

Combined Butterfly Hug and Religious Music Therapy on Reducing Preoperative Anxiety

Rudiyanto^a * | Alifia Setya Apriella Putri^b | Erik Toga^c

^{a,b,c} Bachelor's Degree Program in Nursing, STIKES Banyuwangi.

*Corresponding Author: rudiyanto.rogy@gmail.com

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ABSTRACT

Introduction: Pre-operative anxiety can be caused by several stressful conditions and traumatic experiences experienced by a person differently. If the anxiety experienced by the patient before surgery does not get the right treatment will adversely affect the surgical process, then a non-pharmacological approach is taken, i.e. combination therapy. The aim of this study was to determine the effectiveness of the combination of butterfly hug therapy and religious music with the level of anxiety patients faced pre-surgery.

Methods: This study used a pre-experimental design i.e. with one group pre-test post- test with a sample of 30 respondents. With the purposive sampling technique and the test used is the Wilcoxon Signed Rank Test using the research instrument ZSAS Questionnaire to measure the level of anxiety by administering a combination of Butterfly Hug and Religious Music therapy of the type of prayer according to Standard Operational Procedure (SOP) for the administration of intervention taken with SPSS 16.

Results: The mean value before the combination therapy was 60.00 and after the combination was 24.07. The difference between before and after the combination therapy was 35.93. The value of sig. =0.000 (<0.05) was obtained, which means that there is an effective influence in lowering the level of anxiety by administering a combination of butterfly hug therapy and religious music with the anxiety level of the patient facing the pre-operation in the surgical room.

Conclusions: One of the options that is done independently or as a reference for nursing interventions to lower anxiety levels in the responders is by applying a combination of butterfly hug therapy and religious music. This is a non-pharmacological approach that can reduce anxiety levels in pre-operative patients in the hospital.

Introduction

The methodologies involved in the identification and remediation of disease, physiological aberration, or bodily injury through invasive techniques commonly known as surgical interventions cover significant complexity. During the surgical procedure, anatomical tissue is sliced, which subsequently leads to changes in physiological functions and impact on adjacent organs (Haque et al., 2024). The preoperative phase is the initial segment of perioperative care, starting from the moment the patient arrives at the reception area and ends at the transfer of the patient to the operating table for intervention (Oliveira et al., 2025). Impacts associated with preoperative procedures include important manifestations of anxiety or psychological distress that individuals often face prior to surgery. Anxiety can be characterized as a state of fear that arises due to a perceived threat to one's health, with significant implications related to health problems and psychological consequences (Ranti, 2022).

Pre-operative anxiety can arise from a variety of stress-triggering conditions and traumatic experiences that are perceived differently by individuals (Munir & Takov, 2026).



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Biological problems are closely related to dysfunctions in neurotransmitter regulation, which can be attributed to genetic predisposition as well as the presence of physical diseases. An individual with physical constraints is often prone to having difficulty accepting the condition of their body. Biological, psychological, social, and spiritual factors of a patient's life can be greatly influenced by their anxiety during surgical procedures (Antonis, 2024). Biologically, fear manifests in symptoms similar to dizziness, palpitations, and requires continuous monitoring of vital signs, including repeated assessments of blood pressure, reduced appetite, dyspnea, diaphoresis, and asthenia, along with minor changes in motor activity and goals, e.g., surprising responses to sudden auditory stimuli (BUZA, 2024). Psychologically, anxiety can give rise to a spectrum of emotions including anxiety, fear, recurrent daydreaming, disorientation, impaired concentration, insomnia, and increased irritability (Spielberger, 2022a).

