

Research Article



THE EFFECT OF AMBIENT RELAXATION MUSIC ON ANXIETY OF PROSPECTIVE IMPLANT KB ACCEPTORS AT TPMB ELLA WIYASA PUTRI INDAH WAN KROMENGAN DISTRICT, MALANG

Wika Ariani¹, Rosyidah Alfitri², Tut Rayani Aksohini Wijayanti³

^{1,2,3} Undergraduate Study Programs Midwifery, Institute Science and Health Technology Dr. Soepraoen Hospital, Malang City, East Java 65147, Indonesia,

Corresponding Author :

Wika Ariani, E-mail: wikaariani55@gmail.com, rosyidahalfitri@itsk-soepraoen.ac.id, tutrayani@itsk-soepraoen.ac.id Phone : +62- 85731079140

ABSTRACT

Background:

Background: Anxiety is response common psychological experienced candidate acceptor birth control implant before procedure installation, which can influence readiness, comfort, and acceptance to Action. One non-pharmacological method that can be applied to address this problem is ambient relaxation music, which has gentle and soothing properties. This study aims to evaluate the impact of relaxation using ambient music on anxiety in prospective contraceptive implant recipients.

Methods: Study This use design pre-experimental one group pretest- posttest on 30 respondents with purposive sampling. Anxiety measured before and after intervention music 20 minutes of ambient relaxation using HARS.

Results: The pretest results showed 60.0% (18 respondents) were anxious mild, 26.7% (8 respondents) moderate, and 13.3% (4 respondents) severe. After intervention, occurs change to 16.7% (5 respondents) no anxious, 46.7% (14 respondents) mild, and 36.7% (11 respondents) moderate. The Wilcoxon test shows difference significant ($Z = -2.887$; $p = 0.004$), confirming effectiveness music deep ambient relaxation lower anxiety candidate implant contraceptive acceptor as well as potential as intervention simple, safe, and applicable non- pharmacological in service midwifery.

Conclusion: relaxation using ambient music has significant effect on reduction of anxiety candidate implant contraceptive acceptor

Keywords: anxiety, ambient relaxation music, contraceptive implant acceptors, non-pharmacological therapy, obstetric services

INTRODUCTION

The Family Planning (KB) Program plays a significant role in improving family quality and reducing maternal mortality through safer pregnancy management (1). A large population size will impact the health of mothers and children. This is evident in the high Maternal Mortality Rate (MMR) in Indonesia. (2) . One important basis is the Long-Term Contraceptive Method (MKJP), which offers protection for more than three years and helps couples of childbearing age to plan their families well. (3) . However, the use of MKJP is still low due to lack of knowledge, less than positive attitudes, and minimal support from partners and health workers. Implants as an effective MKJP that can only be installed once are still less popular because prospective acceptors often experience fear and anxiety before the procedure which affects the comfort of the service. (4) .

Contraception is a method or technique used to delay pregnancy, both for the short term and long term. (5) . Globally, out of 100 million women (75%) using hormonal contraceptive methods with implants being the most chosen method, in Sub-Saharan Africa, such as in Kenya (9.9%) and Malawi (11.5%) (1) . This condition is different from Indonesia, where family planning coverage reached 63.22% (BKKBN, 2023), however short-term hormonal methods still dominate such as injections 48.78% and pills 20.69% while implants are only 12.71% (6) .

Anxiety among prospective implant recipients is a common phenomenon in various health facilities. However, implants have a success rate of over 99% in preventing pregnancy. This low interest is influenced by fear of the procedure and concerns about side effects such as spotting,

weight gain, and menstrual cycle disorders (6) . Furthermore, limited information and negative experiences from the environment contribute to anxiety. These findings align with research showing that anxiety in facing health procedures is influenced by perception, experience, and level of knowledge (7) .

This condition is further emphasized by research results which explain that hormonal contraception, including implants, can affect women's hormonal balance and emotional condition (8) . overcome anxiety can used benzodiazepines and propranolol, however must Be careful Because risky cause dependency and effects side effects . (9) Due to these risks, non-pharmacological approaches such as breathing techniques, aromatherapy, and ambient relaxation music are more recommended because they can reduce anxiety through a calming effect on the body and mind. (10) . Short's (2025) findings are reinforced by the finding that music during contraceptive procedures can significantly reduce anxiety, so ambient music can be a safe and effective non-pharmacological intervention to increase the comfort and emotional readiness of prospective implant recipients. (11) . Based on the explanation given, this study aims to examine the impact of ambient relaxation music on the anxiety levels of individuals who will receive contraceptive implants.

MATERIAL AND METHODS

This research uses a structured pre-experimental quantitative approach to examine the relationships between variables that can be measured numerically. This approach emphasizes the use of numerical data to describe, explain, and test hypotheses through statistical analysis. (12) .

Design This using a pre-experiment one group pretest-posttest. Where, study This use One group given a pretest before treatment And given a post-test after given treatment. Use design This chosen Because researchers want to evaluate influence between music relaxation to anxiety candidate acceptor KB Implant. In design This, there is two stage main:

Q₁ (Pretest): measurement level anxiety candidate acceptor KB before given treatment ambient relaxation music .

