

## The Effectiveness of Imagery Therapy Guide on Pain and Anxiety in URS Perioperative Patients in Lontara Room 2 Lower Front of Urological Surgery, RSUP Dr. Wahidin Sudirohusodo Makassar

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**Abstract Objective:** The purpose of this study is to apply Evidence-Based Nursing Practice (EBNP) activities based on the concepts and models of nursing theory. **Method:** EBP implementation design used is true experimental with research design Guide imagery. The sampling technique in the implementation of EBP is accidental sampling with nonprobability sampling approach. The population in this study were patients who were at Wright Patterson Medical Center in Ohio with planned surgery on the head and neck area of 44 people divided into 2 groups. **Results:** giving guide imagery before surgery can reduce the pain as measured by using VAS. The results showed that the pain level was measured after 1 hour postoperatively and 2 hours postoperatively. At the initial measurement, there was no significant difference between the control group and the intervention group with a p value of 0.057. After 2 hours postoperatively, there was a significant difference in pain level between the control group and the intervention group with a p value of 0.041. **Conclusion:** The implementation of evidence based practice using guide imagery as a therapy before the patient is operated is proven to reduce the level of pain and anxiety of the patient.

**Keywords:** Guide Imagery Therapy, Pain, Anxiety, Perioperative Patients.

## INTRODUCTION

About more than 80% of patients undergoing surgery experience acute postoperative pain and about 75% of postoperative pain reports the degree of pain at moderate, severe and even extreme levels. Some studies say that less than half of the operated patients report getting adequate pain relief <sup>1</sup>.

Postoperative pain can cause increased length of stay, increased need for analgesic drugs, and decreased patient satisfaction. Patients who cannot control their pain have an effect on quality of life, bodily functions, healing processes, risk of postoperative complications and risk of persistent postoperative pain <sup>2</sup>.

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Many preoperative, intraoperative and postoperative management strategies are employed to reduce the level of postoperative pain. The American Pain Society (APS), together with the American Society of Anesthesiologists (ASA), establish several guidelines for postoperative pain management based on evidence, effectively, and more safely. These management areas include preoperative education, planning for perioperative pain management, pharmacological and non-pharmacological management, and other procedures and policies.<sup>1</sup>.

*American Nurses Association* challenge nurses and give attention to "the development of theory and practice that focuses on one's individual responsibility in his own health". Experts in the field of pain agree that most of the best pain management is to optimize the combination of the use of analgesic drugs with their own management using complementary therapy<sup>4</sup>.

Many have considered that nonpharmacological therapy has helped in the management of patient pain. When medical drugs are used to treat somatic (physical and emotional), the dimension of nonpharmacological pain therapy aims to overcome the affective, cognitive, behavioral, and socio-cultural aspects of pain. Nonpharmacologic therapy can treat pain as a complementary therapy in mild to moderate pain<sup>5</sup>.

The interest of many health practitioners in using complementary therapies such as guide imagery has been deepened. In guide imagery, imagination is suggested as a guide to achieving a therapeutic goal. An imagination is a mental representation of something, be it real or imagination, with sensory qualities. Guide imagery has several physical effects functionally with various mechanisms<sup>4</sup>. When guide imagery is used as a coping strategy before surgery, this can reduce the level of patient anxiety and reduce the level of pain postoperative patients, and the length of stay of patients in hospital<sup>3</sup>.

A systematic review conducted by Posadzki, Lewandowski, & Terry, (2012) showed that there were 11 studies using guide imagery as an adjunct to managing postoperative pain, and there were significant differences in pain relief for patients undergoing non-musculoskeletal surgery.

Other research conducted by Dobson (2014), in patients with non-musculoskeletal pain, after being given a guide imagery there is an increase in self-

efficacy, and a decrease in pain intensity, and a decrease in analgesic use. Based on the results of interviews of several nurses' inpatient data obtained that the provision of non-pharmacological therapies such as deep breathing relaxation has been carried out but for guide imagery therapy has never been done. Postoperative pain is the most disturbance after surgery that can disrupt the patient's sleep quality and the quality of life of patients in the urology treatment room at Wahidin Sudirohusodo Hospital.

Nonpharmacologic management is one of the important alternatives in managing patient pain. Studies show better clinical results on the use of pharmacological therapies that are given together with nonpharmacological therapies to reduce the level of pain in patients. But in its implementation, non-pharmacological therapy is still not done optimally by nurses. In Nursing Intervention Classification (NIC), the choice of nonpharmacological therapy that can be given to reduce patient pain is a guide imagery action.

The purpose of this study is to apply Evidence-Based Nursing Practice (EBNP) activities based on the concepts and models of nursing theory.

