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ORIGINAL RESEARCH

THE EFFECT OF AUTOGENIC RELAXATION TECHNIQUE ON REDUCING ANXIETY LEVELS IN THIRD-TRIMESTER PREGNANT WOMEN AT TPMB IKE SRI MEI WULAN, BULULAWANG, MALANG REGENCY

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ABSTRACT

Primigravida women those experiencing pregnancy for the first time and lacking prior knowledge of physical changes and the childbirth process tend to experience higher levels of anxiety compared to multigravida women. Therefore, non-pharmacological interventions are needed to help facilitate the labor process, one of which is the use of autogenic relaxation techniques to reduce anxiety in third-trimester pregnant women. This study aimed to determine the effect of autogenic relaxation techniques on the anxiety levels of third-trimester pregnant women at TPMB Ike Sri Mei Wulan, Bululawang District, Malang Regency. The research employed a quantitative method with a pre-experimental design using a one-group pretest–posttest approach. The sample consisted of 27 third-trimester pregnant women selected through purposive sampling from a population of 40 individuals. The instrument used was the PRAQ-R2 questionnaire to measure anxiety levels before and after the intervention. Data analysis was conducted using univariate and bivariate methods, with the Wilcoxon Signed Rank Test applied for statistical analysis. The results showed that before the intervention, most respondents experienced moderate anxiety, while after the intervention, the majority experienced mild anxiety. The Wilcoxon test result indicated a p-value of 0.001 ($p < 0.05$), demonstrating a significant effect of autogenic relaxation techniques in reducing anxiety levels among third-trimester pregnant women. This therapy can be implemented as a non-pharmacological approach to help reduce anxiety in pregnant women during the third trimester.

Keywords

Anxiety, third-trimester pregnant women, autogenic relaxation.

INTRODUCTION

Pregnancy is a physiological process accompanied by various physical and psychological changes. During the third trimester (weeks 28 - 40), these changes often become more pronounced, leading to discomforts such as back pain, frequent urination, constipation, and sleep disturbances (Rayani et al., 2023; Rayani et al., 2024). Alongside these physical symptoms, psychological issues particularly anxiety

are commonly experienced and may significantly affect maternal well-being.

Anxiety during pregnancy is a global health concern. According to the World Health Organization (2023), approximately 10 - 15% of pregnant women worldwide experience anxiety disorders. In Indonesia, the prevalence is reported to be higher, reaching around 28% based on findings published in the Indonesian Journal of Obstetrics and Gynecology (Maba, 2023). Regional data from the East Java Provincial Health Profile (2022) further indicate that anxiety is more common among primigravida women compared to multigravida women. This is supported by research conducted in Malang, which found that pregnant women experience varying levels of anxiety, from mild to severe (Saputri & Yudianti, 2020).

Primigravida women are generally more vulnerable to anxiety due to limited experience, lack of knowledge about childbirth, and concerns regarding maternal and fetal safety. Hormonal changes during pregnancy may also contribute to emotional instability (Lufianti, 2024). However, anxiety is not limited to primigravida mothers; multigravida women may also experience anxiety, particularly if they have a history of traumatic childbirth or pregnancy complications (Arikalang et al., 2023). Additionally, factors such as socioeconomic status, maternal age, family support, and access to healthcare services can further influence anxiety levels (Putri et al., 2022).

If left unmanaged, anxiety can negatively affect both the mother and fetus. Increased stress hormones, such as cortisol and adrenaline, may disrupt placental blood flow, potentially leading to adverse outcomes such as preterm birth and low birth weight (Lobmaier et al., 2020). Therefore, effective anxiety management during pregnancy is essential.

Management of anxiety can be approached through pharmacological and non-pharmacological methods. Although medications such as Selective Serotonin Reuptake Inhibitors (SSRIs) (e.g., sertraline, citalopram, and fluoxetine) are sometimes used, their use during pregnancy remains limited due to potential risks to fetal development (Febrianti, 2024). Consequently, non-pharmacological interventions are widely recommended. These include breathing relaxation, prenatal yoga, aromatherapy, music therapy, and autogenic relaxation (Rahmadani et al., 2023).

Autogenic relaxation is a self-relaxation technique that uses controlled breathing and positive autosuggestion to induce a state of calmness and reduce stress responses (Novita & Suprida, 2022). Previous studies have demonstrated its effectiveness. For example, Putri et al. (2022) reported a significant reduction in anxiety levels among primigravida pregnant women after practicing autogenic relaxation for 10 minutes daily over three days.

