

Conference Paper

Guided Imagery and Music on Anxiety of Mayor Operating Inpatients of Tangerang General Hospital

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Abstract

Background: The anxiety level of clients who will undergo major surgery is very influential on the smooth operation of the operation to be carried out. Actions of a nurse to overcome the anxiety that occurs on the client pre-operation are needed to be able to resolve the issue. **Objective:** This study aimed to look at changes in the patient's anxiety level after guided imagery and music performed by nurses before the surgery performed. **Methods:** The research was used quasi experimental with pretest-posttest control group design, sample collected used Quota Sampling method with total 38 sample divided into two group, the instrument of measuring the anxiety level used (HARS-A) scale, which the statistic test used Wilcoxon Signed Rank Test and Mann-Withney. **Result:** There was a decrease in the value of anxiety in the group given guided imagery and music with an average value of 7.50 (p-value:0.000), whereas there was a tendency to increase the value of anxiety in the control group with an average value of 6.00 (p-value:0.083). There were significant differences in the mean value between the intervention groups (14.03) and the control group (24.97) with p-value 0.001. **Conclusion:** Giving stimuli in the form of guided relaxation techniques can help reduce the level of anxiety in clients who will undergo surgery because it can help clients to distract their anxiety towards the operation process to other things of beautiful nature. The addition of music as one of the image transformation media can strengthen relaxation guidance to be able to reach the maximum level of relaxation that will have an impact on the ability to reduce their anxiety level

Keywords: Guided Imagery, Music, anxiety

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1. Introduction

Surgery is a surgical procedure for doctors to treat conditions that are difficult or impossible to cure with only simple medicines [1]. The level of risk of a surgery is grouped into two, namely minor and major. Major surgery is surgery that carries a high enough risk for patients and is usually extensive. Major surgery is usually done with general anesthesia [2].

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The World Health Organization states that more than 234 million major surgical procedures are performed worldwide each year, the mortality rate reported after major surgery is 0.5-5%, complications after inpatient surgery occur up to 25% [3]. In 2007, of the 401 MOH and Local Government General Hospital, 642,632 operations were carried out.

Based on data in the Inpatient Installation of Tangerang General Hospital related to surgery, there were 4120 people who underwent elective surgery in 2014, in the last three months (January-March 2015) there were 995 people. While the number of patients undergoing surgery with major surgery in 2014 was 1136 people, in the last three months (January – March 2015) as many as 204 people. Meanwhile, the average population in a month undergoing surgery with this type of major surgery from January to March 2015 was 68 people.

From the major surgery data usually carry some degree of risk for patients who undergo it such as the existence of parts of the body that are removed so that disability will occur, changes in body shape, causing extensive physical trauma, and the risk of death is very serious. This high risk has a psychological impact or influence on patients in the preoperative phase [4].

According to [5] examined from the science of psychoneuroimmunology, anxiety can increase heart rate and decrease immunity. Anxiety causes platelet migration to the peripheral area so that blood clots shorten and there is also an increase in perfusion that will be dangerous during surgery which increases the risk of bleeding. Anxiety can also stimulate the sympathetic nervous system and modulus of the adrenal glands. Stimulation of the nervous system and adrenal modula will increase the secretion of the hormone adrenaline and the hormone cortisol which causes stress [6]. Anxiety if not addressed will cause problems and disrupt the operation process in progress or surgery can also be canceled, this condition requires an effort to reduce anxiety.

One technique that can be used to reduce anxiety is Guided Imagery and Music (GIM). Guided imagery is a technique that utilizes stories or narratives to influence the mind, often combined with background music [7]. Guided imagery can generate neurohormonal changes in the body that resemble changes that occur when an event actually occurs [7].

These results are supported by research [8] showing that there is a significant effect of GIM on preoperative anxiety in SC in Banyumas Regional Hospital. Wilcoxon statistical test showed p value <0.05 (p value = 0.033). Conclusion: There is a significant influence between GIM on preoperative anxiety of SC in Banyumas Regional Hospital.

