Effect of Guided Imagery on Pain and Anxiety in Post Cardiac Surgery Patients in First Ambulatory Stage

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Abstract

Background of the Study: Multiple researches have shown that and an array of mind body therapy e.g. imagery, hypnosis, relaxation when employed pre-surgically, can improve recovery time and reduce pain during invasive medical and surgical procedure.[1] Pain and anxiety are significant complaints among patients after cardiac surgery. Guided imagery can be an effective intervention when used as a therapeutic modality for a variety of symptoms and conditions. It can improve health and enhance well-being, particularly through the reduction of pain and anxiety.[2] **Aim of the Study:** so, The present study was conducted on the effect of guided imagery on pain and anxiety in post cardiac surgery patients in first ambulatory stage. **Method:** a quasi experimental study in selected hospitals of a metropolitan city. A total 50 (25 in each experimental and control group) were included through non-probability purposive sampling technique. The tools used in the study were Numerical rating scale and critical care pain observation checklist for pain Beck Anxiety Inventory for anxiety followed by opinionnaire about guided imagery. **Result:** frequency and percentage method shows pre-intervention scores (NRS= 76%, CPOT= 96%) 1st post-intervention scores (NRS=48%, CPOT=24%) 2nd post- test intervention scores (NRS=44%, CPOT=44%,BAI= 52%) in experimental group and in control group before receiving standard care (NRS=96%, CPOT=96%), 25 minutes after receiving standard care on bed (NRS= 84%, CPOT= 92%), 25 minutes after receiving standard care on chair (NRS= 80%, CPOT= 92%,BAI= 72%)

Key Words- *Guided Imagery, Pain, Anxiety, First ambulatory stage, Cardiac surgery.*

Introduction

Oxford Dictionary defines pain as a highly unpleasant physical sensation caused by illness or injury. Unrelieved pain can delay healing, alter immune function, increase stress and cause anxiety, depression, general physical and psychological decline and economic hardship, hence measure need to be taken to relieve patient from pain and anxiety during the postoperative phase.

Dr. Petsikas and his colleagues called 100 patients six to 18 months after they underwent CABG with sternotomy at their institution in 2011. Thirty patients (30%) reported chronic post-sternotomy pain. The researchers defined chronic post-sternotomy pain as pain at the surgical site that persisted for six months or more and was distinct from preoperative pain. Many studies have shown that anxiety in post cardiac surgery patients leads to increase in morbidity and death rates, so it is a main concern to relieve pain and anxiety in post cardiac surgery patients to improve the better health outcome.[3]

Guided imagery therapy is a cognitive behavioural technique. It is a gentle powerful technique more often used to promote relaxation to provide therapeutic benefits including lowering blood pressure, managing pain, reduce stress and anxiety, and even boosting immune system. [4]

A randomized control clinical trial on effects of relaxation and guided imagery on knee strength, reinjure and pain following anterior cruciate ligament reconstruction was conducted by Cupal, Deborah D; Brewer and Britton W.

The result indicated that significantly greater knee strength and significantly less reinjure, anxiety and pain for treatment group participant at 24 weeks post-surgery than for than placebo for control group participants were reported.[5]

American Holistic Nurses Association (AHNA) supports the integration of CAM into conventional health care to enable the client to benefit from the best of all treatment available. In their provision of holistic care, nurse employs practices and therapies from both CAM and conventional medicine.

Problem Statement

A Quasi Experimental study on the effect of Guided Imagery on pain and anxiety in post cardiac surgery patients in first ambulatory stage in selected hospitals of a metropolitan city

Objectives

1. To assess the level of pain in post cardiac surgery patient from experimental group before and after providing guided imagery

2. To assess the level of pain in post cardiac surgery patient from control group before and after providing standard care.

3. To assess the level of anxiety in post cardiac surgery patient from experimental group after providing guided imagery

4. To assess the level of anxiety in post cardiac surgery patient from control group after providing standard care

5. To compare the level of pain in post cardiac surgery patient in experimental group and the control group before and after providing guided imagery.

6. To compare the level of anxiety in post cardiac surgery patient in experimental group and the control group after providing guided imagery.