However, although autogenic relaxation has shown effectiveness in reducing anxiety, limited evidence exists regarding its short-term impact using standardized instruments such as PRAQ-R2 among third-trimester pregnant women in primary care settings. This highlights the need for further investigation in this specific population and context.

A preliminary study conducted on November 10, 2025, at TPMB Ike Sri Mei Wulan, Malang Regency, found that most third-trimester pregnant women (28 - 40 weeks), both primigravida and multigravida, experienced anxiety prior to childbirth. This finding reinforces the importance of implementing

appropriate, safe, and practical interventions.

Therefore, this study aims to examine the effect of autogenic relaxation on anxiety levels among third-trimester pregnant women in the selected study setting.

METHOD

This study employed a quantitative approach using a pre-experimental design with a one-group pretest–posttest format to examine changes in anxiety levels following the administration of autogenic relaxation techniques among third-trimester pregnant women. However, the absence of a control group limits the ability to attribute observed changes solely to the intervention; therefore, the findings should be interpreted with caution and do not imply definitive causality. The study was conducted at TPMB Ike Sri Mei Wulan, Bululawang District, Malang Regency, in January 2026. The population consisted of all third-trimester pregnant women (gestational age 28 - 40 weeks), both primigravida and multigravida, totaling 40 individuals.

The sample was selected using a non-probability purposive sampling technique, chosen to ensure that respondents met specific inclusion criteria relevant to the study objectives. Nevertheless, this method may introduce selection bias and limit the generalizability of the findings. The minimum sample size was calculated using the Lemeshow formula for a finite population, with a 95% confidence level (Z = 1.96), an assumed proportion (p = 0.5), a margin of error (d = 0.1), and a population size of 40, resulting in a minimum of 27 respondents.

The inclusion criteria were third-trimester pregnant women (28 - 40 weeks), primigravida or multigravida, able to communicate effectively, willing to participate by signing informed consent, and experiencing mild to moderate anxiety based on the Pregnancy-Related Anxiety Questionnaire-Revised 2 (PRAQ-R2) score. Exclusion criteria included severe pregnancy complications, current participation in anxiety therapy, a history of psychiatric disorders, inability to complete the intervention, and physical limitations that prevented participation in relaxation exercises.

The independent variable in this study was the autogenic relaxation technique, while the dependent variable was anxiety level. Anxiety was measured using the PRAQ-R2 instrument, which has demonstrated good reliability, with Cronbach's alpha values ranging from 0.79 to 0.85, and has been validated for use in the Indonesian population. Data collection was carried out through questionnaire administration before (pretest) and after (posttest) the intervention.

The autogenic relaxation intervention was delivered by the researcher, who had received prior training, using a standardized protocol consisting of guided breathing, body awareness, and positive autosuggestion. Each session lasted approximately 10–15 minutes and was conducted once daily for three consecutive days within one week. Participant adherence was

monitored through direct supervision and attendance recording.

Data were analyzed using univariate analysis to describe respondent characteristics and the distribution of anxiety levels, and bivariate analysis using the Wilcoxon Matched Pairs Test to assess differences in anxiety scores before and after the intervention. Several potential confounding variables, including parity, level of social support, and educational background, were not controlled for in the analysis and may have influenced anxiety levels; therefore, these factors should be considered when interpreting the results.

RESULTS

An overview of changes in anxiety levels among third-trimester pregnant women before and after the administration of autogenic relaxation intervention is presented in the form of frequency distribution data and bivariate analysis results. The data include anxiety levels before the intervention, anxiety levels after the intervention, as well as statistical test results to determine the effect of autogenic relaxation techniques on reducing respondents' anxiety levels. The results of the study are presented in the following table:

Table 1. Frequency Distribution of Anxiety Levels Before Intervention.

Anxiety Level	Frequency (n)	Percentage (%)
Mild anxiety (0 - 19)	4	14.8
Moderate anxiety (20 - 29)	23	85.2
Severe anxiety (30 - 50)	0	0
Total	27	100.0

Based on Table 1, before the intervention, most respondents experienced moderate anxiety, with 23 people (85.2%), indicating that the majority were at a relatively high level of anxiety. Meanwhile, a small proportion of respondents experienced mild anxiety, with 4 people (14.8%). It can therefore be concluded that only a few respondents had low anxiety levels before the intervention.

