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MINDFULNESS BONDING INTERVENTION BETWEEN MOTHER AND FETUS USING AUDIO TOWARDS PREGNANT WOMEN'S ANXIETY AHEAD OF LABOR

Meirita Herawati[1)], Nia Desriva[2)], Ary Oktora Sri Rahayu[3)]
Email: meiritaherawati@gmail.com[1)], nia.desriva@ikta.ac.id[2)], ary.oktora@ikta.ac.id[3)]
[1,2,3)]Program Studi Pendidikan Profesi Bidan, Fakultas Kesehatan, Institut Kesehatan dan Teknologi Al Insyirah Pekanbaru
Jl. Parit Indah No.38 Tengkerang Labuai Bukit Raya Kota Pekanbaru Riau

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Abstract

Childbirth is a long process, 13-14 hours for primigravida mothers and 6-7 hours for multigravida mothers. In this situation, there are many changes and may cause stress. Neglecting this condition can negatively affect both parties. Mindfulness can help with anxiety in this study. Focusing on the present moment, environment, and activities around you is known as mindfulness. This study aims to determine how effective the use of audio is to reduce anxiety in pregnant women before labor through the relationship of self-awareness between mother and fetus. This study uses a pre-experiment method before and after the experiment in a one-group design. With the total sampling technique, the study population consisted of 21 pregnant women. TM III was conducted in the working area of Rejosari Health Center in July 2024. The Pregnancy Anxiety Scale questionnaire and audio recording were used as media. The results of the two mean difference test analyses showed that the anxiety level of respondents before the self-awareness intervention was 26.76 and after the intervention was 22.38, with a p-value of 0.000. This means that mindfulness activities using audio helped lower the anxiety of pregnant women before giving birth.

Keywords: *Anxiety, Mindfulness bounding, Pregnant women.*

Correspondence:
Meirita Herawati. Program Studi Pendidikan Profesi Bidan Fakultas Kesehatan Institut Kesehatan dan Teknologi Al Insyirah Pekanbaru. Jl. Parit Indah No.38 Tengkerang Labuai Bukit Raya Kota Pekanbaru Riau.
meiritaherawati@gmail.com

1. Introduction

A typical delivery involves the baby being placed behind the skull with force. In general, development is not completed in more than 24 hours, and the mother is left alone without any assistance instruments or means to harm herself or her child. If a regular delivery occurs during pregnancy, it is considered normal. The pregnancy continues for a sufficient number of months (after 37 weeks) without any complications [1]. Childbirth takes a long time; for primigravida mothers, it takes 13–14 hours, while for multigravida [2] It lasts six to seven hours, moms.

Pregnant women may experience pressure due to the numerous changes that occur in their state. Long-term pregnancy processes can cause stress or even depression in vulnerable expectant mothers. If the mother has a psychological condition while pregnant, it can harm both the mother and the unborn child (for instance, a higher likelihood of premature birth, growth

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retardation in the fetus, and low Apgar scores), and it is linked to a lower risk of neurobehavioral and cognitive development in infants and children [3].

Psychological prevalence of disruption High enough. According to data, mental health rates in Indonesia range from 1.6% to 1.8% per 100,000 people. Reproduction disorders affect people of all ages (18–25), although they are most common in women during pregnancy, childbirth, and the postpartum period. (Ministry of Health, 2020). Pregnant women may suffer stress for various reasons. Women go through significant life changes during pregnancy, including physical changes. Because of the influence of hormones, a woman's body begins to alter significantly throughout pregnancy. Modifications These modifications can occasionally be uncomfortable and stressful during pregnancy [4]. In addition to the physical changes, stress during pregnancy can also result from regular life situations for the woman. Early marriage can also lead to problems since young women who marry young are more likely to suffer from despair and consider suicide [5].

Pregnant women can use both pharmacology and non-pharmacology to reduce their anxiety. One type of treatment that involves the use of medications is pharmacology. We should monitor pregnant women's medications because they may affect the fetus they are carrying. This is because nearly all large drugs can cross the placenta [6]. Drugs taken Through the placenta, the mother will engage with the baby's body, and there is a significant chance that such drugs will affect the baby's systems, particularly the respiratory system [7]. One way to prevent this is to provide non-pharmacological interventions to the mother who is about to give birth.

