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The effect of self-hypnosis on anxiety level and self-efficacy of pregnant women in dealing with childbirth during the COVID-19 pandemic

Fauziyatun Nisa', Fritria Dwi Anggraini, Yasi Anggasari, Faridah Umamah

Faculty of Nursing and Midwifery, Universitas Nahdlatul Ulama Surabaya, Indonesia

Correspondence: Fauziyatun Nisa', Faculty of Nursing and Midwifery, Universitas Nahdlatul Ulama Surabaya, Indonesia.

E-mail: fauziyatun.nisa@unusa.ac.id

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Abstract

The COVID-19 pandemic has become a multidimensional disaster, affecting various countries, including Indonesia. Adaptation is crucial in addressing the physical and mental health challenges within communities, which includes the adaptation of pregnant women who are

preparing for childbirth amidst the pandemic with the aim of reducing maternal mortality rates in Indonesia. This research aimed to assess the impact of self-hypnosis on the anxiety levels and self-efficacy of pregnant women preparing for childbirth during COVID-19. The study utilized a quasi-experimental design with pre-test and post-test measures. It involved 30 respondents in both the control and intervention groups, who were selected through consecutive sampling. Anxiety levels were measured using the Depression, Anxiety, and Stress Scale (DASS), while self-efficacy was assessed with the New General Self-Efficacy Scale. Data analysis employed paired t-tests and independent t-tests, with the significance level set at $p < 0.05$. The results indicated a significant difference in anxiety levels and self-efficacy between the control and intervention groups, with a p-value of 0.000. Regular self-hypnosis practice positively influenced both anxiety levels and self-efficacy among pregnant women preparing for childbirth during the COVID-19 pandemic.

Introduction

Anxiety is a natural and common experience for pregnant women as they approach childbirth. However, excessively high levels of anxiety, particularly in the third trimester, can have detrimental effects on both the mother and the fetus, as well as on the delivery process.¹⁻³ Elevated anxiety triggers the body to produce increased levels of stress hormones, such as cortisol, Adrenocorticotropic Hormone (ACTH), norepinephrine, and epinephrine. If these stress hormone levels become too high, they can lead to placental hypoperfusion, which negatively impacts fetal growth.^{4,5} Indonesia has experienced the COVID-19 pandemic, necessitating social distancing measures for all citizens.^{6,7} This situation has heightened concerns and anxieties among many pregnant women, particularly first-time mothers.⁸ This

concern is particularly critical as the due date approaches, given that many hospitals are prohibiting families and relatives from accompanying expectant mothers during childbirth to prevent the spread of COVID-19.⁹⁻¹¹

In several developing countries worldwide, including Ethiopia, Nigeria, Senegal, South Africa, Uganda, and Zimbabwe, there is a high prevalence of psychological disorders among pregnant women (15.6%) and postpartum mothers (19.8%).¹² In Indonesia, a study conducted in 2012 revealed that primigravida mothers experienced severe anxiety at a rate of 83.4%, with moderate anxiety affecting 16.6% of them. Multigravida mothers, on the other hand, experienced severe anxiety at a rate of 7%, moderate anxiety at 71.5%, and mild anxiety at 21.5%. The negative impact of anxiety on pregnant women can stimulate uterine contractions, leading to increased blood pressure, which in turn may trigger conditions such as preeclampsia and miscarriage.¹³⁻¹⁵

The COVID-19 pandemic brings many changes, one of which is also felt by pregnant women.¹⁶ This condition certainly makes many pregnant women feel worried and anxious, especially those who are experiencing pregnancy for the first time.¹² This is very important, especially if it is nearing the day of birth, because many hospitals prohibit families and relatives from accompanying their family members during childbirth to prevent the spread of COVID-19. Without the COVID-19 problem, in general, late-trimester pregnant women are faced with anxiety before their childbirth, let alone if they are in a situation that forces them to give birth without any accompanying family. Giving birth without any accompanying family and the condition of the clinic/hospital that is not conducive because of this pandemic will put pregnant women at a greater risk of feeling anxious and insecure, especially if they don't fully understand the current condition.^{17,18} The aim of this research was to determine the effect of self-hypnosis on the level of anxiety and self-efficacy of pregnant women in preparation for childbirth during the COVID-19 pandemic.

Materials and Methods

Research design

The study employed a quasi-experimental design, utilizing a pre-test and post-test design. The intervention involved implementing self-hypnosis sessions for pregnant women over the course of one month, conducted once a week for a total of four sessions, each lasting 30 minutes. The pre-test assessment was administered prior to the intervention, while the post-test assessment was conducted one month after the pre-test.

Study participants

The sampling technique used nonprobability sampling with a consecutive sampling method. The sample involved 30 respondents in the control group and 30 respondents in the interventions.

Variable, instrument and data collection

The independent variable was self-hypnosis. The dependent variable consisted of the anxiety level and self-efficacy of pregnant women in preparation for childbirth during the COVID-19 pandemic. The instrument used to measure anxiety level was Depression, Anxiety, and Stress Scale (DASS) 42. The DASS questionnaire used consisted of 42 items covering 3 sub-variables, namely physical, emotional, and behavioral. Meanwhile, self-efficacy is estimated using the New General Self-Efficacy Scale created by Chen in 2001, which consists of eight items.

Data analysis

Data were analyzed using statistical tests, namely Paired t-test and Independent t-test with a

significance value <0.05 .