Table 2. Frequency Distribution of Anxiety Levels After Intervention.

Anxiety Level	Frequency (n)	Percentage (%)
Mild anxiety (0 - 19)	22	81.5
Moderate anxiety (20 - 29)	5	18.5
Severe anxiety (30 - 50)	0	0
Total	27	100.0

Based on Table 2, after the intervention, most respondents experienced mild anxiety, with 22 people (81.5%), indicating a decrease in anxiety levels among the majority of respondents. Meanwhile, a small number of respondents still experienced moderate anxiety, with 5 people (18.5%). It can be concluded that after the intervention, most respondents were at a lower level of anxiety compared to before the intervention.

Table 3. Effect of Autogenic Relaxation Technique on Reducing Anxiety Levels in Third-Trimester Pregnant Women

Variable	Negative Ranks n (%)	Positive Ranks n (%)	Ties n (%)	Z	p-value
Pretest - Posttest	18 (66.7%)	0 (0%)	9 (33.3%)	- 4.243	0.001

Based on Table 3, the results of the Wilcoxon Signed Rank Test showed a Z value of -4.243 with a significance value of $p = 0.001$ ($p < 0.05$). This indicates that there is a statistically significant difference in anxiety levels among third-trimester pregnant women before and after being given the autogenic relaxation technique.

DISCUSSION

Identifying Anxiety Levels in Third-Trimester Pregnant Women Before the Autogenic Relaxation Technique

Based on Table 1, before being given the autogenic relaxation technique intervention, most respondents experienced moderate anxiety, with 23 people (85.2%), while only 4 people (14.8%) were in the mild anxiety category. These results indicate that the anxiety level of third-trimester pregnant women before the intervention was in the moderate category and tended to be high.

Anxiety is a complex emotional response that arises when individuals face situations perceived as threatening, uncertain, or difficult to control. Anxiety involves not only psychological aspects such as fear and worry, but also physiological responses such as increased heart rate, elevated blood pressure, rapid breathing, excessive sweating, and muscle tension. Under certain conditions, excessive anxiety can interfere with cognitive functions such as concentration and the ability to think clearly (Abdullah et al., 2021).

In the third trimester, the mother's psychological changes appear more complex and intensify compared to the previous trimester, due to the growing pregnancy and the impending delivery (Purwati et al, 2024). At this stage, the mother begins to imagine the birth process, the potential pain, potential complications, and the baby's condition after birth. Uncertainty about the birth process is a major factor triggering increased anxiety. Furthermore, hormonal changes during pregnancy can also affect emotional stability.

Unmanaged anxiety can excessively activate the sympathetic nervous system, placing the body in a “fight or flight” condition. This can lead to increased physical tension, sleep disturbances, fatigue, and prolonged stress. In pregnant women, this condition may affect their readiness to face labor.

In addition to physiological factors, anxiety is also influenced by psychosocial factors such as lack of information about childbirth, previous pregnancy experiences, and family support. An unsupportive social environment or negative experiences from others regarding childbirth can also strengthen fear perceptions in pregnant women.

Primigravida mothers tend to have higher anxiety levels because they have no prior experience and lack a clear picture of the childbirth process. This lack of knowledge often leads to excessive negative thoughts and reinforces anxiety (Putri et al., 2022).

Research by Hastanti et al. (2019) states that primigravida mothers have higher anxiety levels compared to multigravida mothers due to lack of previous childbirth experience. Based on the researcher’s assumption, the high level of anxiety before the intervention is caused by a combination of lack of experience, limited information, and mental unpreparedness for upcoming labor.

Identifying Anxiety Levels in Third-Trimester Pregnant Women After the Autogenic Relaxation Technique

Based on Table 2, after being given the autogenic relaxation technique, most respondents experienced mild anxiety, with 22 people (81.5%), while 5 people (18.5%) remained in the moderate anxiety category. These results indicate a decrease in anxiety levels compared to before the intervention.

Autogenic relaxation is a relaxation technique based on self-suggestion aimed at creating a relaxed state through breathing regulation, concentration, and focus on bodily sensations such as warmth and heaviness in the limbs. This technique works by stimulating the parasympathetic nervous system, allowing the body to enter a relaxed state characterized by decreased heart rate, reduced muscle tension, and more regular breathing (Purba, 2023).

