable, so it did not require validity and reliability tests again. With an average instrument validity value of 0.726 and a reliability test of 0.938.[15]

Results

This study was conducted at PMB midwife N to determine the effect of providing conventional education and mindfulness on self-efficacy. The data collected were secondary data in the experimental and control groups who were given education for 1 meeting. The time of educational assessment is 1 week after the provision of measuring the increase in self efficacy in respondents. The observation results were then processed using SPSS and analyzed by univariate and bivariate. Univariate analysis aims to describe the characteristics of each research variable while bivariate analysis aims to determine the effect of conventional education and mindfulness on self efficacy. Univariate analysis to determine the characteristics of respondents, the following

is a description of the frequency distribution of respondents' beliefs in the experimental group and control group.

Table 1. Distribution of respondents' frequency by paritas

Characteristic	Experimental Group		Control Group	
Paritas	**Frequency (f)**	**Percentage (%)**	**Frequency (f)**	**Percentage (%)**
Primipara	3	30,0	5	50,0
Multipara	6	60,0	5	50,0
Grandepara	1	10,0	0	0
Sum	**10**	**100**	**10**	**100**

In table 1, it can be seen that the frequency distribution data of primipara parity characteristics of the research results obtained from 10 respondents, which were studied primipara as many as 3 people (30%), multipara age as many as 6 people (60%), while grandepara as many as 1 person (10%) in the experimental group. Whereas in the control group, primiparous parity was 5 people (50%), multiparous was 5 people (50), grandepara was 0 (0%).

Table 2. Frequency Distribution of Pretest and Posttest Self Efficacy in the Experimental Group and Control Group

Category	Experimental Group		Control Group	
	Pretest			
Self Efficacy	**Frequency (f)**	**Percentage (%)**	**Frequency (f)**	**Percentage (%)**
Sure	5	50,0	5	50,0
Unsure	5	50,0	5	50,0
Sum	10	100	10	100
	Posttest			
Sure	8	80,0	6	60,0
Unsure	2	20,0	4	40,0
Sum	10	100	10	100

Table 2 shows that pregnant women third trimester before the administration of mindfulness by doing pretest treatment experienced as many as 5 people (50.0%), and not sure as many as 5 people (50.0%). This shows that the most frequency in pregnant women third trimester before being given mindful given mindfulneess with unsure and sure categories are the same. Then after the posttest treatment the proportion increased who experienced sure as many as 8 respondents (80.0%), and not sure as many as 2 respondents (20.0%). This shows that the

frequency of third trimester pregnant women who are many before being given education with the category is confident.

Table 2 shows that third trimester pregnant women before providing conventional education by conducting a pretest in the control group experienced uncertainty as many as 5 people (50.0%) and as many as 5 people (50.0%) were confident. This shows that the frequency before being given conventional education is the same. Then the posttest of the control group experienced uncertainty as many as 4 people (40.0%) and as many as 6 people (60.0%) were confident. This shows that the most frequent third trimester pregnant women before being given education with the confident category.

Table 3. Data Normality Test the experimental group and the control group

Pretest and Posttest		Shapiro-Wilk			
		N	*P value*	*N*	*P value*
Self efficacy	Pretest Experiments and Controls	20	.885	20	.487
Self efficacy	Posttest Experiments and Controls	20	.000	30	.121

Table 3 of the data normality test seen from the Shapiro-Wilk test, namely obtained data results that were not normally distributed in both groups, namely the experimental group and the control group with p values in the sig experimental group, the data are not normally distributed (0.000) < α (0.05). In the control group, the data appear to be normally distributed p value (0.121) > α (0.05). The data were obtained from two non-homogeneous groups, therefore, the hypothesis testing used was a non-parametric statistical method using the Mann-Whitney Test.[15]

Table 4. Differences in Pretest and Posttest Score Self-Efficacy in the Experimental Group of Mindfulness Treatment for Pregnant Women in Trimester 3

	Pretest	***Posttest***		**Z**	***P-value***
Group	M	M	SD	Score	
Experiment	5.95	15.05	6.802	-3.454	0.001

M = Mean, SD = Standard Deviation

Table 4 it can be concluded that there is a difference in score self efficacy in adolescents before and after mindfulness in the experimental group with a result of 0.001 ($p < 0.05$).