## **METHOD**

In the implementation of this EBP, the design of the EBP implementation used was true experimental with the Guide imagery research design carried out by the method of the population of urology patients based on the number of beds, namely 34 beds. The population is then selected by accidental sampling, that is, patients will be selected based on inclusion criteria that have been set for three weeks the number of patients who will undergo URS surgery. Patients will then be divided into two groups, the group is the intervention group and group 2 is the control group. The intervention process that will be carried out in the intervention group is the group will be given guide imagery therapy and the control group will be treated according to the hospital's preoperative standards. In the preoperative stage, the two groups were measured for anxiety using VAS (Visual Analog Scale), the intervention group was given guide imagery therapy for  $\pm$  13 minutes and the control group was given privacy time to prepare themselves by praying and being more relaxed.

Then the anxiety was measured using APAIS after the patient was delivered to the operating room. After surgery and the patient was brought back to the treatment room, students took anxiety measurements, measuring pain scale 1 hour postoperatively and pain 2 hours postoperatively using VAS.

The sampling technique in the implementation of EBP is accidental sampling with a nonprobability sampling approach, which is a sampling method by determining subjects who meet the inclusion and exclusion criteria that exist when implementing the EBP application <sup>8</sup>.

The population in this study were patients who were at Wright Patterson Medical Center in Ohio with planned surgery on the head and neck area of 44 people divided into 2 groups. Interventions given: guide imagery before and after surgery. Comparison given: usual care (pre operative and postoperative care standard). Measurement results: the patient's postoperative pain level is reduced

*Guide imagery* is one of the nursing intervention options in the nonpharmacological pain management technique that has been agreed upon in the Nursing Intervention Classification (NIC) <sup>9</sup>. The application of guide imagery can be done independently, with a coach / guide, or with video or cassette tapes. GI interventions are effective by considering individual personality, individual relaxation, age of development and expectations to be achieved after therapy. Imagery for adults takes  $\pm$  10-30 minutes and in children can be tolerated  $\pm$  10-15 minutes. Before starting therapy begins with relaxation exercises using slow breathing such as lower breathing using the chest cavity, diaphragm and progressive muscle relaxation that focuses on the word or object. After the client is relaxed and calm, the client begins to be fortunate to get imagery that brings the client involved in it <sup>10</sup>.

## Results

**Table 1.** Data on Anxiety Measurement Results in Control and Intervention Patients using APAIS and VAS in Lontara 2 Below Dr. Wahidin Sudirohusodo Makassar Hospital 22 November 2017 - 28 December 2017 (n = 10)

Respondents	Group	Pre Operation		VAS Anxious Post Operations
		VAS Anxious Pre intervention	APAIS Post Intervention	
1	Control	30	18	30
2	Control	30	18	30
3	Control	45	17	45
4	Control	50	15	40
5	Control	50	16	45
6	Guide Imagery Therapy	40	12	10
7	Guide Imagery Therapy	30	10	10
8	Guide Imagery Therapy	40	11	10
9	Guide Imagery Therapy	60	11	20
10	Guide Imagery Therapy	30	12	10

**Results of Measurement of Pain of control and intervention respondents using VAS**

**Table 2.** Data on Pain Measurement Results in Control and Intervention Patients using VAS in Lontara 2 Below Dr. Wahidin Sudirohusodo Hospital Makassar 22 November 2017 - 28 December 2017 (n = 10)

Respondents	Group	VAS Postoperative Pain	
		1 hour	2 hours
1	Control	30	30
2	Control	20	20
3	Control	40	40
4	Control	40	30
5	Control	40	40
6	Guide Imagery Therapy	20	10
7	Guide Imagery Therapy	20	10
8	Guide Imagery Therapy	20	20
9	Guide Imagery Therapy	40	30
10	Guide Imagery Therapy	30	10

**Analysis of the patient's anxiety**

Analysis of differences in pre-and postoperative anxious VAS in control patients.

**Table 3.** Differences in mean VAS of pre and post operative anxiety in control patients in Lontara 2 Lower Dr.Wahidin Sudirohusodo Hospital Makassar 22 November 2017 - 28 December 2017 (n = 5)

	Average	n	Difference (SD)	CI 95%	Value <i>p</i>
VAS anxious before surgery	41.00	5	3.00(4.472)	-2.55 – 8.55	0.208
VAS anxious after surgery	38.00	5			

*Paired Test Results:  $p > 0.05$ ; significant*

Table 3. Shows that from 5 respondents, the average VAS before surgery was 41.00 and the VAS was anxious after surgery 38.00, based on the results of statistical tests using the Paired T test, *p* values were 0.208 and the confidence interval was - 2.55-8.55. Because the *p* value  $> 0.05$  and the Confidence Interval value exceed zero, it can be concluded that there is no statistically significant difference in VAS before and after surgery in control patients.

