The Effect of Kutaneus Stimulus (Slow-Stroke Back Massage) and Music Therapy of Anxiety Levels Inpatient Pre Operations in Mardi Waluyo Blitar Hospital

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Abstract. Surgery will cause the patient to experience various stressors. Stressors that appear can be psychological stress such as anxiety. Someone who experiences severe anxiety tends to hamper the operation process; the patient will be short-tempered, and irritable. This study aims to determine the effect of a cutaneous stimulus (slow-stroke back massage) and music therapy on anxiety levels in preoperative patients at Mardi Waluyo Blitar Hospital. This research uses a quasi-experimental design. The number of samples in this study was 36 respondents who were divided into three groups, namely the slow-stroke back massage group, music therapy, and a combination of both. The sampling in this study is nonprobability sampling with a purposive sampling approach. This research uses statistical analysis test Paired T-Test and Anova Two Way. Paired T-Test results showed a p-value of 0,000 <α (0.05), which means there is a significant effect between slow-stroke back massage, music therapy, and a combination of both of them on the level of anxiety in preoperative patients. ANOVA Two Way test results found that the p-value 0.307> α (0.05) with no significant difference in effect between groups of slow-stroke back massage, music therapy, and a combination of both of them on the level of anxiety of preoperative patients. Cutaneous stimulus (slow-stroke back massage) and music therapy significantly reduce anxiety levels in preoperative patients. Meanwhile, there is no significant difference in effect between cutaneous stimulus (slow-stroke back massage).

Key words: anxiety, slow-stroke back massage, music therapy, pre surgery.

Introduction

Surgery is an all invasive treatment procedure that involves opening or displaying the part of the body that will be handled and is generally done by making an incision and ending with wound closure and suturing. (Potter and Perry, 2010). The patient is said to be in the preoperative period after it has been decided by the doctor that the patient must carry out a surgical or surgical procedure and end when the patient is already in the operating room. When facing surgery, patients will experience various stressors. Surgery that awaits surgery will cause fear and anxiety in patients who associate the surgery with pain, possible disability, become dependent on others, and possibly death (Potter and Perry, 2010).

Anxiety is a vague feeling of uneasiness due to discomfort or fear accompanied by a response (cause is not specific or unknown to the individual) (Yusuf et al., 2015). Someone who experiences severe anxiety tends to hamper the operation process, the patient will be short-tempered, and irritable.

The effects of anxiety cause uncomfortable cognitive, psychomotor, and physiological responses, such as difficulty in logical thinking, increased agitation motor activity, and increased vital signs (Videbeck, 2012). These conditions can endanger the patient's condition so that surgery can be delayed or even canceled and can also affect the length of patient care in the hospital.

Anxiety needs to be overcome when doing psychological preoperative preparation. Anxiety in preoperative patients can be treated with non-pharmacological therapy. Non-pharmacological therapy is therapy without the use of drugs (MGMP, 2019). One of the non-pharmacological therapies that can be used is complementary nursing therapy which is guided by the rules of NIC (Nursing Intervention Classification) and Indonesian Nursing Intervention Standards. There are several therapies used to overcome anxiety in the Indonesian Nursing Intervention Standards, namely the promotion of social support, anxiety reduction, and complementary therapy. Nursing complementary therapies that can be used include cutaneous stimulus (slow-stroke back massage) and music therapy.

Slow-stroke back massage is cutaneous stimulation in the form of slow massage in the back area 60 times in one minute (Atikah, 2013 in Fitri et al., 2018: Fitri). Purwanto (2014) explained that music therapy is an attempt to improve mental and physical quality with sound stimulation consisting of rhythm, melody, organized form, and style so that music is created that is beneficial for physical and mental health. Cutaneous stimulation (slow-stroke back massage) and music therapy have the same benefits, namely, increase body relaxation, provide comfort, and even reduce anxiety. The combination of a cutaneous stimulus (slow-stroke back massage) and music therapy can be used as an independent nursing intervention in overcoming anxiety in preoperative patients.

Material and Methods

This research uses a quasi-experimental design (Quasy Experimental). This study uses a pre-test and post-test design, namely by measuring anxiety levels before being given a cutaneous stimulus (slow-stroke back massage) and music therapy, then re-measuring anxiety levels after being given a cutaneous stimulus (slow-stroke back massage) and music therapy.

The population in this study were 172 patients pre-surgery major surgery in Mardi Waluya Regional Hospital. The sample used in this study is 36 respondents who will be divided into three groups namely, 12 respondents were given cutaneous stimulus (slow-stroke back massage), 12 respondents were given music therapy and 12 respondents were given a combination of a cutaneous stimulus (slow-stroke back massage) and music therapy. The sampling in this study is nonprobability sampling with a purposive sampling approach. The independent variables in this study are cutaneous stimulus (slow-stroke back massage) and music therapy. The dependent variable in this study is the level of anxiety.