X (Treatment): Giving intervention in the form of ambient relaxation music during time certain.

Q₂ (Post-test): measurement level anxiety after given treatment ambient relaxation music .

This study defines the population as all prospective acceptors of implant contraception at TPMB Ela Wiyasa Putri Indahwan. This population is fluctuating following the number of visits each period of December 6, 2025 - February 26, 2026 as the population in this study and the sample in this study is prospective acceptors of implants in the period of December 6, 2025 - February 26, 2026, in the Kromengan area of TPMB Ela Wiyasa Putri Indahwan. This study was conducted at TPMB Ela Wiyasa Putri Indahwan. This study has obtained ethical permission from the health research ethics committee at the Institute of Science and Health Technology, Dr. Soeraoen Hospital with number KEPK. EC / 405 / X11 / 2025. All participants have been explained to the Health Research Ethics Committee at the Institute of Science and Health Technology, Dr. Soepraoen Hospital with number KEPK. EC / 405 / X11 / 2025. All participants have been explained about this study and gave their consent to participate through informed consent.

RESULTS

Respondent Characteristics

The characteristics of the respondents in this study reflect the demographic profile of the subjects studied. Based on several aspects such as age, education, occupation, parity, and history of contraceptive use, the respondents' characteristics are as follows:

Table 1 Respondent characteristics.

Respondent characteristics	(f)	(%)
Age		
17 - 25 years old	7	23.3
25 - 35 years old	19	63.3
35 - 44 years old	4	13.3
Total	30	100.0
Education		
Junior High School	4	13.3
Seniou High School	23	76.7
College tall	3	10.0
Total	30	100.0
Work		
housewife ladder	18	60.0
Private	8	26.7
Farmer	4	13.3
Total	30	100.0
Parity		
Primipara	12	40.0
Multipara	18	60.0
Total	30	100.0
KB history		
Inject	21	70.0
Pill	6	20.0
Natural methods	3	10.0
Total	30	100.0

The results showed that the highest age of respondents was 25–35 years (63.3%) and the lowest was 35–44 years (13.3%). High school education was the highest (76.7%), while others were the lowest. The most common occupation was housewife (60.0%), and the lowest was other



occupations. In terms of parity, multiparity was the highest (60.0%) and primiparity the lowest. Contraceptive history was predominantly injection methods (70.0%) as the highest, and other methods as the lowest. In general, respondents were predominantly early adults with secondary education backgrounds, domestic roles, and reproductive experience and previous contraceptive use tended to influence readiness in choosing implant contraception.

Special Data

ambient relaxation music intervention , anxiety levels were measured to obtain a snapshot of the respondents' baseline conditions. This data is crucial for assessing changes following the intervention. The distribution of respondents' anxiety levels before receiving ambient relaxation music is as follows:

Table 2 Respondents' Anxiety Level Before Being Given Ambient Relaxation Music

Anxiety level	Frequency (f)	Percentage (%)
n't any anxiety	0	00.0
Anxiety light	18	60.0
anxiety currently	8	26.7
anxiety heavy	4	13.3
Extreme anxiety	0	00.0
Total	30	100.0

Based on Table 2 shows that most respondents experienced anxiety with a mild anxiety category of 18 people (60.0%), while a small number experienced severe anxiety, namely 4 people (13.3%).

Anxiety levels after being given ambient relaxation music

Ambient relaxation music intervention , anxiety levels were measured again to determine the changes that occurred. The measurement results are presented in Table 3.

Table 3 Anxiety levels after being given ambient relaxation music

Anxiety level	Frequency (f)	Percentage (%)
n't any anxiety	5	16.7
anxiety light	14	46.7
anxiety currently	11	36.7
Anxiety heavy	0	00.0
Extreme anxiety	0	00.0
Total	30	100.0

Based on table 3, the majority of respondents were in a state of mild anxiety, namely 14 people (46.7%), a small number of respondents had moderate anxiety, namely 5 respondents (16.7%).

Ambient Relaxation Music Intervention on Anxiety of Prospective Implant Contraceptive Acceptors

Ambient relaxation music was analyzed using cross-tabulation. The results of this analysis are presented in Table 8 below.

Table 4 Crosstabulation of Anxiety Levels Before and After Providing Ambient Relaxation Music.

count		Post test			Total
		No worries	Mild anxiety	Moderate anxiety	
pre-test	Anxiety light	5	12	1	18
	percentage	16.7%	40.0%	3.3%	60.0%
	Emergency medium	0	2	6	8
	percentage	0%	6.7%	20.0%	26.7%
Total	emergency weight	0	0	4	4
	percentage	0%	0%	13.3%	13.3%
Total		5	14	11	30
percentage		16.7%	46.7%	36.7%	100%

Table 4 shows a comparison of anxiety levels before and after the intervention, which shows a downward trend. Of the 18 respondents (60.0%) who experienced mild anxiety in the pretest, after the intervention, 5 respondents (16.7%) experienced a decrease to no anxiety, 12 respondents (40.0%) remained in the mild category, and 1 respondent (3.3%) experienced an increase to moderate anxiety.