To reduce pre-operative anxiety in patients, it is essential to use a variety of methodologies that can be integrated synergistically. The Butterfly Hug represents a self-soothing therapeutic approach aimed at reducing feelings of anxiety, increasing relaxation, and fostering self-motivation to navigate stressful life circumstances (Nadidah Faras Dita et al., 2024). Concurrently, music therapy is widely recognized for its efficacy in lowering anxiety through distraction and emotional modulation (Harney et al., 2023). While patient-selected relaxing music is traditionally utilized in clinical settings for general relaxation, this study specifically selected religious music. Preoperative anxiety often triggers not only physiological stress but also profound existential and emotional distress that necessitates deeper, faith-based coping mechanisms. Religious music provides an added dimension of spiritual coping by evoking feelings of safety, connection to a higher power, and inner peace, which are crucial for mitigating the existential fears associated with surgical procedures (Jain et al., 2025); (Page et al., 2021). Therefore, combining the somatic self-soothing effects of the Butterfly Hug with the spiritual comfort of religious music is hypothesized to produce superior and holistic outcomes in preoperative anxiety management.

Previous studies have primarily investigated the Butterfly Hug in specific, isolated demographics, such as nursing students dealing with long-distance relationships, adolescents, older adults, and specific surgical groups like laparotomy patients (Caturini et al., 2023a), (Ramdhani & Soleman, 2023) (Nadidah Faras Dita et al., 2024). Although Butterfly Hug and music interventions have individually been associated with anxiety reduction in several populations, evidence regarding a standardized combined intervention among heterogeneous preoperative hospital patients remains limited. Addressing this critical gap, the aim of this study was to determine the effectiveness of the combination of Butterfly Hug therapy and religious music on the anxiety levels of diverse patients facing pre-surgery.

Methods

Study Design

This study employed a quantitative pre-experimental research design using a single-group pretest-posttest approach (*one-group pretest-posttest design*). Baseline measurements of anxiety levels (pre-test) were established prior to the administration of the intervention, followed by post-intervention assessments (post-test) on the same cohort. No parallel control group was utilized in this design.



Setting

The research was conducted in the Surgical Ward of Blambangan General Hospital (*RSUD Blambangan*), Banyuwangi, East Java, Indonesia. Data collection was carried out over a one-month period between March and May 2025. The intervention and assessments took place directly in the preoperative preparation unit and patient rooms prior to surgical transfer.

Research Subject

- **Sampling Strategy:** A purposive sampling technique was used to select participants based on specific clinical eligibility criteria tailored to the study objectives.
- **Population and Sample Size:** The target population comprised all preoperative patients admitted to the Surgical Ward during the three-month period from March to May 2025 (N = 372). From this population, a sample size of n=30 respondents was enrolled. Sample size sufficiency was justified based on standard non-parametric power requirements for preliminary feasibility and pre-experimental nursing intervention studies utilizing paired-sample Wilcoxon signed-rank analyses.
- **Inclusion Criteria:**
 1. Preoperative adult patients aged >18 years scheduled for elective or non-emergency surgical procedures under total, regional, or sedation anesthesia.
 2. Conscious, fully oriented, and able to communicate verbally.
 3. Exhibiting baseline anxiety as indicated by initial screening.
 4. Willing to participate and provide signed informed consent.
- **Exclusion Criteria:**
 1. Patients with severe auditory or cognitive impairments preventing active engagement in the intervention.
 2. Patients receiving active pharmacological anti-anxiety or sedative medication immediately prior to the trial.
 3. Patients undergoing emergency surgical interventions requiring immediate operating room transfer.
- **Recruitment:** Eligible patients were identified upon admission to the surgical holding unit, informed about the study protocol, and recruited after obtaining written consent.

Instruments

- **Anxiety Measurement Tool:** Pre- and post-intervention anxiety levels were measured using the adopted Zung Self-Rating Anxiety Scale (ZSAS) questionnaire. The ZSAS is a 20-item self-report instrument designed to quantify affective and somatic anxiety symptoms. Items are scored on a 4-point Likert scale ranging from 1 (*a little of the time*) to 4 (*most or all of the time*), yielding total raw scores between 20 and 80.
- **Validity and Reliability:** The translated Indonesian version of the ZSAS was validated through expert construct review and previous empirical testing in clinical populations, demonstrating high internal consistency (Cronbach's alpha > 0.80).
- **Intervention Apparatus:** Standard Operating Procedure (SOP) protocols were established for the Butterfly Hug technique. Religious music (*Islamic prayer/sholawat*) was delivered using a standardized smartphone audio device paired with audio output calibrated to a comfortable volume (40–50 dB).