7. To associate pain scores with selected demographic variables.

8. To associate anxiety scores with selected demographic variables.

9. To elicit opinion of patients about the guided imagery.

Methods and Materials

A quasi experimental quantitative approach is adopted by the investigator for the accomplishment of the present study, 50 post cardiac surgery patients (n=25 in each group) during first ambulation period, chosen by Non probability purposive sampling technique in a critical care unit of a selected multispeciality tertiary care hospital. The tool used are standardized scales ; Numerical rating scale, Critical Care Pain observation checklist for pain , Beck Anxiety Inventory for Anxiety and pre-test post-test control group design is used as the investigator assess the pain level in both experimental and control group followed by the implementation of first session of intervention for 15 minutes in experimental group and standard care received in control group. Later first post test had been taken followed by patients are ambulated on chair then second session of intervention had been given in subjects of experimental group and standard care received by control group. second post test was taken after 10 minutes of second session.

Results

The findings shows that-

Level of pain (NRS) in subjects of control and experimental group-

In experimental group

· Pre test, majority 76% subject had moderate pain.

· First post test- Mild and moderate pain level as 52%and48% respectively.

· Second post test -Majority 56% subject with mild pain, 44% with moderate pain.

In control group

· Pre-test- Majority 96% subjects had moderate pain.

· First post test – Majority 52% of subjects had moderate pain

· Second post test - Maximum 80%subjects had moderate pain

Level of pain (CPOT) of control and experimental group-

In Experimental group-

· Pre test- 96% subjects had moderate pain

· First post test- 76% subjects with mild pain , 24% subjects with moderate pain

· Second post test- 56% subjects had mild pain, 44% with moderate pain.

In control group-

· Pre-test- majority96%subjects with moderate pain

· First post test score - 92% of subjects with moderate pain

· Second post test findings were similar to first post test results.

Level of anxiety in experimental and control group after intervention on chair-

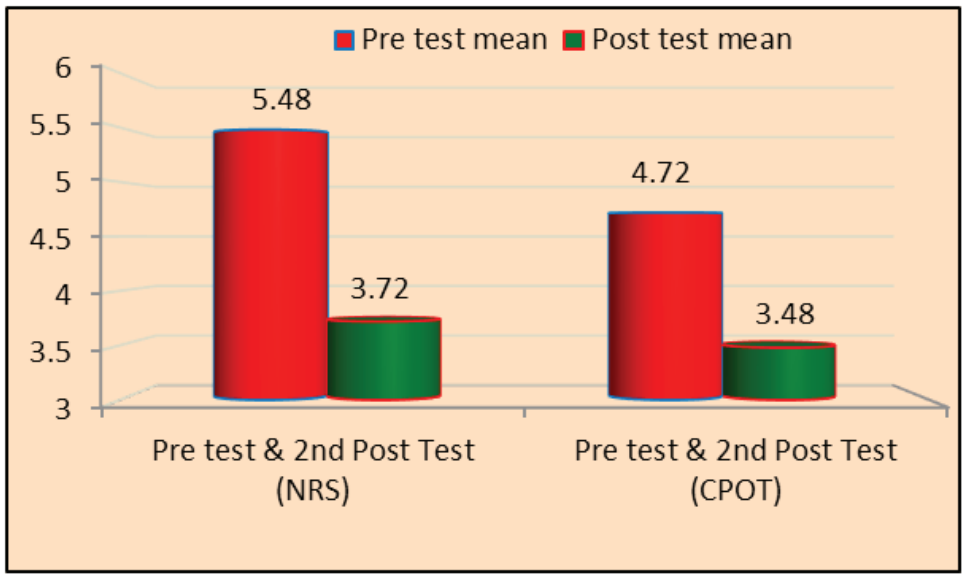
· In the Experimental group, 48% subjects with low anxiety followed by 52% with moderate anxiety.

· In the Control group, most subjects (72%) were in moderate anxiety level.