Non-pharmacological methods for reducing anxiety include Quran recitation, classical music therapy, gentle yoga, lavender aromatherapy, and more. There are numerous non-pharmacological treatments that can help pregnant women who are facing childbirth feel less anxious. Other non-pharmacological strategies, such as mindfulness therapies, can also help people overcome their anxiety. The ability to focus on the present moment, the surroundings, and the activity itself is a condition known as mindfulness. Numerous populations have found effectiveness with mindfulness techniques in treating psychological disturbances [2]. The usefulness of mindfulness in overcoming psychological issues, including stress, anxiety, and depression, as well as physical issues, is explained by research conducted in the Netherlands [8]. It is strongly advised that mindfulness programs be investigated by Manpower Health and expectant mothers since mindfulness effectively reduces anxiety and depression. The goal is to reduce anxiety during pregnancy and improve the chances of a successful outcome [9].

A mindfulness bonding intervention between the mother and the fetus is one of several mindfulness therapies that can be used with pregnant women. Emotional bonding between the mother and fetus also has a good effect on the fetus, aiding in the development of the sensory-motor, cognitive, social, and emotional kid after birth [10]. According to research, mindfulness interventions help mothers feel better, lower stress levels, and strengthen their bonds with their babies [11].

Interventions that are currently being developed, the patient comes to the still-conventional aspect of the service to bend intervention. Moments of development in technology this can be used to easily and widely provide more information. Utilizing technology, such as audio, is one way to provide pregnant mothers with easier and faster assistance. Certain beneficial technologies, such as tele-educational implementation tools for pregnant women and labor planning during COVID-19, can help mothers feel less stressed and anxious [12].

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According to the findings of a review of the research on mindfulness and pregnancy, mindfulness practices can help pregnant women deal with stress, anxiety, and depression. Pregnant women with a history of depression can even benefit from mindfulness exercises [13]. Mothers' psychological well-being significantly improved in a study that used a mobile health-based application to strengthen the emotional tie between parents and fetuses [14].

An investigation into the emotional use of the mindfulness proximity app was carried out in Indonesia. Research has demonstrated the beneficial effects of the mother-fetus relationship on the husband's psychological well-being and harmony [15]. Despite this, mindfulness bonding between a mother and her fetus has not yet been performed on an anxious mother.

Researchers have extensively studied the usage of mindfulness applications on smartphones in connection with the previously described problems. Nevertheless, little research has been done on how to assist laboring pregnant women in overcoming their anxieties. Research on the use of audio to lessen anxiety in pregnant women going into labor is necessary to discover a solution to this issue. Scientists are interested in the study "The Effectiveness of Mindfulness Bonding Intervention for Mother and Fetus Using Audio on Anxiety of Pregnant Women About to Give Birth." This study aims to determine the impact of audio-based mindfulness bonding for mother and fetus on pregnant women's anxiety before delivery.

2. Methods

This study tested the impact of therapy on research findings using quantitative methodologies and a pre-experimental, one-group pretest-posttest design. The overall sampling technique included 21 pregnant ladies in their third trimester. Mothers with Android cellphones who are able to use them, cooperative mothers, and pregnant women nearing the end of Trimester III labor were among the respondents who met the inclusion criteria. Meanwhile, we exclude pregnant women with mental health issues. Anxiety is measured using the Pregnancy Anxiety Scale (PAS) questionnaire.

3. Results and Discussion

Table 1. Distribution Frequency of Respondents

Characteristics Respondents		Frequency	Percentage %
Age	< 20 Years	1	4.8
	21-30 Years	16	76.2
	>30 Years	4	19
Total		**21**	**100**
Education	basic education	6	28.6
	Secondary Education	15	71.4
	higher education	0	0
Total		**21**	**100**
Work	Work	1	4.8
	Doesn't work	20	95.2
Total		**21**	**100**
Parity	Primigravida	7	33.3
	Multigravida	14	66.7
	Grand Multipara	0	0
Total		**21**	**100**

Table 1 above reveals that, of the 21 respondents, the majority are between the ages of 21 and 30 (sixteen respondents, or 76.2%); the majority have secondary education (19 respondents, or 71%); the majority do not have a job (20 respondents, or 95.2%); and the majority have multiple personalities (14 respondents, or 66.7%).

Characteristics of the research outcome: the bulk of responders, 16 in all (76.2%), are between the ages of 21 and 35. These findings are consistent with study (14) and show that the majority of respondents are between the ages of 20 and 35. Women are already biologically and psychologically able to carry out the pregnancy period and give birth safely.

Most of the research findings were that 14 respondents, or 66.7% of the sample, were multigravida pregnant. A woman with prior pregnancy history was more likely to verify that their own experience was taller than that of a new

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mother who was pregnant for the first time or had their first child [16]. The taller a mother is, the less likely she is to experience worry. Investigate if there is a significant correlation between a pregnant mother's anxiety level and her ability to cope with the impending birthing process [17].

