



## Article Review

# Hand Massage Therapy Against Anxiety In Surgical Patients

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### Abstract

Anxiety in the preoperative stage reaches 534 million people, with an incidence rate of 5-25% among those aged 5-20 years and 50% among those aged 55 years and over, causing an increase in blood pressure that hinders rehabilitation efforts. One technique to reduce anxiety during surgery is hand massage. This research aims to understand better the effect of hand massage therapy on preoperative pain at RSI Ibnu Sina Padang in 2022. This research is experimental, using a pre - post-test design with 32 samples divided equally between intervention and control groups. The research was conducted for a full week at RSI Ibnu Sina Padang, Multazam Surgical Inpatient. Information was collected using the Hamilton Anxiety Rating Scale (HARS) and analyzed with the help of the Wilcoxon and Mann-Whitney tests. Research based on the Wilcoxon test showed a difference in the severity of symptoms between the groups participating in the experiment before and after the application of hand massage therapy ( $p = 0.0001$  for both comparisons). The results of the Mann - Whitney U test showed that hand massage could reduce the level of pain experienced by surgical patients at RSI Ibnu Sina Padang ( $p = 0.0001$ ).

## INTRODUCTION

Surgery is a type of treatment that is carried out to observe or view damaged tubules and ending with wounds. <sup>1</sup> The incision in tissue tubular changes that inhibit changes in tubular physiology and damage other tubular organs can occur during the recovery period.<sup>2</sup> Surgery is associated with a lot of stigmas among clients and the surrounding community, which generally agree that it is a major problem that causes anxiety and anxiety at the target level Cito/emergency surgery and elective surgery are classified as two different types of advancement.<sup>3</sup>

Based on data from the Ministry of Health, of the 50 types of disease treatment in Indonesia, 32% of them use electrical treatment methods (surgery is ranked 11th).<sup>4</sup> It is estimated that 32% of Indonesia's population suffers from serious illnesses, 25% suffer from mental health problems, and 7% suffer from non-communicable diseases. In Indonesia, electrical operations and maintenance are responsible for 40% of all cases of disease transmission. It is estimated that the prevalence of serious illnesses in Indonesia is 32%, mental health problems 25%, and anxiety 7%. Based on Riskesdas the decline in elective surgery amounted to 26,764

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surgical cases in 2019 in West Sumatra.<sup>5</sup> Based on data Yanti According to data collected between June and August 2019, the number of elective surgery patients in Padang City was 10,265 people, while surgical procedures were 5,564 people.<sup>6</sup>

According to Ljungqvist The preoperational, operational, and post-operational phases are three stages of assessment actions.<sup>7</sup> Preoperative planning is one of the first steps to be taken throughout the postoperative phase. More than two-quarters of patients who present for the preoperative phase of the procedure experience anxiety.<sup>8</sup> Based on research results, 11–80 % of the elderly population experienced pre-operative anxiety in 2017.<sup>9</sup> According to statistics collected from 34 provinces in Indonesia, Bali province has the highest prevalence of astigmatism at more than 11.0%, followed by DI Yogyakarta at around 10.4%, and West Sumatra at 9.1%.<sup>5</sup> Based on statistical data, 155,208 people lived in West Sumatra in 2021, with around 47,692 of them suffering from emotional mental disorders including preoperative anxiety. According to statistics collected from 19 Regency/City in West Sumatra Province, Mentawai Islands City occupies the highest position with anxiety prevalence at around 32.8%, Pariaman City at around 20.82%, and Padang City at 14.2%.

Anxiety has standard symptoms which include mild, moderate, severe, and panic. With symptoms of anorexia, gematria, persistent low-level breathing, lack of relaxation, increased blood pressure, and shortness of breath.<sup>10,11</sup> The patient's blood pressure during preoperative preparation leads to abnormal hematocrit, which has serious consequences for the patient's overall health and surgical outcomes. It can also cause post-operative complications,<sup>12</sup> causing long-lasting wounds and resulting in long hospital days.<sup>13</sup> The patient's tubular function can be damaged during surgery and can interfere with plans or ongoing procedures, the role of the nurse is needed in cases of anxiety in the preoperative care

stage to relieve the patient's need for physical and psychological care.<sup>14</sup> Several types of treatment can be used by practitioners to treat anxiety, including medical and non-medical treatment. Relative relaxation therapy is the single most effective method for treating anxiety, and methods can vary such as deep breathing relaxation, using SEFT (Spiritual Emotional Freedom Technique),<sup>15</sup> five-finger hypnosis, endorphin massage, and hand massage can all be effective.<sup>16</sup>