Intervention

The intervention consisted of a standardized 7-minute combined session administered once per participant.

- **Administrator & Setting:** The session was administered individually in a quiet preoperative holding environment by trained nurse researchers following a validated Standard Operating Procedure (SOP).
- **Procedure:**
 1. *Baseline Assessment:* Participants completed the pre-test ZSAS questionnaire.
 2. *Execution:* Participants were guided into a comfortable seated or semi-fowler position. They performed the Butterfly Hug—crossing their arms over their chest and rhythmically tapping their shoulders alternating left and right at a slow, soothing rhythm—while simultaneously listening to religious music (*sholawat*) via audio equipment. The combined protocol lasted continuously for 7 minutes.
 3. *Post-Assessment:* Immediately following the completion of the 7-minute intervention, the post-test ZSAS questionnaire was administered to record changes in anxiety levels.
- **Control Group:** As a pre-experimental single-group study, no control group was implemented.

Data Analysis

Quantitative data analysis was performed using IBM SPSS Statistics software (Version 16.0).

- **Descriptive Statistics:** Continuous data were summarized using means, medians, minimums, and maximums, while categorical data (age, gender, surgical type, anesthesia type) were expressed as absolute frequencies and percentages.
- **Inferential Statistics:** To evaluate the effect of the intervention, the non-parametric *Wilcoxon Signed-Rank Test* was selected. This statistical test was appropriate because the data comprised paired dependent pre- and post-test scores from a small sample size ($n=30$) without assuming a normal population distribution. Statistical significance was established at $p < 0.05$ (2-tailed).

Ethical Consideration

- **Ethical Approval:** Formal ethical approval was obtained prior to field implementation from the Health Research Ethics Commission (*Komisi Etik Penelitian Kesehatan - KEPK*) of STIKES Banyuwangi on November 8, 2024 (Ethical Clearance Reference Number: 024/01/KEPK-STIKESBWI/XI/2024-2025; application submitted October 17, 2024).
- **Institutional Authorizations:** Official administrative research permission was granted by the Director of Blambangan General Hospital (*RSUD Blambangan*), Banyuwangi.
- **Participant Protection:** Written informed consent was secured from all respondents prior to data collection. Participation was voluntary, confidentiality was strictly maintained through participant anonymization (coding), and participants retained the right to withdraw from the study at any point without impacting their clinical care.



Results

1) General Data Characteristics

Table 1 By Age

Age	N	Percentage (%)
18-25 Years	1	3,3%
25-40 Years	5	16,7%
40-60 Years	10	33,3%
>60 Years	14	46,7%
Total	30	100%

Based on Table 1 of the age of respondents in the Surgical Room, it shows that almost half of the age range >60 years is 14 respondents (46,7%).

Table 2 By Gender

Gender	N	Percentage (%)
Female	19	63,3%
Male	11	36,7%
Total	30	100%

Based on the table of 2 genders of respondents in the Surgical Room, it shows that the majority of respondents were female, which is 19 respondents (63,3%).

Table 3 By Operation Type

Operation Type	N	Percentage (%)
Prostate	8	26,7%
Hemorrhoidectomy	4	13,3%
Ileus obs	9	30,0%
Hernia	4	13,3%
Hidrocephalus	2	6,7%
Tumor	3	10,0%
Total	30	100%

Based on the table of 3 types of surgery respondents in the Surgical Room, it shows that almost half of the types of ileus operations obs are 9 respondents (30,0%).

Table 4 By Type of Anesthesia

Type of Anesthesia	N	Percentage (%)
Total Anesthesia	16	53,3%
Regional Anesthesia	11	36,7%



Sedation Anesthesia	3	10,0%
Total	30	100%

Based on the table of 4 types of anesthesia respondents in the Surgical Room, it shows that most types of anesthesia are total, which is 16 respondents (53,3%).