Research [9] compared anxiety levels for both groups, anxiety levels decreased significantly in the Guided Imagery group ($P = .002$). for 2 hours, the Guided Imagery group reported significantly less pain ($P = 0.041$). The use of Guided Imagery in ambulatory surgery can significantly reduce preoperative anxiety which can produce less postoperative pain.

Based on the problems that have been described, GIM relaxation techniques are expected to reduce the anxiety of major preoperative patients, it is deemed necessary to conduct research on the Effectiveness of Guided Imagery and Music on the anxiety of preoperative patients in the Inpatient Installation of Tangerang Regency Regional Hospital in 2015.

2. Methods

This type of research used in this research is Quasi Experiment with Pretest-Posttest Control Group Design approach. The sample in this study were 38 respondents who were divided into treatment groups and control groups. Sampling using Quota Sampling. This research was conducted at Tangerang District General Hospital, data collection was carried out on June 24 to July 28, 2015. Measuring instruments in this study used an anxiety questionnaire sheet Hamilton Anxiety Rating Scale (HARS-A). The Questionnaire have consist of 14 groups of symptoms are combined and from the results of the summation can be known degree of anxiety of a person namely if the Value less than 14 is No anxiety, 14 -20 is Mild Anxiety, 21 – 27 is Moderate anxiety, 28-41 is severe anxiety and 42 – 56 is panic. Analysis of the data used is Univariate Analysis and Bivariate Analysis, Bivariate Analysis is done by Wilcoxon test and Mann Withney test because the type of data is categorical.

3. Results

3.1. Univariate Analysis Results

3.2. Wilcoxon test results

3.3. Mann-Whitney test results.

TABLE 1: Frequency Distribution of Demografi respondents.

Age (Years)	Intervention (Responden)		No Intervention (Responden)	
	Frek	%	Frek	%
17-25	3	15.8	2	10,5
26-35	4	21.3	3	15.8
36-45	2	10,5	3	15.8
46-55	7	36.8	8	42.1
56-65	3	15.8	3	15.8

TABLE 2: Frequency Distribution of Anxiety Levels Before and After Given Guided Imagery and Music Intervention.

Level Anxiety	Pre Test		Post Test	
	Frek	%	Frek	%
No	0	0	2	10,5
Mild	4	21,1	11	57,9
Moderat	12	63,2	6	31,6
Severe	3	15,8	0	0
Panic	0	0	0	0
Total	19	100	19	100

TABLE 3: Frequency Distribution of Anxiety Levels Before and After the Control Group in the Inpatient Installation of Tangerang General Hospital.

Level Anxiety	Pre Test		Post Test	
	Frek	%	Frek	%
No	0	0	0	0
Mild	5	26,3	3	15,8
Moderat	13	68,4	14	73,7
Severe	1	5,3	2	10,5
Panic	0	0	0	0
Total	19	100	19	100

TABLE 4: Differences in the Anxiety Levels of Major Preoperative Patients Before and After Guided Imagery and Music in the Intervention Group at the Inpatient Installation of Tangerang General Hospital.

Intervensi	Kategorik Rank	N	P Value Sig. (2-tailed)
Posttest < Pretest	Negative Rank	14	0,000
Posttest > Pretest	Positive Rank	0	
Posttest = pretest	Ties	5	
Total		19	

4. Discussion

Table 2 shows that before guided imagery and music therapy, the majority of respondents' anxiety level was in the category of moderate anxiety as many as 12 respondents

TABLE 5: Differences in the Anxiety Levels of Pre-Major Patients Before and After in the Control Group at the Inpatient Installation of Tangerang General Hospital.

Intervensi	Kategorik Rank	N	P Value Sig. (2-tailed)
Posttest < Pretest	Negative Rank	0	0,083
Posttest > Pretest	Positive Rank	3	
Posttest = pretest	Ties	16	
Total		19	

TABLE 6: Test Results Comparison of of Anxiety Level between Intervention Group and Control Group.