This study uses an instrument in the form of a questionnaire, namely the Zung Self-Rating Anxiety Scale (SRAS) that has been modified by the researcher, which has been tested for validity and reliability with the results of all valid statements and the reliability test with a value of 0.77. Univariate analysis in this study was conducted to describe the research variables by making frequency distribution tables and data distribution in tabular form. Bivariate analysis in this study used the statistical analysis test Paired T-Test for analysis per group and the Anova Two Way or the two-way ANOVA test to determine differences in influence between groups. Statistical tests were performed using IBM SPSS Statistics Version 25.

Result

General data

Table 1. Frequency Distribution of General Characteristics of Respondents in RSUD Mardi Waluyo Blitar on December 23, 2019 - January 23, 2020

Characteristics	Group					
	Slow-Stroke Back Massage		Music Therapy		Combination of Slow-Stroke Back Massage and Music Therapy	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
1. Age						
17-25	2	16.7	4	33.3	3	25.0
26-35	1	8.3	1	8.3	0	0
36-45	2	16.7	1	8.3	4	33.3
46-55	1	8.3	2	16.7	0	0
56-65	6	50.0	4	33.3	5	41.7
Total	*12*	*100.0*	*12*	*100.0*	*12*	*100.0*
2. Gender						
Girl	6	50.0	7	58.3	8	66.7
Male	6	50.0	5	41.7	4	33.3
Total	*12*	*100.0*	*12*	*100.0*	*12*	*100.0*
3. Education						
Elementary school	3	25.0	3	25.0	1	8.3
Middle School	1	8.3	1	8.3	1	8.3
High school	7	58.3	8	66.7	8	66.7
S1	1	8.3	0	0	2	16.7
Total	*12*	*100.0*	*12*	*100.0*	*12*	*100.0*
4. Profession						
Private	3	25.0	2	16.7	2	16.7
entrepreneur	0	0	1	8.3	1	8.3
Civil servants	0	0	0	0	2	16.7
IRT	6	50.0	4	33.3	3	25.0
Farmers	1	8.3	2	16.7	1	8.3
College student / Student	1	8.3	2	16.7	2	16.7
Does not work	1	8.3	1	8.3	1	8.3
Total	*12*	*100.0*	*12*	*100.0*	*12*	*100.0*
5. Medical diagnosis						
Goiter	2	16.7	0	0	0	0
FAM	2	16.7	1	8.3	3	25.0
Cholelithiasis	2	16.7	1	8.3	1	8.3
Abdomen Tumor	1	8.3	0	0	1	8.3
Mammae tumor						
Appendicitis	1	8.3	0	0	1	8.3
Uteri Cyst						
Vesikolitotomy	1	8.3	5	41.7	2	16.7
Myoma Uteri	2	16.7	1	8.3	0	0

CKR	1 0 0	8.3 0 0	1 1 2	8.3 8.3 16.7	4 0 0	33.4 0 0
Total	*12*	*100.0*	*12*	*100.0*	*12*	*100.0*

Based on Table 1 it is known that the characteristics of respondents in each group, the most age is in the range of 56-65 years, with female sex, the highest level of education is high school, the most work as IRT.

Bivariate Analysis

Table 2. Paired T-Test Anxiety Level Test Before and After Given Slow-Stroke Back Massage Interventions

Slow-Stroke Back Massage	N	The mean	Elementary school	*p-value*
	12	18,667	3,551	0,000

Table 2 shows that in the slow-stroke back massage group there were 12 respondents with an average reduction in post-treatment anxiety levels of 18,667. The analysis shows that the p-value is 0,000 <α (0.05) which means that H1 is accepted and H0 is rejected.

Table 3. Paired T-Test Anxiety Level Test Results Before and After Music Therapy Interventions Are Given

Music Therapy	N	The mean	Elementary school	*p-value*
	12	17,500	2,646	0,000

Table 3 shows that in the music therapy group there were 12 respondents with an average decrease in post-treatment anxiety level of 17,500. The analysis shows that the p-value is 0,000 <α (0.05) which means that H1 is accepted and H0 is rejected.

Table 4. Paired T-Test Anxiety Level Test Results Before and After Intervention Combined Slow-Stroke Back Massage and Music Therapy

Combination	N	The mean	Elementary school	*p-value*
	12	24,083	3,728	0,000

Table 4 shows that in the combination of slow-stroke back massage and music therapy groups there were 12 respondents with an average reduction in post-treatment anxiety levels of 24,083. The analysis shows that the p-value is 0,000 <α (0.05) which means that H1 is accepted and H0 is rejected.