Autogenic relaxation also plays a role in reducing limbic system activity related to emotions, thereby decreasing anxiety responses. In addition to physiological effects, this technique provides psychological benefits such as increased self-control, enhanced calmness, and the ability to shift negative thoughts into more positive ones. When practiced regularly, it can form adaptive responses to stress (Mutmainnah et al., 2024).

In pregnant women, autogenic relaxation is highly beneficial in reducing tension before childbirth. Mothers become more capable of controlling fear, thinking more calmly, and being mentally better prepared to face labor. This is important because the psychological condition of the mother can influence pain perception and the childbirth process itself (Anjani et al., 2025).

Research by Putri et al. (2022) shows that autogenic relaxation is effective in reducing anxiety in primigravida pregnant women. According to the researcher's assumption, the reduction in anxiety after the intervention occurs because repeated relaxation practice helps respondents gradually learn to control negative thoughts and replace them with calmer and more positive states.

Analyzing the Effect of Anxiety Levels Before and After the Autogenic Relaxation Technique in Third-Trimester Pregnant Women

Based on Table 3, the results of the Wilcoxon Signed Rank Test showed a Z value of -4.243 with a significance value of $p = 0.001$ ($p < 0.05$). This indicates a significant difference between anxiety levels before and after the autogenic relaxation technique intervention in third-trimester pregnant women.

The analysis results show that 18 respondents (66.7%) experienced a decrease in anxiety (negative ranks), no respondents experienced an increase in anxiety (0%), and 9 respondents (33.3%) experienced no change. This indicates that the intervention had a dominant effect in reducing respondents' anxiety levels.

The effectiveness of autogenic relaxation is due to its ability to calm the nervous system, reduce sympathetic activity, and increase parasympathetic activity. This process helps reduce muscle tension, stabilize breathing, and decrease excessive fear or worry. This relaxation technique can address both physiological and psychological responses that arise from anxiety before childbirth (Anita Lufianti, 2024).

In addition to physiological effects, autogenic relaxation also provides psychological benefits such as increased self-control, reduced negative thinking, and improved self-confidence.

This is especially important for primigravida mothers who have no prior childbirth experience. Research by Koropit et al. (2020) shows that primigravida mothers are more anxious than multigravida mothers due to lack of experience, making relaxation interventions an appropriate strategy to reduce anxiety.

The results of this study are consistent with research conducted by Abdullah et al. (2021), which found that autogenic relaxation techniques are effective in reducing anxiety in pregnant women, especially primigravida. Reducing anxiety not only improves psychological well-being but also supports maternal readiness for childbirth and reduces the risk of stress-related complications.

CONCLUSIONS

Based on the results of the study on the effect of the autogenic relaxation technique on reducing anxiety levels in third-trimester pregnant women at TPMB Ike Sri Mei Wulan Bululawang, Malang Regency, it can be concluded that before the intervention was given, most third-trimester pregnant women experienced anxiety in the moderate category. This indicates that the respondents' anxiety levels were still relatively high prior to childbirth due to various concerns related to the labor process, the baby's condition, and personal readiness, which were also influenced by factors such as lack of information, previous childbirth experience, and psychological and social conditions.

After the autogenic relaxation technique intervention was administered, there was a decrease in anxiety levels, as indicated by the majority of respondents being in the mild anxiety category. This reflects an improvement in psychological condition, where pregnant women became calmer, more capable of controlling negative thoughts, and better prepared to face childbirth.

In addition, based on the results of the Wilcoxon Signed Rank Test, a p-value of 0.000 ($p < 0.05$) was obtained, indicating a significant effect between anxiety levels before and after the intervention. Therefore, it can be concluded that the autogenic relaxation technique has a significant effect in reducing anxiety levels in third-trimester pregnant women.

REFERENCES

Abdullah, V. I., Ikraman, R. A., & Harlina, H. (2021). Pengaruh Penerapan Teknik Relaksasi Autogenik Terhadap Tingkat Kecemasan Ibu Hamil Primigravida. *Quality : Jurnal Kesehatan*, *15*(1), 17–23. https://doi.org/10.36082/qjk.v15i1.199

Anita Lufianti. (2024). Pengaruh Teknik Relaksasi Autogenik Terhadap Tingkat Kecemasan Ibu Hamil Primigravida Trimester III Di Wilayah Kerja Puskesmas Pulokulon II. *Journal of TSCNers*, *9*(02), 75. http://str.nursing.poltekkes-medan.ac.id/ojs-3.3.0-13/pannmed/article/download/1077/725/3029

Anjani, A. D., Lestari, D., Aulia, N., Wulandari, N., & Berlianti, J. F. (2025). *Hubungan Stres Pada Ibu Hamil dengan Risiko Kelahiran Prematur*. *5*, 1732–1741.