Table 5. Differences in Pretest and Posttest Score Self Efficacy in The Control Groups of Education Conventional

M = Mean, SD = Deviation

	Pretest	***Posttest***		**Z**	***P-value***
Group	M	M	SD	Score	
Control	7,85	13.15	6.530	-2.016	0.044

Table 5 concluded that there were differencesin score self efficacy in adolescents before and after education convetional in the control group with a result of 0.044 ($p < 0.05$).

So, there is a difference in effectiveness between the two groups, but the experimental group experienced a much more significant change.

Table 6. Effect of Self Efficacy between Experimental Group and Control Group

	Experimental				**Control**			
Variable	M	SD	Z Score	P-value	M	SD	Z Score	P-value
Posttest	78,70	3.831	2.807	0.005	75.40	5.337	2.677	0.007

M = Mean, SD = Standard Deviation

Table 6 it can be concluded that there is a difference in self-efficacy post-test scores of 78.70 and 75.40 between the experimental group and the control group, with a p-value of 0.000 ($p < 0.05$). Therefore, there is an effect of the two interventions on self-efficacy.

Discussion

Differences in Self-Efficacy Pretest and Posttest in the Experimental Group of Pregnant Women in the Third Trimester

From the results of the tests that have been carried out, it can be seen that self-efficacy at the time of pretest and posttest in the experimental group shows a difference with a p value of 0.001 ($p < 0.05$). By practicing meditation regularly, pregnant women can feel more relaxed in facing the process of pregnancy and labor. Fear and anxiety before childbirth is a natural experience, so it is important to encourage pregnant women to do meditation that can foster courage in themselves to undergo a safe and comfortable delivery process.[16]

Whereas, based on Hapsari's research in 2021, each participant attended eight sessions of mindfulness training, which included practices such as breath awareness, body scanning, mindful eating, and pregnancy yoga. The author uses a single-case experimental design type A-B with a baseline condition of seven days and an intervention condition of 14 days. Data analysis using descriptive statistical techniques through visual analysis with quantitative and qualitative graphs. Participants were given a pregnancy diary to measure daily changes in anxiety, along with interviews and observations. The results of the intervention show that in participant 1 and participant 3, there was a decrease in the mean pregnancy anxiety, while participant 2 experienced an increase.[8]

Differences in Self-Efficacy Pretest and Posttest in the Control Group of Pregnant Women in the Third Trimester

From The results of the tests that have been done, it can be seen that thedysmenorhe pain scale in the pretest and posttest in the control group has differences with the value of *p value* 0.044 ($p < 0.05$). Antenatal Care (ANC) is a service provided by nurses to pregnant women, such as monitoring the physical, psychological, metabolic and balance of the fetus as well as preparing for the labor and birth process so that the mother is ready to face a new life as a parent.[17]

Based on research by Demirci the There were eligible seven articles. Antenatal education had a large, positive effect on outcome expectancy and efficacy expectancy with *p value* 0.000 ($p < 0.05$). So Substantial evidence suggested high heterogen eity. Antenatal education is effective in promoting women's belief in themselves about not only ability of coping with birth, but also desired outcome of coping behavior which is effective in achieving a positive birth experience.[10]

Effect of Posttest Self-Efficacy between Experimental Group and Control Group

Based on the final results of the study on the Pretest and Posttest Self Efficacy Frequency Distribution test, there is an increase in confidence with a comparison of the results of third trimester pregnant women who are confident 8:6 between mindfulness and conventional education. and the results of the man whitney test both interventions have effectiveness to increase self efficacy but at a lower p-value mindfulness than conventional education, namely p-value 0.001. This finding is in line with Seigal's theory, the Mindfullneiss Baseid Cognitive Therapy (MBCT) technique utilizes breathing techniques such as meditation, breathing exercises and 28 relaxation exercises while combining the elements of cognitive therapy to assist in overcoming

negative thought patterns that are a contributing factor to psychological problems such as anxiety, depression, bipolar and other psychological problems.[18]

Based on the experience of conducting this research, there are several challenges that researchers need to pay attention to. One of them is that not all research participants benefit from mindfulness training, as also found in Hapsari's study in 2021.[8] This research has not delved deeper into the reasons why this occurs, but discussions with participants suggest that factors such as never having experienced contractions (primipara) and previous childbirth trauma (multipara) may be contributing causes. In addition, the limited sample size means that this study only provides a small overview of the effectiveness of conventional antenatal education and mindfulness on the self-confidence of pregnant women. The limited time and budget also pose challenges, resulting in a short duration for the intervention and a brief period for re-measurement. Thus, this research can only provide an initial overview of the increase in self-confidence after mindfulness training is given.