2) Characteristics of Special Data

Table 5 Anxiety Levels Before and After a Combination of Butterfly Hug Therapy And Religious Music in Patients Facing Pre Surgery

Combination of Butterfly Hug Therapy And Religious Music	Mean	Median	Max	Min	<i>p</i>
Before	60,00	60,00	68	49	0.000
After	24,07	23,50	35	20	
Difference value	35,93	36,5	33	29	

Based on Table 5 of the frequency before the combination of Butterfly Hug And Religious Music therapy in preoperative patients in the surgical room, the mean value before performing the combination of Butterfly Hug And Religious Music therapy in preoperative patients in the surgical room was 60,00. The middle values of each variable are 60,00 (before) and 24,07 (after). Demonstrated that in the severe anxiety category, but after performing a combination of Butterfly Hug And Religious Music therapy for 1 month, the anxiety level of the preoperative patients decreased with the average being included in the mild anxiety category.

Further analysis using the Wilcoxon Signed Rank Test on IBM SPSS Statistic 16. The Wilcoxon Signed Rank Test using a significance value (2 tailed) of 0.000 (<0.05) indicates the effectiveness of the combination of butterfly hug therapy and religious music with the level of anxiety patients facing pre-surgery in the surgical room.

Discussion

1) Anxiety Levels Before a Combination of Butterfly Hug Therapy And Religious Music In Patients Facing Pre Surgery

In table 5 before the combination of Butterfly Hug and Religious Music therapy in the Surgical Room, it is shown that the mean (mean) of 60,00 before the combination of Butterfly Hug and Religious Music therapy was included in severe anxiety (Caturini et al., 2023b). Severe anxiety often concentrates on specific details or problems, consequently deterring the individual from contemplating alternative thoughts. Individuals usually need significant help in directing their attention to different domains. Symptoms manifesting at this intensity include reports of dizziness, headaches, nausea, insomnia, frequent urination, diarrhea, palpitations, a narrowed field of perception, self-absorption, an urgent desire to reduce an increased level of anxiety, feelings of helplessness, confusion, and disorientation (Roussel, 2025).

There are several factors that influence anxiety in the face of pre surgery namely gender, and type of anesthesia. A review of table 2 genders of the respondents in the Surgical Room showed that the majority of respondents were female, 19 respondents (63,3%). It is also in line with (Yuliana et al., 2024) women are prone to experiencing anxiety in the face of pre-surgery due to the influence of the hormones estrogen and



progesterone, these hormones affect brain activity in regulating emotions including to anxiety responses. Women are also often more concerned about how surgery may affect their physical appearance especially if the surgery involves changes to visible parts of the body (Slomski, 2022).

In addition to gender, the type of anesthesia can also cause anxiety when facing pre-surgery. Based on the table of 4 respondents types of anesthesia in the Surgical Room shows that almost most types of anesthesia are total, which is 16 respondents (53,3%). This is in line with (Hardt & Wappler, 2023) anxiety research of patients undergoing procedures with this type of anesthesia and our ability to assess and predict pre-operative anxiety in patients undergoing anesthesia. Anesthesiologists view patient anxiety, its frequency, effects and causes, as well as their coping strategies against anxious patients undergoing surgery under anesthesia as well as in line with research (Maulida, 2022) anxiety can increase autonomic nervous system activity that can trigger stress responses such as increased heart rate, blood pressure, and the release of stress hormones such as cortisol and adrenaline. This condition can potentially lead to delay or cancellation of the operation (Selzer & Cloyd, 2026).

In the researchers' opinion, this pervasive baseline severity reflects an acute psychological crisis triggered by a perceived total loss of bodily autonomy and existential uncertainty. We contend that the high proportion of patients scheduled for total anesthesia (53.3%) acts as a primary psychological stressor, as patients inherently associate loss of consciousness with an absolute surrender of control and an underlying fear of intraoperative mortality or failure to awaken. Furthermore, our clinical observation during baseline assessments indicated that female patients, who constituted the majority of the sample (63.3%), displayed heightened psychological vulnerability. We interpret this gender disparity not only as a reflection of neuroendocrine sensitivity to stress hormones, but also as a manifestation of social anxieties regarding postoperative family role disruptions, loss of domestic functioning, and concerns over permanent physical altercations from surgical scars.