**Analysis of differences in pre-and postoperative anxious VAS in Guide Imagery Therapy patients****Table 4.** Differences in mean VAS pre and post operative anxiety in Guide Imagery Therapy patients in Lontara 2 Below Dr. Wahidin Sudirohusodo Makassar Hospital November 22 2017 - December 28 2017 (n = 5)

	N	Median (Min-Maks)	Value <i>p</i>
VAS anxious before surgery	5	40(30-60)	0.041
VAS anxious after surgery	5	10(10-20)	

*Wilcoxon Test, 5 subjects experienced a decrease in anxiety, nothing was fixed and nothing improved. Value:  $p < 0.05$ ; significant*

Table 4 shows the comparison of anxious VAS before and after intervention in patients with guide imagery therapy. There were 5 people with anxious VAS results after the intervention were lower than before the intervention. On the results of statistical tests using Wilcoxon, ( $p = 0.041$ ). Because the  $p$  value  $< 0.05$ , there was a statistically significant difference in anxiety VAS after being given an intervention. This is also reinforced by different median (minimum and maximum) values.

#### Analysis of APAIS anxiety differences in control and intervention patients

**Table 5.** Differences in mean APAIS scores in control and intervention patients in Lontara 2 Lower Dr.Wahidin Sudirohusodo General Hospital Makassar 22 November 2017 - 28 December 2017 (n = 10)

	Group	n	Mean (SD)	CI 95%	Value $p$
<b>APAIS Score</b>	Control	5	16.80 (1.304)	5.60(4.002 – 7.198)	0.000
	guide imagery Therapy	5	11.20 (0.837)		

*Independent T Test Results:  $p < 0.05$ ; significant*

Table 5. shows the average APAIS score in control patients 16.80 and in patients given guide imagery therapy 11.20. Based on statistical tests using the independent T test, the value of  $p = 0,000$  and the confidence interval value of 4,002-7,198. Because the  $p$  value  $< 0.05$  and the confidence interval value do not exceed zero, it can be concluded that there are statistically significant differences in the APAIS mean scores between the groups given the guide imagery intervention and those not given the intervention.

#### Analysis of the difference in anxious VAS in control patients and postoperative interventions

**Table 6.** Difference in average anxiety VAS scores in control patients and postoperative interventions in Lontara 2 Lower Dr.Wahidin Sudirohusodo Hospital Makassar 22 November 2017 - 28 December 2017 (n = 10)

	Group (n)	Median (min-maks)	Value $p$
<b>VAS Anxiety Score</b>	Control (n=5)	40.00(30-45)	0.007
	guide imagery Therapy (n=5)	10.0(10-20)	

*Mann Whitney Test. Average control patient rank 8, patient guide imagery 3.  
Mann Whitney Test Results:  $p < 0.05$ ; significant*

In table 6. The results of one-tailed analysis (one tail) using the Mann-Whitney hypothesis test p value is 0.007. Because the p value  $<0.05$ , it can be concluded that there is a significant difference between anxious VAS of patients given guide imagery intervention and those not given intervention. This is also reinforced by different median (minimum and maximum) values.

#### **Analysis of pain VAS differences in control patients and 1-hour postoperative intervention**

**Table 7.** Difference in mean pain VAS score in control and intervention patients 1 hour and 2 hours postoperatively in Lontara 2 Lower Dr.Wahidin Sudirohusodo General Hospital Makassar 22 November 2017 - 28 December 2017 (n = 10)

	<b>Group (n)</b>	<b>Median (min-maks)</b>	<b>Value p</b>
<b>Pain VAS Score 1 hour Post Surgery</b>	Control (n=5)	40.00(20-40)	0.180
	guide imagery Therapy (n=5)	40.00(20-40)	
<b>Pain VAS score 2 hours Post Surgery</b>	Control (n=5) guide imagery Therapy (n=5)	30.00(20-40) 10.00(10-30)	0.031

#### *Mann Whitney Test*

In table 7, the results of the analysis using the Mann-Whitney hypothesis test on the VAS score of Pain 1 hour postoperatively, the p value is 0.180. Because the value of  $p > 0.05$ , it can be concluded that there is no significant difference between the pain VAS of patients given guide imagery intervention and those not given intervention 1 hour postoperatively. This is also reinforced by the same median (minimum and maximum) values. Whereas the results of the analysis of pain VAS score 2 hours postoperatively using the Mann Whitney hypothesis test p value was 0.031. Because the p value  $<0.05$ , it can be concluded that there is a significant difference between the pain VAS of patients given guide imagery intervention and those not given intervention 2 hours after surgery. This is also reinforced by different median (minimum and maximum) values.