However, it provides evidence regarding the effectiveness of antenatal education approaches, both conventional and mindfulness, in improving pregnant women's self-efficacy. In addition, a more in-depth analysis showed that the mindfulness intervention had a statistically significant impact on improving self-efficacy. These findings indicate that the mindfulness component in antenatal education programs has great potential in empowering pregnant women and increasing their confidence in facing the pregnancy and childbirth process. This study opens the door for further research to uncover the mechanisms underlying the effectiveness of mindfulness in improving pregnant women's self-efficacy. In addition, future research could explore the optimal duration and frequency of mindfulness interventions, as well as the long-term impact of these interventions on maternal and child health.

Limitation

Based on the experience of conducting this research, there are several challenges that researchers need to pay attention to. One of them is that not all research participants benefit from mindfulness training, as also found in Hapsari's study in 2021.[8] This research has not delved deeper into the reasons why this occurs, but discussions with participants suggest that factors such as never having experienced contractions (primipara) and previous childbirth trauma (multipara) may be contributing causes.This is in line with the results of the study by yazia and suryani, 2022 26.6%

experienced moderate stress, 37.5% poor family support, 37.5% poor husband support, 40.6% have trauma, 46.9% have a level of personal readiness in the category of not prepared and 46.9% had a heavy activity level.[19] In addition, the limited sample size means that this study only provides a small overview of the effectiveness of conventional antenatal education and mindfulness on the self-confidence of pregnant women. The limited time and budget also pose challenges, resulting in a short duration for the intervention and a brief period for re-measurement. Thus, this research can only provide an initial overview of the increase in self-confidence after mindfulness training is given.

Conclusion

There is a difference between the pretest and posttest of the experimental group and the control group, it can be concluded that there is a difference in self efficacy in trimester 3 pregnant women before and after being given mindfulness in the experimental group with stronger results as many as 8 (80%) pregnant women experience confident self efficacy and p-value 0.001 ($p < 0.05$). While in the control group, it can be concluded that there are differences in self efficacy in pregnant women in Trimester 3 before and after conventional education in the control group with the results of 6 (60%) pregnant women experiencing confident self efficacy and p-value 0.044 ($p < 0.05$). The results showed that the comparison between the experimental and control groups showed that mindfulness was more effective in increasing self-efficacy compared to conventional approaches.

To this end, it is recommended that mindfulness programs be integrated into antenatal education programs. Further research is needed to uncover the mechanisme of mindfulness more deeply and to develop more effective programs. In addition, socialization to healthcare workers and pregnant women about the benefits of mindfulness is also important to carry out.

Ethical Considerations

Ethical Consideration researchers attention to several ethical research issues. First, Informed Consent, which ensures that participants fully understand the purpose of the research, the interview process, risks, benefits, and their rights before giving consent. Second, Voluntary Participation, which ensures that participants participate voluntarily and without pressure. Third,

Confidentiality, which ensures that the information provided by participants is kept confidential. Fourth, Emotional Protection, which understands that participants with sensitive health conditions may experience strong emotions during the interview, so researchers must show empathy and sensitivity in handling emotional responses.[20]

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Conflict of Interest

The authors declare that there is no conflict of interest in this research. All data and information collected have been processed objectively and are not influenced by personal or institutional interests.

Author contribution

Shintia Permatasari: Conducting research, being responsible for the entire content of the scientific article, and making revisions.

Nurul Husnul Lail: Supervising and guiding the implementation of research and preparing the scientific article, providing critiques, feedback, and suggestions for the manuscript writing as the First Supervisor.

Risza Choirunissa: Supervising and guiding the implementation of research, providing critiques, feedback, and suggestions for the manuscript writing as the Second Supervisor.

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