According to theory, hand massage is a technique specifically aimed at massaging the sac muscles in the hands.<sup>17</sup> This special massage can help increase endorphin levels in the blood, slow the growth of fat around the heart, and make the body feel calmer, healthier, and slimmer.<sup>18</sup> Hand massage is carried out in eight different ways using olive oil.<sup>17</sup> This treatment lasts for ten minutes with six repetitions of each finger before surgery.<sup>19</sup> Additionally, there is no requirement for expensive specialized equipment during hand massage therapy, allowing practitioners to treat patients regardless of their socioeconomic status.<sup>20</sup> According to an initial survey conducted on February 17, 2022, at RSI Ibnu Sina Padang with 10 respondents who were about to undergo surgery, 7 people reported experiencing anxiety while 3 other people reported difficulty controlling emotions, not being able to communicate effectively, feeling uncomfortable, and having difficulty sleeping. The patient complained that no treatment was provided to reduce his anxiety. The patient did not receive any treatment to overcome this problem, such as hand massage, to reduce his anxiety. In addition to being concerned about the action to be taken and experiencing severe anxiety, nine people also said they had never heard of hand massage therapy.

## METHODS

The design used in this research is quantitative and uses a two-group pretest - posttest design with intervention and control group. This research focuses on the

level of anxiety of respondents about elective surgery or surgery. This research measures anxiety. The subjects of this research were patients who underwent surgery at RSI Ibnu Sina Padang. Inclusion criteria for selecting research subjects include willingness to be a respondent, respondents willing to be given therapy hand massage, and respondents who will undergo elective surgery. The subjects of this research were 32 people. The sampling technique was used to obtain the sample for this research is purposive sampling. The level of anxiety of research subjects was measured using HARS (Hamilton Anxiety Rating Scale), HARS assessment with a score of 0 - 4, with details of score 0 = No symptoms at all, score 1 = One symptom present, score 2 = Moderate/half of the symptoms present, score 3 = Severe/more than half of the symptoms present and score 4 = Very severe, all symptoms present. The level of anxiety is measured using assessments entered the category which are mild, moderate, and severe levels of anxiety. This assessment was done pre-test and test in the intervention and control groups. Action hand massage was given to patients who met the inclusion criteria and signed informed consent after filling in the questionnaire anxiety hereinafter that, the researcher provided therapy and massage for  $\pm$  10 minutes on both palms of the respondent's hands using olive oil. Anxiety level assessment instrument based on is an instrument standard that has been used in hospitals, so it has been declared valid and reliable for measuring patient anxiety. Instrument anxiety assessment in the form of a questionnaire Hamilton Anxiety Rating Scale (HARS), has validity and reliability standard. The HARS scale has been proven to have high enough validity and reliability for measuring anxiety in research clinics namely 0.93 and 0.97. For data analysis, bivariate analysis was carried out to determine the effect of the independent variables on the dependent variables studied using non-parametric tests, namely test Mann Whitney and Wilcoxon. Test Wilcoxon obtained results with values-

value ( $p < 0.05$ ) stating that there was a difference before and after treatment (hand massage) in the intervention group while group control without treatment.

### **Ethical Considerations**

This research has been reviewed and approved by the Medical Faculty Ethics Committee University Padang State. All research subjects participated in this study voluntarily. Researchers explain the research objectives and interventions that will be carried out to patients when the patient begins treatment. Patients are given the freedom to contribute as research subjects. After the patient is willing to become a research subject, the patient signs a consent form to become a research subject (informed consent). Researchers did not include the patient's identity inside reports and publication manuscripts to maintain the confidentiality of patient data. Data is collected solely for academic research purposes.

### **RESULTS**

Based on data from 16 respondents analyzed using the Univariate method, half of the respondents (60%) were female, less than half (30%) had appendectomy surgery, almost half of the respondents (47%) worked as private employees, more than half (65%) said they had never had surgery before, and more than half of respondents (70%) were aged between 20 and 40.

This research showed that, of the 16 respondents who received treatment (hand massage), more than half (75%) were categorized as medium scale. The level of anxiety on the mild scale was obtained by a small number of respondents (25%).

Data from 16 respondents with their level of anxiety before acting on the control group showed that almost all respondents (85%) were in the severe category, and respondents with a moderate level of anxiety were less than half of the

respondents (25%). The control group was not given any treatment.