Building upon this clinical vulnerability, we argue that the nature of the surgical diagnoses further compounded the baseline psychological distress. Patients admitted for conditions such as Ileus Obstruksi (30.0%) and prostate disorders (26.7%) frequently experienced severe pre-procedure abdominal discomfort, acute pain, and distressing physiological disruptions prior to entering the surgical ward. In our interpretation, physical suffering acts as a constant somatosensory amplifier of fear, convincing patients that their condition is inherently critical or potentially malignant. Therefore, we emphasize that preoperative anxiety in surgical wards must be recognized by nursing teams not merely as transient nervousness, but as a complex somatic-existential crisis deeply intertwined with the patient's biological gender, anatomical site of intervention, and chosen modality of anesthesia.

2) Anxiety Levels After a Combination of Butterfly Hug Therapy And Religious Music In Patients Facing Pre Surgery

Based on Table 6 after the combination of Butterfly Hug and Religious Music therapy in the Surgical Room, it is shown that the mean (mean) of 24,07 after the combination of Butterfly Hug and Religious Music therapy is included in mild anxiety (Caturini et al., 2023b).

There is a correlation between mild anxiety and the level of tension in everyday life that drives a person to achieve a state of heightened alertness and heightened perceptual acuity.



Manifestations of mild anxiety at these thresholds include fatigue, irritability, increased sense of perceptual lightness, reinforced awareness, and behavior appropriate to situational demands in response to life stress, thereby increasing individual alertness and capacity for broader cognitive understanding (Spielberger, 2022b).

There are several factors that influence anxiety in the face of pre surgery, age, and family support. Reviewed table 1 of the age of respondents in the Surgical Room, showing that almost half of the age range >60 years was 14 respondents (46,7%). This is also in line with (Waluyo et al., 2025) the behavior and thinking of the pre-operative patient being one of the factors, with increasing age, then more mature pre-operative patients will be confident in undergoing surgery as well as influential family support for the recovery process after surgery, overcome anxiety of patients before surgery, recognize the diseases experienced by the patient.

Management of anxiety levels can be effectively achieved through an integrative approach that uses butterfly hug therapy in conjunction with religious music for patients undergoing preoperative procedures in a surgical setting. Advantages of butterfly hug therapy as articulated by (Rosyidul Ibad et al., 2023), showed that this therapeutic modality has the capacity to induce tranquility in the mind and facilitate relaxation of the body, thus reducing feelings of anxiety and worry, in addition to other manifestations associated with anxiety disorders. This therapeutic technique has been empirically validated as potent in reducing symptoms in patients preparing for surgical interventions. Furthermore, the application of the butterfly hug technique during meditation serves to promote a calming effect on the body, improving the therapeutic methodology through self-affirmation aimed at improving well-being; in addition, this method has been documented to increase the level of oxygen saturation of the blood, contributing to a state of calm (Zalsa Dwi Ramdhani & Siti Rahma Soleman, 2023).

The results of a combination of butterfly hug therapy and religious music on anxiety level were conducted in respondents during the study, which lasted 7 minutes for 1 time, this therapy is very easy to perform in patients facing surgery. According to the results of the study (Erik Adik Putra Bambang Kurniawan & I Wayan Sudarta, 2024) It was found that after performing a combination of butterfly hug therapy and religious music that advises people to listen to music when they feel more relaxed and comfortable, which can help calm and lower anxiety. Butterfly Hug and Music Therapy is also a simple therapy method that is easy to do anywhere and anytime.

Religious music therapy can help families of patients experiencing anxiety before surgery by turning attention to things that reduce anxiety, pain, a more regular rhythm of breathing, reduce body tension, provide a positive visual image, relaxation, improve mood, and encourage patient progress during the treatment and recovery period (Rensya et al., 2023).