Variabel	N	Average Rank	Sum Rank	Mann-Whitney P Value
Posttest (Intervensi)	19	14,03	266,50	0,001
Posttest (Kontrol)	19	24,97	474,50	

aged 27 to 51 years, 4 respondents experienced mild anxiety with age 50 to 63 years, 3 respondents experienced severe anxiety with the age range is 19 to 23 years, which means that in this study most of the younger ages tend to experience higher anxiety because psychological maturity is still lacking, future worries threaten after surgery if it is not as expected and not much experience. This is consistent with the opinion that the age of the respondent is in harmony with the maturity of an individual's psychology which influences his anxiety [10].

Based on the above table after guided imagery and music therapy, most of the anxiety level of the respondents decreased. This happened because before the respondent's therapy was afraid of the operating room and operating equipment, the fear of surgery did not bring healing to him, the fear of the shadows experienced by the respondent was left alone, so there was an inhibition of the neurotransmitter GABA and endorphin hormone, and causes the hypothalamus to stimulate the adrenal glands to produce the hormone cortisol. Cortisol is a hormone that causes disappointment, feelings of depression and sadness and presents excessive fear [11].

Then after being given guided imagery and music therapy the respondent will imagine something fun and then provide a stimulus to the hypothalamus to release endorphin hormone and suppress the release of cortisol so that the respondent will feel relaxed and reduce anxiety. Research states that relaxation can restore cortisol levels in the normal range [12]. This result is supported by several studies, there are studies that say that guided imagination can reduce anxiety, before the treatment of most respondents experienced severe anxiety that is as many as 15 respondents, then after treatment most of the respondents are at moderate anxiety levels, namely 14 respondents [13]. Then

these results are also strengthened by research that proves that reducing anxiety can be done using relaxation techniques [14].

Based on table 3 above shows that most pretest scores experienced moderate anxiety, namely 13 respondents aged 25 to 49 years, 5 respondents were mildly anxious with ages 52 to 64 years and 1 respondent was anxiously aged 24 years where this was the youngest age in the control group. Which means that in the control group also shows data that age affects the level of anxiety, where the majority of respondents who are younger are also higher levels of anxiety. The above results are supported by research which shows that anxiety in adolescent developmental stages is higher than that of young adult development [8]. In this group respondents were not given guided imagery and music therapy, posttest scores did not decrease even some experienced an increase in anxiety, this could have happened because there was no stimulus that suppressed the release of the hormone cortisol which had a big effect on anxiety responses, as well as the waiting times for operations close will make the respondent more anxious so that the respondent experiences prolonged anxiety. Research also conducted [15] showed that the control group did not experience a decrease in anxiety, while the intervention group that was given guided imagery therapy could reduce anxiety in patients with total joint arthroplasty pre surgery.

Based on table 4 above, the value of Sig. (2-Tailed) = 0,000 < p (0.05) at a significant level of 5%, with the value of respondents having decreased levels of anxiety with the negative rank category there were 14 respondents after being given Guided Imagery and Music. There were 0 respondents who experienced an increase in anxiety level with a positive rank category after being given Guided Imagery and Music. The value of respondents did not change the level of anxiety with the category Ties there are 5 respondents. Actually 4 out of 5 respondents experienced a decrease in anxiety score, but the decrease was still in the same category, while 1 respondent did not experience a change in score either increasing or decreasing. This may be because the respondent is elderly, so his imagination and hearing has decreased. Thus the results of this study have a significant difference in anxiety levels in major preoperative patients before and after being given Guided Imagery and Music at the Inpatient Installation of Tangerang Regency General Hospital in 2015.