Table 1  
Respondents' Anxiety Level Before Being Given Hand Massage Therapy

indicator	f	%
Anxiety category		
Severe	8	25
Moderate	24	75
Total	32	100

The test used bivariate analysis and found evidence of respondents' anxiety before and after receiving hand massage therapy with a p-value of 0.0001 ( $p=0.05$ ). So it can be concluded that there are differences in respondents' anxiety in the intervention group at RSI Ibnu Sina Padang in 2022. Data on respondents' anxiety levels before and after the control group showed no significant difference at the 5% significance level ( $p = 0.682$ ). This means that there will be a difference in anxiety levels at RSI Ibnu Sina Padang in 2022.

Tabel 2  
Differences in Anxiety Levels in control Group Before and After Giving Hand Massage

Group	Mean Rank	Std. Deviasi	p
Before	33,38	8,724	0,628
After	32,81	5,695	

Data from a comparison of two groups using the Mann-Whitney test yielded a p-value of 0.0001 ( $p = 0.05$ ), allowing us to conclude that the hand massage intervention used in the intervention The group at RSI Ibnu Sina Padang in 2022 may have several benefits.

Tabel 3  
Differences in Anxiety Levels in Intervention Group Before and After Giving Hand Massage

Group	Mean Rank	Std. Deviasi	p
Before	29,06	5,026	0,0001
After	21,19	4,722	

## DISCUSSION

The results of the study showed that the level of anxiety of respondents before being

given hand massage therapy of respondents in the intervention group was more than half of the respondents (25%) were at the anxiety level in the severe category and almost half of the respondents (75%) were at the anxiety level in the moderate category at RSI Ibnu Sina Padang Year 2022. The results of this research are in line with research conducted <sup>21</sup>, it was found that after being given hand massage therapy there was a decrease from before being given hand massage therapy with the anxiety level of more than half of the respondents (55.6%) being in the moderate category and almost half of the respondents (44.4%) were in the mild category. Anxiety is excessive worry about an unclear object and can be associated with feelings of uncertainty resulting in the inability as a result of research an object <sup>22</sup>. Anxiety will increase as the surgery schedule gets closer. Anxiety causes cognitive, psychomotor, and physiological responses. These respondents were characterized by difficulty thinking clearly, and difficulty solving the problems they were experiencing <sup>23</sup>.

According to the researchers' analysis, the patient's anxiety level before being given hand massage therapy was less than half of the level of severe anxiety (25%). This happens because the patient feels afraid of the failure of the operation being carried out. The less knowledge about the surgical procedure that will be carried out, the more anxiety the patient will feel. Most of the respondents from the research results are in the productive age of 20-40 years, with the female gender influencing because of the female's age and gender, in women, emotions cannot be controlled well so the coping mechanisms that occur are not good, triggering increased levels of anxiety. Massage is a manipulation technique where pressure is applied to the hands on the soft tissue parts of the body, usually muscles, tendons, and ligaments, without shifting or changing the position of the joints to increase blood circulation, relaxing muscles, reducing pain, stretching muscles, increasing oxygen levels in the body blood

24. According to the researchers' analysis, the patient's anxiety level after being given hand massage therapy was found to be more than half with a mild level of anxiety (56.2%). This shows that some of the respondents experienced moderate anxiety in facing surgery. The results of the study showed that there was a decrease in anxiety levels before and after being given hand massage therapy. This is because when the patient is given mind-hand massage therapy, the patient's body will relax. After all, when the hand massage is given blood pressure will decrease, and hormones that regulate happy mood will increase which makes blood circulation to the brain smoother, making the patient feel comfortable. feeling calm and relaxed.

## CONCLUSION

The distribution of respondents' anxiety levels before receiving hand massage therapy showed that more than half of the respondents were in the "medium" category. The frequency distribution of anxiety levels in the intervention group showed that some participants were still in the "mild" anxiety scale category even though they had received hand massage therapy. The frequency distribution of anxiety level responses before and after almost all respondents were in the "weak" category and the distribution of anxiety level responses after almost all respondents were in the "weak" category of the control group.

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## CONFLICT OF INTEREST

There is no conflict of interest to declare from this research.