## **DISCUSSION**

In Table 4. which shows the measurement of anxiety in control and intervention patients using VAS, the value of  $p = 0.041$  and the table in table 5. shows the measurement of anxiety in control and intervention patients using the APAIS instrument  $p = 0.000$  and the value of CI 4.002 - 7.198, shows that in the intervention

guide group and the control group there are differences on the anxiety scale. This is because the guide imagery gives a more relaxed and relaxed picture, making the mind more focused so that it makes the effectiveness of relaxation that can reduce the level of patient anxiety. This matter is in line with research Reicher-attir & Levy<sup>14</sup> dan Charalambous there are differences in patients with the application of guide imagery on the level of anxiety facing the invasion and delivery compared with control patients. While in Table 3. shows the pre-post anxiety measurements in control patients with statistical tests obtained p value = 0.208 concluded that there was no significant difference on the anxiety scale of control patients without the application of guide imagery.

Roffe, Schmidt, & Ernst, (2005) in Synder & Lindquist, (2006), including Kwekkeboom and colleagues in 1998 reported increased anxiety in 3 of the 15 participants who used imagery to reduce anxiety. However, the authors also acknowledge that imagery is considered pleasant, although it is not able to relieve anxiety. Some individuals experience narrowing of the airways that is reported anecdotally or has difficulty breathing when they focus on breathing techniques<sup>16</sup>.

This is a sign of vigilance that warns individuals of danger and enables the individual to act in the face of threats<sup>11</sup>. In addition, anxiety can have side effects on the patient's physiological reactions including breathing, heart rate, adrenaline and noradrenaline concentrations in plasma, cardiac output, and blood pressure, which if there is an increase will be dangerous for the patient during the operating room.<sup>12</sup>

In table 7. which shows the value of the pain scale using an hour postoperative VAS in control and intervention patients. The median VAS between control and intervention patients did not show any difference. With the results of the Mann Whitney statistical test, a value of  $p = 0.180$  ( $p > 0.05$ ) was obtained, indicating there was no difference in the VAS pain scale in control patients or interventions 1 hour postoperatively. However, on the difference in mean 2-hour postoperative VAS pain scale between control and intervention patients, it was found that the value of  $p = 0.031$  ( $p < 0.05$ ), which shows that there is a statistically different 2-hour postoperative VAS pain scale in control and intervention patients. Based on the median value of the 2-hour postoperative pain VAS scale in the intervention patients it was seen to be more decreased compared to the VAS scale of the control patient's pain.



The decrease in the pain scale of intervention patients 2 hours postoperatively was caused by the effect of guide imagery therapy in providing immunization which caused a decrease in pain. The mechanism of pain reduction by administering guide imagery is through increased immune cells that contain peptide opioids (mainly endorphins) thereby reducing the effects of pain in patients <sup>4</sup>. The use of analgesics in postoperative patients is the leading therapy in reducing pain, but in research conducted by Nelson et al., (2013) *guide imagery* can be used as a complementary therapy in treating patient pain as well as influencing the body's immune system and restoring physiological bodies with minimal effects on vital signs, and inconsistent changes in endocrine measurements. This is in line with research conducted by Posadzki, Lewandowski, & Terry, (2012) states that the effect of guide imagery has an impact on health outcomes and quality of life in patients with CNCP (Cancer Non Chronic Pain), there are significant differences in changes in guide imagery treatment compared to standard or non-treatment treatments. Guided imagery or guided imagery is the development of mental functions that express themselves dynamically through psychophysiological processes involving all the senses and bring changes to behavior, perception, or physiological responses with one's guidance or through the media <sup>17 18</sup>.

The application of Evidence Based Practice is supported by research conducted by Gonzales et al., (2010), which found that there was a decrease in the pain scale 2 hours postoperatively in the group of patients given the guide imagery intervention ( $p = 0.041$ ) compared to the control group. Evaluate and measure results that are important in determining the effectiveness and assessment of guide imagery in clinical practice<sup>19 20</sup>. Expected clinical outcomes are physical signs of relaxation, decreased levels of anxiety and depression, goals achieved and positive changes in attitudes and behaviors Post-White & Johnson, (1991) <sup>2</sup>. The application of guide imagery in the Lontara 2 Urology room at Wahidin Sudirohusodo Hospital has not been carried out considering that guide imagery is one of the actions that actually existed before but has not been well socialized among nurses given the large workload of nurses in the room.

## CONCLUSION

The implementation of *evidence-based* practice using guide imagery as a therapy before the patient is operated is proven to reduce the level of pain and anxiety of the patient. One of the advantages of this guide imagery therapy is that patients can carry

out this therapy themselves using their own cellphone and headset facilities to reduce patient pain and anxiety.

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