Based on the above table after being given guided imagery and music, 14 respondents experienced a decrease in the level of preoperative major anxiety, in the implementation of the respondents attending the therapy happily without coercion, seen when the therapy respondents felt comfortable and relaxed, even many respondents

who smiled to themselves to sleep while listening to therapy, which means that suggestions and music can be absorbed effectively by respondents. This is supported by research that proves that guided imagery will make patients relaxed and comfortable, can make patients fall asleep so as to maintain the quality of patient sleep [16]. This is because the imagination technique is a type of relaxation that is done by creating a positive impression in the mind of the respondent and then concentrating on that impression, so that gradually the discomfort felt can be removed [4].

Environmental conditions during the implementation of the therapy were quite calm, there was no noise that made the respondent disturbed because the implementation of guided imagery and music therapy was carried out outside visiting hours of visitors, the bed curtain was closed, the respondent also used a headset so that the respondent was not disturbed by the surrounding environment. In accordance with research that says guided imagery and music (GIM) therapy is carried out in a quiet place, GIM is done by focusing fantasy or imagination facilitated with music. Music effects are used to strengthen patient relaxation so that the imagination and suggestion given will be more easily induced. The ultimate goal is that the patient will be able to control his anxiety [17]. Research that supports the above results, the study states that there is a significant effect between GIM on preoperative anxiety in SC Banyumas Regional Hospital. Guided imagery and music relaxation has an effect on improving the functioning of the nervous system which will have an impact on decreasing the stress response that can be used to intervene in preoperative anxiety of SC [8].

Based on table 5 above, the statistical test results using the Wilcoxon test obtained Sig values. (2-Tailed) = 0.083 < p (0.05) at a significant level of 5%, with the value of respondents experiencing a decrease in the level of anxiety with negative category ranks there are 0 respondents. There were 3 respondents who experienced an increase in anxiety level with a positive rank category. The value of anxiety of respondents who remained with the category of Ties there were 13 respondents.

Therefore, these results were not significantly different in the level of anxiety in the pre-major surgery patients before and after the control group at the Tangerang Regency Hospital Inpatient Installation in 2015. In the table above respondents in this group were not given guided imagery and music therapy and it was seen that none of the respondents experienced a decrease in anxiety levels. The level of anxiety that did not change and increased in this group because of fear and worry was left alone, so there was nothing to divert the fear and worry experienced by the respondent. This result is supported by research conducted by [9] which states that changes in anxiety

levels decreased significantly in the Guided Imagery group while in the control group there were no differences in anxiety.

The results of the analysis of table 5 above show that there is a significant difference between the posttest scores of anxiety levels in the intervention group and the control group. Statistical test results obtained p value = $0.001 \leq 0.05$. This result is because the treatment group was given guided imagery and music therapy so that the value of posttest anxiety decreased, while in the control group no guided imagery and music therapy was given, so that the value of posttest anxiety was not decreased. The conclusion is that there is a significant difference in the level of major preoperative anxiety between the treatment and control groups. In the table above the two groups have significant differences, this happens because in the treatment group respondents were given Guided Imagery and Music (GIM) therapy while in the control group respondents were not given Guided Imagery and Music (GIM) therapy so that in the control group there was no stimulus can release endorphin hormones that can reduce anxiety and nothing suppresses the release of the hormone cortisol which can affect the onset of anxiety.

The above results are supported by several studies, there are studies that say the guided imagery group can reduce anxiety than the control group, both groups have significant differences [9]. The study also said that relaxation of guided imagery is more effective because it can stimulate parasympathetic nerves, inhibit the sympathetic central system to control heart rate, causing the body to relax, guided imagery techniques also form a beautiful shadow that can be accepted as a stimulus for various senses, so that tension will be removed and the body will be relaxed and comfortable [13].

5. Conclusion

Therapy Guided imagery and music can be used to reduce anxiety in patients who will perform major operations with mild and moderate anxiety levels because giving stimuli in the form of guided relaxation techniques can help reduce the level of anxiety in clients who will undergo surgery. The addition of music as one of the image transformation media can strengthen relaxation guidance to be able to reach the maximum level of relaxation that will have an impact on the ability to reduce their anxiety level.