## REFERENCES

1. Minton J, Sidebotham DA. Hyperlactatemia and cardiac surgery. *The journal of extra-corporeal technology*. 2017;49(1):7.
2. Huang C, Hsu S, Chen YR. Systematic review of the surgery-first approach in orthognathic surgery. *Biomedical journal*. 2014;37(4):184.
3. Potter & Perry. *Buku Ajar Fundamental Keperawatan Konsep, Proses Dan Praktik*. Jakarta: EGC; 2016.
4. Organization WH. Definition of skilled health personnel providing care during childbirth: the 2018 joint statement by WHO, UNFPA, UNICEF, ICM, ICN, FIGO and IPA. World Health Organization; 2018.
5. Risesdas. *Profil Kesehatan Indonesia*. Jakarta; 2020.
6. Yanti DA, Silaban LS, Purba S, Simarmata JM. Pengaruh Hand Massage Terhadap Penurunan Tingkat Kecemasan Klien Pre Operasi Di Rumah Sakit Patar Asih Lubuk Pakam Tahun 2021. *Jurnal Keperawatan Dan Fisioterapi (JKF)*. 2021;3(2):171-9.
7. Ljungqvist O, Scott M, Fearon KC. Enhanced recovery after surgery: a review. *JAMA surgery*. 2017;152(3):292-8.
8. Cronenwett JL, Johnston KW. *Rutherford's vascular surgery e-book*. Elsevier Health Sciences; 2014.
9. Querstret D, Cropley M. Assessing treatments used to reduce rumination and/or worry: A systematic review. *Clinical psychology review*. 2013;33(8):996-1009.
10. Morrison AS, Heimberg RG. Social anxiety and social anxiety disorder. *Annual review of clinical psychology*. 2013;9:249-74.
11. kuscianah Kuswa Y. Reduction of Anxiety Levels in Schizophrenia Patients Using Progressive Muscle Relaxation. *Journal South East Asia Nursing Research*. 2021;3(2).
12. Tiller JWG. Depression and anxiety. *The Medical Journal of Australia*. 2013;199(6):S28-31.
13. Bandelow B, Michaelis S, Wedekind D. Treatment of anxiety disorders. *Dialogues in clinical neuroscience*. 2022;
14. Tuma AH, Maser JD. *Anxiety and the anxiety disorders*. Routledge; 2019.

15. Lina LF, Sabriyanti HE, Sartika A. Decreased The Anxiety Scale of Hemodialysis Patients With The Spiritual Emotional Freedom Technique (SEFT) and The Autogenic Relaxation. *South East Asia Nursing Research*. 2019;1(3):142.
16. Asmawati A, Ikhlasia M, Panduragan SL. The Effect of Spiritual Emotional Freedom Technique (SEFT) Therapy on the Anxiety of NAPZA (narcotics, psychotropic, and other addictive substances) Residents. *Enferm clín(Ed impr)*. 2020;206-8.
17. Brand LR, Munroe DJ, Gavin J. The effect of hand massage on preoperative anxiety in ambulatory surgery patients. *AORN journal*. 2013;97(6):708-17.
18. Cheng-Hua NI, Li WEI, Chia-Che WU, Chueh-Ho LIN, Pao-Yu C, Chuang YH, et al. Machine-Based Hand Massage Ameliorates Preoperative Anxiety in Patients Awaiting Ambulatory Surgery. *The Journal of Nursing Research*. 2021;29(3):e152.
19. Baderiyah A, Pitoyo J, Setyarini A. Pengaruh Hand Massage Terhadap Tingkat Kecemasan Pasien Pre Operasi Pada Pembedahan Elektif. *Journal of Applied Nursing (Jurnal Keperawatan Terapan)*. 2021;7(2):116-25.
20. Abbaspoor Z, Akbari M, Najari S. Effect of foot and hand massage in post-cesarean section pain control: a randomized control trial. *Pain Management Nursing*. 2014;15(1):132-6.
21. Kusmirayanti NWL. Pengaruh Pemberian Hand Massage Terhadap Tingkat Kecemasan Pasien Pre Operasi Di Ruang Janger RSD Mangusada. *Jurnal Skolastik Keperawatan*. 2021;7(1):39-45.
22. Stuart, G.W., Sundden SJ. *Buku Saku Keperawatan Jiwa*. In: 5th ed. Jakarta: EGC; 2014.
23. Ajani AT, Movitaria MA, Saputra N, Komelasari Y. COVID-19 Education and Vaccination in Reducing Students' Anxiety Levels at SMP 2 Silaut. In: 1st International Conference on Health Sciences and Biotechnology (ICHB 2021). Atlantis Press; 2022. p. 24-7.
24. Akbar I, Putri DE, Afriyanti E. Pengaruh Relaksasi Otot Progresif terhadap Penurunan Dismenore pada Mahasiswi A 2012 Fakultas Keperawatan Unand. *NERS Jurnal Keperawatan*. 2016;10(1):1-13.