In the authors' view, the sharp decline from severe anxiety (mean 60.00) to mild anxiety (mean 24.07) within a single 7-minute session demonstrates that preoperative psychological distress is highly malleable when targeted through rapid somatic-spiritual modalities. We argue that the demographic profile of our cohort predominantly older adults aged >60 years (46.7%) and middle-aged adults aged 40–60 years (33.3%) played a decisive role in facilitating this rapid therapeutic response. In our clinical interpretation, older adults possess greater emotional maturity, life experience, and a established reliance on religious coping mechanisms; when exposed to familiar religious music (sholawat), they readily enter a state of spiritual surrender (tawakkal), framing the upcoming surgical procedure as a faith-guided event under divine protection rather

than a catastrophic medical threat. Interconnecting this spiritual readiness with the physical intervention, we posit that the simplicity and brief duration of the 7-minute protocol were crucial for patient compliance, particularly among elderly respondents who often present with physical frailty or cognitive fatigue. Because the Butterfly Hug requires minimal physical effort crossing arms and executing slow, alternating bilateral taps it provided an immediate, accessible tactile anchor that enabled patients to actively participate in their own self-soothing without feeling overwhelmed. In the researchers' perspective, combining this effortless self-administered physical grounding with the passive absorption of religious music allowed patients across all age brackets (from young adults to the elderly) to rapidly transition from autonomic hyperarousal to a restorative, quieted emotional state.

3) The Effectiveness Of Combining Butterfly Hug Therapy and Religious Music on Anxiety Levels

Further analysis using the Wilcoxon Signed Rank Test on IBM SPSS Statistic 16. The Wilcoxon Signed Rank Test using a significance value (2 tailed) of 0.000 (< 0.05) indicates the effectiveness of the combination of Butterfly Hug Therapy and Religious Music with the Anxiety Level of Patients Facing Pre Surgery in the Surgical Room. Research conducted by Nadidah Faras Dita et al., (2024) which conducted research on the effect of a combination of butterfly hug and music therapy methods on changes in anxiety levels in adolescents. There was a change in anxiety levels after an intervention using a combination of butterfly hug therapy and music therapy that researchers assumed by giving a combination of Butterfly Hug and Music Therapy methods could have a better effect on coping in a person experiencing anxiety, where administering a Butterfly Hug gives suggestions to the individual to feel calmer and more comfortable while listening to music that can help in improving feelings and providing a calming effect. Butterfly Hug and Music Therapy is also an easy and simple therapy that can be done anywhere and anytime.

According to (Lestari & Kosim, 2024) factors that cause anxiety in patients before surgery include fear of pain or soreness after surgery, fear of physical changes due to organs being removed or removed from the body, fear of failure of the body or other organs to function as they did before surgery, and fear of experiencing the same malignancy of the disease suffered by patients when the diagnosis is uncertain, as well as the presence of fear that the operation is failing.

Anxiety in preoperative patients is a stress response produced by fear or uncertainty of the surgical procedure to be performed. Pathophysiologically, this anxiety begins with activation of the central nervous system, specifically by the prefrontal cortex and amygdala that process threats or fear (Siti Khadijah et al., 2024). Activation of the amygdala then stimulates the hypothalamus to activate the hypothalamic-pituitary-adrenal (HPA) axis and the autonomic nervous system, specifically the sympathetic nervous system. This process triggers the "fight or flight response," which is characterized by an increase in heart rate, blood pressure, and respiratory rate, as well as the release of catecholamines such as adrenaline and noradrenaline from the adrenal glands (King, 2022).

In addition, the hypothalamus also releases the hormone CRH (Corticotropin-Releasing Hormone), which stimulates the pituitary gland to secrete ACTH (Adrenocorticotrophic Hormone). This hormone then triggers the release of cortisol, the main stress hormone, which increases blood glucose levels and the body's energy as a

form of adaptation to stress. The combination of these processes leads to such clinical manifestations as palpitations, restlessness, muscle tension, sleeplessness, up to excessive fear (Shingo Ueda, 2024).

Interventions such as butterfly hugs and religious music have a significant therapeutic impact in reducing anxiety in preoperative patients. The Butterfly Hug technique, which involves a rhythmic tap-tap movement on the body, works by activating the parasympathetic nervous system through vagal stimulation. This decreases the activity of the sympathetic nervous system that predominates when anxiety increases. The impact is seen in decreased heart rate, blood pressure, and breathing patterns becoming calmer. In addition, this technique helps to reduce the hyperactivity of the amygdala, which is the center of fear processing, so that the release of stress hormones such as CRH and cortisol is reduced. The patient's body becomes more relaxed (Caturini et al., 2023b).