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Conflict of Interest

The authors have no conflict of interest to declare.

References

- [1] Potter, P. A., & Perry, A. G. (2006). *Buku Ajar Fundamental Keperawatan: Konsep, Proses, dan Praktik* (4 ed., Vol. 2). Jakarta: EGC.
- [2] Baradero, M., Dayrid, M. W., & Siswadi, Y. (2009). *Keperawatan Perioperatif: Prinsip & Praktik*. Jakarta: EGC.
- [3] World Health Organization. (2015). *WHO*. Retrieved April 3, 2015, from WHO: <http://www.who.int/patientsafety/safesurgery/en/>
- [4] Smeltzer, S. C., & Bare, B. G. (2002). *Buku Ajar Keperawatan Medikal Bedah Brunner dan Suddarth* (8 ed., Vols. 1,2). Jakarta: EGC.
- [5] Glaser, J. K., McGuire, L., Robles, T. F., & Glaser, R. (2002). Emotions, Morbidity, and Mortality: New Perspectives from Psychoneuroimmunology. *Annual Review of Psychology* 53, 83-107.
- [6] Tomb, D. A. (2004). *Buku saku psikiatri*. Jakarta: EGC.
- [7] Hart, J. (2008). *Guided Imagery*. Mary Ann Liebert, INC, 14(6), 295-299.
- [8] Sutrimo, A. (2013). *Pengaruh Guided Imagery and Music (GIM) Terhadap Kecemasan Pasien Pre Operasi Sectio Caesaria (SC) di RSUD Banyumas*. Purwokerto.
- [9] Gonzales, E. A., Ledesma, R. J., McAlister, D. J., Perry, S. M., Dyer, C. A., & John, P. M. (2010). Effects of Guided Imagery on Postoperative Outcomes in Patients Undergoing Same-Day Surgical Procedures: A Randomized, SingleBlind Study. *AANA Journal*, 78, 181-188
- [10] Feist, J. (2009). *Freud: psikoanalisis dalam teori kepribadian: theories of personality*. Jakarta: Salemba Medika.
- [11] Guyton, A. C., & Hall, J. E. (2006). *Textbook of medical physiology* (11 ed.). Philadelphia: Elsevier Saunders.

- [12] Andarmoyo, S. (2005). *Pengaruh Terapi Non-farmakologi (Imajinasi Terbimbing) Terhadap Tingkat Nyeri Pasien Post Operasi Sectio Cesarea pada Ibu Primipara Hari 1-2*. Jawa Timur: FIK Universitas Muhammadiyah Ponorogo
- [13] Aprianto, D., Kristiyawati, S. P., & Purnomo, S. C. (2013). *Efektifitas Teknik Relaksasi Imajinasi Terbimbing dan Nafas Dalam Terhadap Penurunan Kecemasan pada Pasien Pre Operasi*. Semarang: STIKES Telogorejo.
- [14] Pratiwi. (2012). *Pengaruh teknik relaksasi autogenik terhadap penurunan tingkat kecemasan pada ibu dengan anak retardasi mental tingkat sedang di SDLB YAKUT Purwokerto*. Purwokerto: Universitas Jendral Soedirman.
- [15] Thomas, K. M., & Sethares, K. A. (2010). Is guided imagery effective in reducing pain and anxiety in the postoperative total joint arthroplasty patient. *Orthopaedic Nursing*, 393-399.
- [16] Komara, M., Utomo, W., & Hasanah, O. (2013). Efektifitas Teknik Relaksasi Guided Imagery Terhadap Pemenuhan Rata-rata Pemenuhan Jam Tidur Pasien di Ruang Rawat Inap Bedah. *Program Study Ilmu Keperawatan Universitas Riau*.
- [17] Beebe, L. H., & Wyatt, T. H. (2009). Guided imagery & music using the Bonny method to evoke emotion & access the unconscious. *Journal of Psychosocial Nursing*, 47, 29-33.