A study involving 21 respondents found that the majority of pregnant mothers, specifically 15 respondents (71.4%), had completed secondary education. The respondent's most recent educational achievement influenced their response to the provided information. A person's knowledge will be of higher quality and more intellectually mature the more educated they are. They are more likely to focus on his and his family's health. Additionally, the same idea was stated by[18] that an individual's education level will have an impact on their thought processes and talents to be able to absorb new information.

Table 2. Frequency of distribution based on third-trimester pregnant women's anxiety levels before and after mindfulness therapy

Anxiety Level	Pretest		Posttest	
	f	%	f	%
No Worries	7	33.3	10	47.6
Worried Light	3	14.3	5	23.8
Moderate Anxiety	10	47.6	6	28.6
Severe Anxiety	1	4.8	0	0
Total	**21**	**100**	**21**	**100**

Based on table 2 above, it can be seen that among the 21 pretest respondents, the majority currently experience a level of anxiety, specifically 10 respondents (47.6%). In contrast, in the posttest, the majority of respondents report being at the anxiety level of "not anxious," also comprising 10 respondents (47.6%).

Tabel 3. Results of Statistical Tests on Third-Trimester Pregnant Women before and after receiving mindfulness therapy

	N	Min	Max	Mean	Std. Deviation	P-Value
Pre Test	21	16	42	26.76	7,949	0,000
Post Test	21	13	38	22.38	6,749	

According to analysis utilizing the Paired Samples Test, the average anxiety level of the respondent was 26.76 before and 22.38 after completing the mindfulness intervention. The findings of the paired samples test show that mindfulness bonding for mother and fetus utilizing audio is beneficial in reducing anxiety when the p-value is 0.000 and less than 0.05. A woman in her pregnancy is on the verge of giving birth.

Findings from the study this is consistent with studies carried out by [19] linked parties' experiences. Mother gave birth to mindfulness-based, and the results showed that, in a sense, mindfulness-based cognitive treatment influences the respondents' level of anxiety.

Respondents report that they can unwind and relax more effectively when listening to the mindfulness intervention audio. Research indicates that breathing techniques employed in mindfulness training can help individuals feel calm and soothed, enabling them to overcome any challenges they may be facing [20].

According to the findings of the research, a mindfulness intervention that uses audio to strengthen the relationship between the mother and fetus can effectively reduce anxiety levels in pregnant women who are about to give birth. According to the research findings, patients who suffer from health worry (hypochondriasis) can benefit from mindfulness training [21]. Moreover, mindfulness practices combined with meditation and yoga enhance psychological well-being by lowering anxiety, symptoms of depression, and negative thoughts. They also lessen the sense of stress and

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anxiety and increase the intensity of positive thoughts [22].

A review of the literature on mindfulness studies for expectant mothers highlighted the benefits of mindfulness practice for them. It is particularly beneficial for pregnant women with a history of depression in managing stress, anxiety, and depression [13,14].

According to the research, mindfulness techniques used in interventions can help lower a pregnant woman's anxiety levels as she approaches childbirth. The benefit is demonstrated by the difference in anxiety levels before and after the mindfulness
training. Counseling mindfulness is one of the supportive interventions for mental health during period pregnancy. Condition mindfulness is demonstrated by somebody with existence intention from self alone, acceptance, no judgment, and focused attention on emotions, thoughts, and sensations in the moment.

4. Conclusion

According to research findings, mindfulness interventions that incorporate audio to enhance the bond between mother and fetus can significantly lower anxiety levels in pregnant women approaching childbirth. This is because mindfulness therapy helps alleviate overthinking and excessive worry regarding the labor process, improving one's sense of control and confidence when facing labor.

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6. References

[1]. Ristica OD. Asuhan kebidanan pada ibu bersalin dengan posisi miring untuk memperlancar proses kala ii di pmb hj. Murtinawita, sst kota pekanbaru tahun 2021. Jurnal Kebidanan Terkini (Current Midwifery Journal). 2022;2(1):64–8.

[2]. Ahmadi A, Fatriyani I, Nugraheny E, Coussons-Read ME, Pais M, Pai M V, et al. Levels of depression among adolescent girls with early marriage. Obstet Med. 2013;6(2):1–4.

[3]. Coussons-Read ME. Effects of prenatal stress on pregnancy and human development: Mechanisms and pathways. Obstet Med. 2013;6(2):52–7.

[4]. Pais M, Pai M V. Stress among pregnant women: A systematic review. Journal of Clinical and Diagnostic Research. 2018;12(5):LE01–4.

[5]. Rachman LY, Widianti E, Setyawati A. Levels of Depression Among Adolescent Girls With Early Marriage. Journal of Maternity Care and Reproductive Health. 2019;2(3):223–33.