Meanwhile, religious music exerts a relaxing effect by stimulating the release of neurotransmitters such as dopamine and serotonin in the brain. Soothing music decreases the activity of the amygdala, which reduces fear and increases the sense of peace. It also helps suppress the "fight or flight" response produced by the sympathetic system, so that the patient's heart rate, blood pressure, and breathing rate decrease. With a more regular breathing pattern, oxygenation of the body increases, which contributes to a feeling of calm and comfort (Rani Pratiwi, 2021).

The combination of these two interventions effectively modulates the nervous system, reducing physical symptoms such as palpitations and muscle tension, as well as lowering psychological symptoms such as restlessness and fear. By restoring the balance between the sympathetic and parasympathetic systems and normalizing the hypothalamic-pituitary-adrenal (HPA) axis, the patient is better mentally and emotionally prepared to undergo surgical procedures. This intervention proves that non-pharmacological therapies can be an important part of pre-operative anxiety management (Razavinasab et al., 2025).

We interpret these empirical findings ($p = 0.000$) as robust validation of a dual-gateway, neuro-spiritual synergistic mechanism. In the researchers' perspective, the true novelty and clinical power of this combined intervention stem from its simultaneous targeting of both "bottom-up" (somatic) and "top-down" (cognitive-spiritual) pathways. The bilateral tactile tapping of the Butterfly Hug acts as a "bottom-up" somatic circuit breaker, physically sending sensory signals through the spinal cord to activate vagal parasympathetic tone and immediately suppress sympathetic "fight-or-flight" cardiac and respiratory acceleration. Concurrently, the religious music acts as a "top-down" cognitive-emotional blanket, bypassing intellectual resistance and reconditioning the limbic system to release endorphins and dopamine, thereby neutralizing the existential dread processing in the hyperactive amygdala.

Building upon this neurobiological synergy, we strongly contend that implementing either modality in isolation would be insufficient for heterogeneous preoperative populations facing diverse surgical stress ranging from major abdominal surgeries like Ileus (30.0%) under total anesthesia (53.3%) to localized procedures under regional anesthesia (36.7%). Isolated music listening can easily be disrupted if a patient is physically restless or hyperventilating, whereas physical grounding alone may lack the spiritual depth required to resolve existential fears of mortality. By unifying both techniques into a standardized 7-minute Standard Operating Procedure (SOP), we provide a holistic psychophysiological shield. Therefore, we advocate for this zero-cost,

non-invasive, and nurse-led intervention to be formally institutionalized within pre-anesthetic nursing protocols to optimize patient readiness and surgical outcomes.

Conclusion

The results of the research that have been carried out have resulted in the following conclusions:

1. Results were obtained before the combination of Butterfly Hug and Religious Music therapy in the Surgical Room, showing that the mean (mean) was 60,00 before the combination of Butterfly Hug and Religious Music therapy, which is included in severe anxiety.
2. Results obtained after the combination of Butterfly Hug therapy and Religious Music in the Surgical Room, showed that the mean (mean) of 24.07 after the combination of Butterfly Hug and Religious Music therapy was included in mild anxiety.
3. Effectiveness of the Combination of Butterfly Hug Therapy and Religious Music with further analysis using the Wilcoxon Signed Rank Test on IBM SPSS Statistic using a significance value (2 tailed) of 0.000 (<0.05) which means that there is an Effectiveness of Combination of Butterfly Hug Therapy And Religious Music With Anxiety Level of Patients Facing Pre Surgery In Surgical Room.

Ethics approval and consent to participate

In the implementation of this research effort, before directly engaging in fieldwork, researchers submitted laiketic application to STIKES Banyuwangi Health Research Ethics Commission (KEPK) on October 17, 2024, then obtained approval from the ethics review board on November 8, 2024, with reference number 024/01/KEPK-STIKESBWI/XI/2024-2025, thus allowing for research progress. After this ethical support, permission is requested from the Director of Blambangan RSUD to obtain the necessary approval, and after receiving the necessary approval from the researcher.

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