Table 5. ANOVA Two-Way Test Results in Levels of Respondents Anxiety in the Group Slow-Stroke Back Massage, Music Therapy and a Combination of Slow-Stroke Back Massage and Music Therapy

	The mean	*p-value*
Effects of SSBM, Music Therapy and Combination	7260,125	0,000

Differences in Influence Between SSBM Groups, Music Therapy, and Combinations	15,292	0.307
Pre Post Test Interaction	74,042	0.005

Table 5 shows the results of the two-way ANOVA analysis, for the three treatments of slow-stroke back massage, music therapy, and a combination of both, it was found that the p-value 0,000 <α (0.05), which means H1 was accepted and H0 was rejected. The results of the intergroup analysis found that the p-value 0.307> α (0.05), which means that H0 was accepted and H1 was rejected. The results of the analysis of the interaction between the treatment of slow-stroke back massage, music therapy, and a combination of both and the group found that the p-value 0.005 <α (0.05).

Discussion

Based on the results of research from three treatment groups namely slow-stroke back massage, music therapy or a combination of slow-stroke back massage and music therapy analysis results of the Anova Two-Way test showed a p-value of 0.307> α (0.05) which means no difference in influence between cutaneous stimulus (slow-stroke back massage), music therapy or a combination of slow-stroke back massage and music therapy on anxiety levels in preoperative patients. The anxiety that occurs in preoperative patients is influenced by several factors including internal factors: age, sex, education and economic status, physical condition, and personality type (Potter and Perry, 2010).

The results showed the most respondents in the group slow-stroke back massage, the music therapy group and the combination of the two were the most respondents, with an age range of 56-65 years. Research Vellyana et al. (2013: 108-113) showed that the P-value 0.036 <0.05, which means there is a significant relationship between age and anxiety level of patients preoperatively. Someone with adolescence or young age is more likely to experience anxiety compared to the age level of an increasingly mature and older (Savitri et al., 2016: 1-6). Stuart (2010) states that the maturity or maturity of an individual will affect the coping abilities of a person's mechanism so that more mature individuals are difficult to experience anxiety because the individual has a greater ability to adapt to anxiety than an immature age.

The second internal factor that affects the level of anxiety is gender; the results of the study showed that most respondents in the stroke back massage group, music therapy or a combination of the two were female. Research Vellyana et al. (2013: 108-113), get the results that respondents who are female experience anxiety levels higher than respondents with male sex before undergoing surgery. Qulsum (2012), states that women tend to be more emotional, easy to vent their feelings, while men are objective and can think rationally so they can think and can control emotions (Savitri et al., 2016: 1-6). According to Halgin, Withbourne (2010) anxiety is more often experienced by women than men, because women often use feelings to respond to and deal with things in their lives while men always use their minds in dealing with situations that will threaten themselves (Savitri et al., 2016: 1-6).

The third internal factor that affects the level of anxiety is the level of education, the results of the study showed that the most respondents in the stroke back massage group, music therapy or a combination of the two, namely the high school education level. Education is a learning process in an educational institution with various levels of

education (Ayuningtyas et al., 2018: 110-116). According to Ayuningtyas et al. (2018: 110-116), the lower the education, the less able to analyze and describe new problems so that anxiety will occur. This is consistent with the theory Stuart (2010), that the level of education of a person will affect the ability to think, the higher the level of education the easier it is to think rationally and capture new information including in outlining new problems.

Another factor affecting the type of surgery, in this study all respondents underwent major surgery. According to Palla and Sukri (2018: 45-53), there is a relationship between the type of surgery with the level of anxiety in preoperative patients. This is in line with the study of Wardani (2012), which states that anxiety is highest in pre-major surgery patients, while the lowest is found in minor preoperative patients (Palla and Sukri, 2018: 45-53). In addition to internal factors, anxiety is also influenced by external factors, namely potential stressors, social culture, and support from family (Potter and Perry, 2010), in which external factors in this study were not examined by researchers. According to Ahsan et al. (2017: 1-12), family support is very important in providing enthusiasm, especially in terms of surgery, the more family support is given the less discomfort felt.

Therefore, researchers assume that there is no difference in influence between the slow-stroke back massage group, music therapy, and a combination of the two due to internal factors such as age, sex, education level, and other factors such as the type of surgery. Besides, there are external factors that cannot be controlled by researchers such as family support, social culture, environment, and the stressors faced by respondents.

However, the three slow-stroke back massage interventions, music therapy, and a combination of the two can be used as alternatives to provide independent nursing interventions in reducing anxiety levels in preoperative patients.

Conclusion

Anxiety surgery patients can be reduced by providing complementary therapy that is slow-stroke back massage, music therapy, and a combination of both because it can activate sympathetic nerves, so it can be used in nursing actions to reduce preoperative anxiety levels. However, there was no significant difference between the provision of slow-stroke back massage interventions, music therapy, and a combination of the two to reduce the level of anxiety of patients preoperatively.

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