[6]. Abdushshofi MF, Elvina R, Hersunaryati Y. Evaluasi Ketepatan Penggunaan Obat Ibu Hamil di Departemen Obstetri dan Ginekologi Rumah Sakit X. Farmasains. 2016;3(1):21–9.

[7]. Tri Yulianti, Dahlia Nugrahini Es. Drug Use Evaluation On Pregnant Woman At X Hospital Surakarta. Am J Res Commun [Internet]. 2019;5(August):12–42. Available from: http://downloads.esri.com/archydro/archydro/Doc/Overview of Arc Hydro terrain preprocessing workflows.pdf%0Ahttps://doi.org/10.1016/j.jhydrol.2017.11.003%0Ahttp://sites.tufts.edu/gis/files/2

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e-ISSN: 2549-5054

013/11/Watershed-and-Drainage-Delineation-by-Pour-Point.pdf%0Awww

[8]. Rinske A Et al. Standardised mindfulnessbased interventions in healthcare: An overview of systematic reviews and metaanalyses of RCTs. PLoS One. 2019;4.

[9]. Amutio A, Franco C, Pérez-Fuentes M de C, Gázquez JJ, Mercader I. Mindfulness training for reducing anger, anxiety, and depression in fibromyalgia patients. Front Psychol. 2015;5:1572.

[10]. Cildir, D. A., Azbek, A., Topuzoglu, A., Orcin, E., & Janbakhishiv CE. Association of prenatal attachment and early childhood emotional, behavioral, and developmental characteristics: A longitudinal study. Infant Ment Health J [Internet]. 2019;1(11). Available from: https://onlinelibrary.wiley.com/doi/10.1002/imhj.21822

[11]. Khoramirad A, Abedini Z, Khalajinia Z. Relationship between mindfulness and maternal stress and mother–Infant bonding in neonatal intensive care unit. J Educ Health Promot. 2021;10:337.

[12]. Aksoy Derya Y, Altiparmak S, Akça E, Gökbulut N, Yilmaz An. Pregnancy and birth planning during COVID-19: The effects of tele-education offered to pregnant women on prenatal distress and pregnancy-related anxiety. Midwifery. 2021;92(June 2020).

[13]. Lucena L, Frange C, Pinto ACA, Andersen ML, Tufik S, Hachul H. Mindfulness interventions during pregnancy: A narrative review. J Integr Med. 2020;18(6):470–7.

[14]. Adilla I, Misrawati M, Indriati G. Efektivitas Intervensi Mindfulness Bonding Ibu dan Janin Menggunakan Smartphone Terhadap Kecemasan Ibu Hamil Menjelang Persalinan. Jurnal kesehatan komunitas (Journal of community health). 2023;9(2):257–64.

[15]. Afdila Fannia N, Misrawati M, Wahyuni S. Pengaruh Edukasi Stimulasi Janin Menggunakan Media Video Terhadap Kedekatan Emosional Ibu dan Janin. COMSERVA: Jurnal Penelitian dan Pengabdian Masyarakat. 2023;2(09):1677–84.

[16]. Salim N. Hubungan tingkat kecemasan dengan paritas kehamilan trimester III di puskesmas jongaya kota makassar. Skiripsi Makassar: Stikes Panakkukang. 2020;

[17]. Heriani H. Kecemasan dalam Menjelang Persalinan Ditinjau Dari Paritas, Usia dan Tingkat Pendidikan. Jurnal Aisyah: Jurnal Ilmu Kesehatan. 2016;1(2):Hal-01.

[18]. Hawari D. Manajemen Stress Cemas dan Depresi. Jakarta: Badan Penerbit FKUI Hastono, Sutanto, Priyo.(2012). Statistik Kesehatan. 2016;

[19]. Fisher C, Hauck Y, Bayes S, Byrne J. Participant experiences of mindfulness-based childbirth education: a qualitative study. BMC Pregnancy Childbirth. 2012;12:1–10.

[20]. Wijaya YD. Pelatihan Pengelolaan Emosi dengan Teknik Mindfulness untuk Menurunkan Distres pada Penyandang Diabetes Mellitus Tipe-2 di Puskesmas Kebon Jeruk Jakarta. Jurnal Psikologi. 2014;12(2):48–53.

[21]. McManus F, Surawy C, Muse K, Vazquez-Montes M, Williams JMG. A randomized clinical trial of mindfulness-based cognitive therapy versus unrestricted services for health anxiety (hypochondriasis). J Consult Clin Psychol. 2012;80(5):817.

[22]. Duncan LG, Bardacke N. Mindfulness-based childbirth and

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e-ISSN: 2549-5054

parenting education: promoting family mindfulness during the perinatal period. J Child Fam Stud. 2010;19:190–202.