Table 5 Effect of Ambient Relaxation Music Intervention on Anxiety of Prospective Implant KB Acceptors .

	test - pre-test
Z	-2.887 ^b
Asymp . Sig. (2-tailed)	.004

Based on Table 9, the results of the Wilcoxon Signed-Rank Test show a Z value of -2.887 with a significance value of 0.004 ($p < 0.05$). This indicates that there is a significant difference between anxiety before and after the ambient relaxation music intervention for prospective KB implant recipients.

Ambient Relaxation Music

Based on the measurement results, the majority of respondents (18 people) experienced mild anxiety, followed by moderate anxiety (8 people) (26.7%), and severe anxiety (4 people) (13.3%). These findings indicate that most prospective contraceptive implant users experience anxiety prior to the procedure, but generally it remains at a relatively manageable, mild level.

Theoretically, anxiety is an emotional response to a situation that is perceived as threatening or full of uncertainty. This condition is characterized by feelings of worry, tension, and restlessness, as well as physiological changes such as increased heart rate and muscle tension. (4) . In the context of health services, especially for prospective contraceptive implant users, anxiety can arise due to concerns about the insertion procedure, the possibility of pain, and perceptions of the side effects of the contraceptive device. (13) .

Besides the worries to pain and effects Besides , anxiety in the candidate KB acceptors are also influenced by experience medical previously , knowledge about procedures , support social especially from family , and perception to risk action . Insufficient experience fun and limitations information tend increase anxiety , whereas support social play a role as factor protective that helps individual undergo procedure with more comfortable (14,15) .

Ambient Relaxation Music

Research result show existence decline anxiety after intervention music ambient relaxation . A total of 5 respondents (16.7%) did not experience anxiety , 14 respondents

(46.7%) were in the category light , and 11 respondents (36.7%) in the category moderate . Findings This describe that part big respondents experience decline level anxiety , even part Already No feel anxiety , so that music ambient relaxation is capable create better conditions calm before action installation implants .

Based on the Wilcoxon Signed Rank Test, it was obtained Z value = -2.887 with significance of 0.004 ($p < 0.05$). The results show existence significant influence from music ambient relaxation against decline anxiety candidate Implant KB acceptor . Negative Z value signify existence decline level anxiety after intervention , so that in a way statistics intervention This effective in repair condition psychological respondents.

DISCUSSION

The study results showed that before the intervention, respondents' anxiety was predominantly mild, indicating pre-procedure anxiety that was still manageable. This aligns with the literature that suggests pre-procedure conditions are often perceived as threatening due to uncertainty and concerns about pain and the outcome of the procedure. Ambient relaxation music helps reduce anxiety through emotional and physiological regulation, so mild anxiety is an adaptive response that can still be managed (16–18).

Contextually, pre-procedural anxiety is an adaptive response to a perceived threatening situation. Concerns about pain, the procedure, and side effects are key triggers, influenced by individual risk perception and limited information. (4.13) .

After giving music ambient relaxation occurs decline marked anxiety shift to category more light , including emergence

respondents without anxiety . This is show that intervention effective in help regulations emotion before action . In a way physiological , music with slow tempo and character gentle stimulate system nerve parasympathetic so that lower response stress like pulse heart and tension muscle (9,10) .

Findings This reinforced by the results of statistical tests which show existence difference significant with a tendency to reduce anxiety, thus confirming the effectiveness of ambient relaxation music. Thus, the changes that occur are not only descriptive but also inferential. In line with this, music intervention has been shown to reduce anxiety through the regulation of emotional and physiological responses, especially in the pre-action phase. (19,20) .

The results of this study align with previous studies showing that the use of music in healthcare can significantly reduce patient anxiety. Research by Short et al. (2025) found that that intervention music during procedure gynecology effective in increase comfort and reduce anxiety (11) . In addition , Hadiyati & Sitorus (2025) also reported that ambient music can create calming atmosphere in the environment service health , so that contribute to stabilization condition psychological patients . (10) . The effectiveness of the intervention is influenced by the characteristics of the respondents, especially the dominance of mild anxiety which allows for a more adaptive response. In addition, experience, family support, and understanding of procedures are thought to contribute to strengthening the effect of the intervention, although this was not analyzed specifically. (4) .

Thus, these findings suggest that ambient relaxation music is not merely a supportive intervention but also has the

potential to be an effective, simple, and easy-to-implement non-pharmacological approach. This intervention can be used to improve the comfort and psychological readiness of potential recipients prior to implant placement.

CONCLUSION

Based on results research , before intervention majority respondents experience anxiety mild (60.0%), followed by moderate (26.7%) and severe (13.3%). After intervention music ambient relaxation occurs change with 16.7% not anxious , 46.7% mild , and 36.7% moderate , which shows trend decline anxiety . The results of the Wilcoxon Signed-Rank Test obtained $Z = -2.887$ with $p = 0.004$ ($p < 0.05$), which indicates existence difference meaningful before and after intervention . With thus , music ambient relaxation effect in lower level anxiety candidate implant contraceptive acceptor before action installation.

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