Arikalang, F. D., Wagey, F. M. M., Tendean, H. M. M., Studi, P., Dokter, P., Kedokteran, F., & Sam, U. (2023). *Gambaran Tingkat Kecemasan Ibu Hamil Primigravida dan Multigravida*

dalam Menghadapi Persalinan di Indonesia. *11*(3), 283–292.

Febrianti, Y. (2024). Antidepressant use in pregnancy and the risk of neonatal outcomes: a scoping review. *Jurnal Ilmiah Farmasi*, *20*(1), 90–102. https://doi.org/10.20885/jif.vol20.iss1.art7

Lobmaier, S. M., Müller, A., Zelgert, C., Shen, C., Su, P. C., Schmidt, G., Haller, B., Berg, G., Fabre, B., Weyrich, J., Wu, H. T., Frasch, M. G., & Antonelli, M. C. (2020). Fetal heart rate variability responsiveness to maternal stress, non-invasively detected from maternal transabdominal ECG. *Archives of Gynecology and Obstetrics*, *301*(2), 405–414. https://doi.org/10.1007/s00404-019-05390-8

Lukmana, A., Rayani, T., Wijayanti, A., & Veronika, R. M. (2024). *Pengaruh Pemberian Kompres Jahe untuk Mengurangi Nyeri Punggung pada Ibu Hamiltrimester III di Kota Malang*. *5*(4).

Maba, A. P. (2023). Anxiety in Pregnant Women During the Covid-19 Pandemic: An Interpretative Phenomenological Analysis. *Bulletin of Counseling and Psychotherapy*, *5*(1), 81–88. https://doi.org/10.51214/bocp.v5i1.538

Mei, N., Purwati, A. (2024). *SENTRI : Jurnal Riset Ilmiah*. *3*(5), 2413–2421.

Mutmainnah, D., Umar, S., Marhaeni, M., & B, S. (2024). Efektivitas Teknik Relaksasi Autogenic terhadap Tingkat Kecemasan Ibu Hamil Trimester III di Puskesmas Tamalate Kota Makassar. *Media Kebidanan*, *3*(1), 13–17. https://doi.org/10.32382/mkeb.v3i1.740

Nesi Novita, & Suprida. (2022). The Importance of Autogenic Relaxation in Reducing Anxiety Levels for Pregnant Women. *International Journal Scientific and Professional (IJ-ChiProf)*, *1*(2), 48–51. https://doi.org/10.56988/chiprof.v1i2.7

Purba, M. (2023). *Hubungan Teknik Relaksasi Autogenik Dengan Tingkat Kecemasan Ibu Hamil Menjelang Persalinan di Klinik Pratama Matahari*. *2*(12), 5849–5853.

Putri, P., Susanti, E., & Rifqi Amalia, P. (2022). Pengaruh Teknik Relaksasi Autogenik Terhadap Tingkat Kecemasan Ibu Hamil Primigravida. *Jurnal Ilmu Psikologi Dan Kesehatan (SIKONTAN)*, *1*(2), 133–140. https://doi.org/10.47353/sikontan.v1i2.393

Rahmadani, S., Lidya, N., Laila Astuti, Y., Hartaty Angraini, D., & Kristianto, J. (2023). Hubungan Prenatal Yoga dengan Kecemasan pada Ibu Hamil. *Jurnal Health Sains*, *4*(1), 1–8. https://doi.org/10.46799/jhs.v4i1.656

Saputri, I. S., & Yudianti, I. (2020). Tingkat Kecemasan Ibu Hamil Trimester III Anxiety Level of Third Trimester Pregnant Women. *JURNAL Midwifery Update (MU)*, *2*(1), 16–23. http://jurnalmu.poltekkes-mataram.ac.id/index.php/jurnalmu/article/view/72/58

Setiya, R. (2023). *Pengaruh Akupresur Titik Bladder 23 (Shensu) Terhadap Nyeri Punggung Bawah Ibu Hamil Trimester III Di TPMB Mamik Yulaikah Kasri*. *15*, 1–7.