Ethical clearance

The research has received ethical approval from the Health Research Ethics Commission, Universitas Nahdlatul Ulama Surabaya, based on ethical certificate 122/EC/KEPK/UNUSA/2021. During the research, the researcher pays attention to the ethical principles of information to consent, respect for human rights, beneficence, and non-maleficence.

Results

Based on the collected data, a descriptive analysis was conducted, presenting the frequency distribution of pregnant women's responses to the research variables. The results were summarized in Table 1, revealing that the majority of pregnant woman respondents were of productive age (77%), had secondary education qualifications (60%), were not working (63%), and were multiparous (83%).

Table 2 demonstrates the results of the paired t-test statistical analysis, indicating a p-value of 0.00. Since the p-value is less than 0.05, it can be concluded that there is a significant change in the anxiety levels of pregnant women before and after the intervention. The results of the paired t-test statistical test obtained a value of $p=0.000$ in the intervention group and a significance value of $p=0.301$ in the control group. The p-value <0.05 can be concluded that there was a significant change in the level of anxiety level before and after being given self-hypnosis in the intervention group and control group.

Table 3 explains that based on the paired t-test statistical test, the $p\text{-value}=0.00$. $P\text{-value}<0.005$, so it can be concluded that there was a significant change in the self-efficacy of pregnant women before and after the intervention. The results of the paired t-test statistical

test obtained a value of $p=0.000$ in the intervention group and a significance value of $p=0.210$ in the control group. The p -value <0.05 can be concluded that there was a significant change in the level of self-efficacy before and after being given self-hypnosis in the intervention group and control group.

Discussion

The findings of this study indicate a significant difference in the anxiety levels of pregnant women facing childbirth between the control and intervention groups. Notably, there was a decrease in anxiety levels among pregnant women following the self-hypnosis intervention compared to before the intervention. This suggests that regular self-hypnosis can effectively reduce anxiety levels in pregnant women. Furthermore, the study highlights the significant impact of self-hypnosis on alleviating anxiety among pregnant women facing childbirth during the COVID-19 pandemic. This is in line with Fatimah et al.'s study, which states that relaxation training with the hypnobirthing method can significantly reduce the subject's anxiety in dealing with nulliparous pregnancy in preparation for childbirth.¹⁹

The existence of thoughts such as giving birth that will always be followed by pain, will cause an increase in the work of the sympathetic nervous system.^{20,21} In this situation, the endocrine system, which is made up of glands such as the adrenal, thyroid, and pituitary (the control center of the gland), releases their respective hormones into the bloodstream to prepare the body for an emergency. As a result, the autonomic nervous system activates the adrenal glands, which affect the system of the hormone epinephrine. An increase in the hormones adrenaline and noradrenaline or epinephrine and norepinephrine causes dysregulation of the body's biochemistry, resulting in physical tension in pregnant women.²² The impact of this physiological process can arise in daily behavior. Thus, pregnant women become sensitive, restless, unable to focus, indecisive - and may even want to run away from the realities of life.²³

There was an increase in self-efficacy of pregnant women between before and after self-hypnosis interventions. This shows that self-hypnosis can increase the self-efficacy of pregnant women in dealing with childbirth during the COVID-19 pandemic. Regular self-hypnosis has an impact on the self-efficacy of pregnant women.²⁴ A series of relaxation techniques ranging from muscle relaxation, breathing relaxation, mental relaxation, and instilling positive sentences that are carried out regularly with full concentration will cause a relaxed condition in the body. As a response, the body releases endorphins, which make pregnant women relax and feel less pain, especially when the brain reaches alpha waves or is at rest.^{25,26} In this condition, the body releases serotonin and endorphins so it allows a relaxed condition without tension and anxiety.^{27,28}

Conclusions

There was a significant positive impact of self-hypnosis on stabilizing the anxiety levels of pregnant women. Additionally, self-hypnosis was found to enhance and improve the self-efficacy of pregnant women. Therefore, it is recommended that pregnant women engage in regular self-hypnosis sessions to benefit from its effects on anxiety stability and self-efficacy enhancement.

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Table 1. Distribution of pregnant women based on characteristics of education, occupation, and information acquisition.

Characteristics	Category	Frequency	Percentage (%)
Age	Productive (20-35)	23	77
	Non-productive	7	23
Education	Primary	3	10
	Secondary	18	60
	Tertiary	9	30
Occupation	Not working	19	63
	Working	11	37
Parity	Primiparous	5	17
	Multiparous	25	83
Total		30	100

Table 2. Changes in anxiety level before and after self-hypnosis in the intervention and control groups.

Pregnant women	Pregnant women's anxiety level		p-value
	Before	After	
	(Mean±SD)	(Mean±SD)	
Control group	27.66±2.27	23.34±2.24	0.301
Intervention group	27.27±1.92	18.44±2.43	0.000

SD, Standard Deviation

*p<0.05 based on paired t-test

Table 3. Changes in self-efficacy before and after self-hypnosis in the intervention and control groups.

Pregnant mother	Self-efficacy		p-value
	Before	After	
	(Mean±SD)	(Mean±SD)	
Control group	10.5±1.32	10.5±1.13	0.210
Intervention group	3.92±0.98	11.9 ± 2.05	0.000

SD, Standard Deviation

*p<0.05 based on paired t-test

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