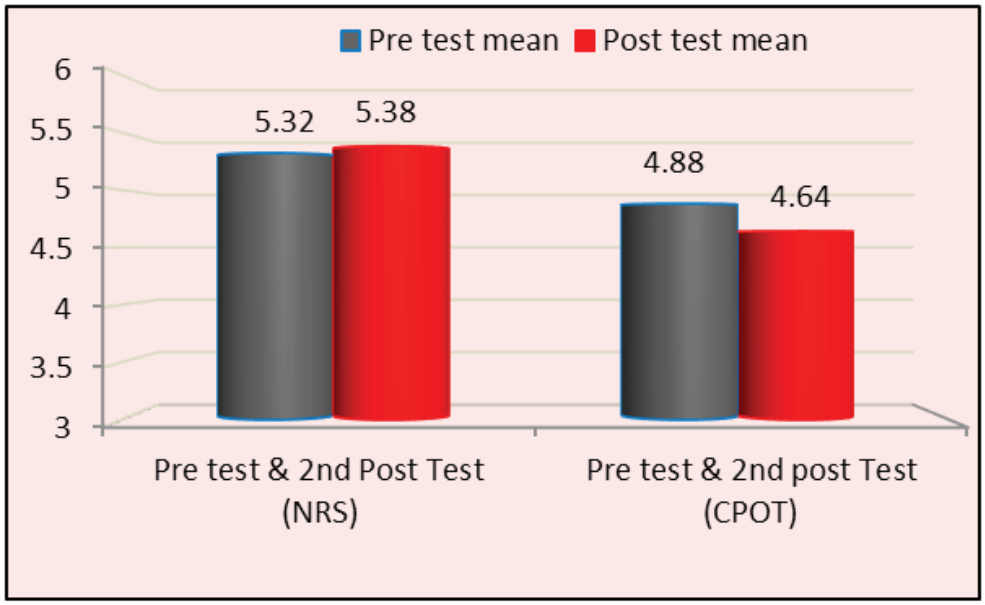
Comparison of pre and post test mean scores between experimental and control group for pain and anxiety- Mann-Whitney test shown mean scores of pain in experimental group was less (NRS=3.72, CPOT=3.48 ≤ NRS= 5.38, CPOT= 4.64) than the control group. Anxiety mean score in experimental group was less (22.96 ≤ 30.48) than the control group after the intervention, hence it proves that the guided imagery is an effective intervention in reducing pain and anxiety level.

Association of demographic variables with anxiety and pain in experimental group and control group- ANOVA shows that there is association of anxiety with regard to age in control group and found anxiety mean scores of 18 – 40 years age group is less (20.0≤34) than of 41 – 60 years.

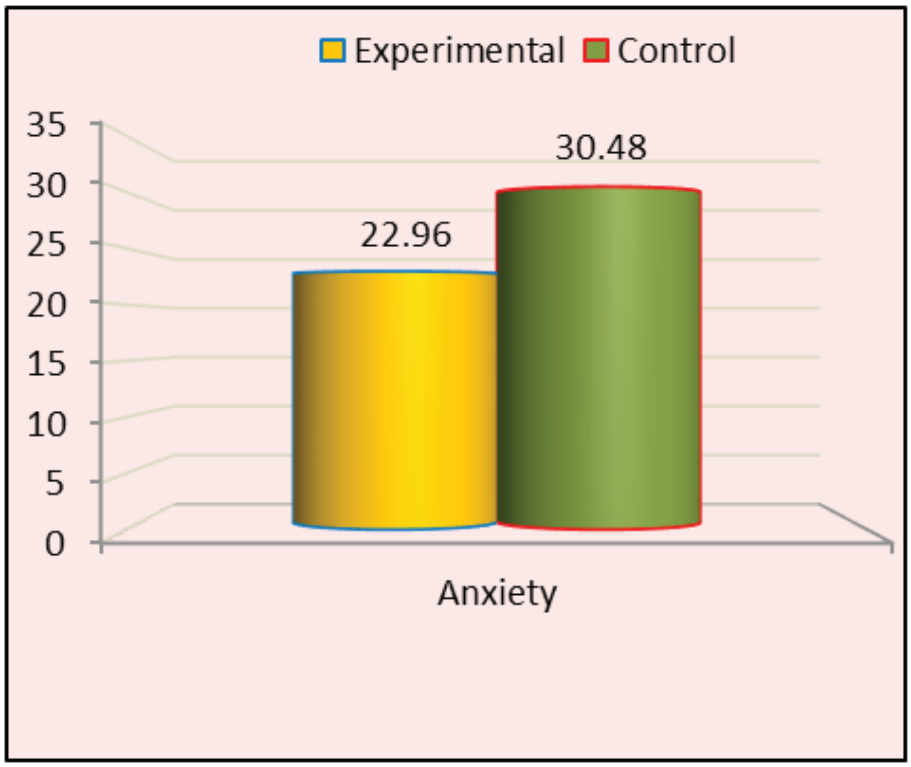
Assessment of opinionnaire of Guided Imagery in experimental group- Maximum subjects responded that they feel less pain after guided imagery, would like to use guided imagery for my next ambulation and will recommend this therapy to others with 23 (92%), 24 (96%) and 24 (96%) subjects respectively



(1) Comparison of means of pre-test and post-test pain scores (NRS and CPOT) in Experimental group



(2) Comparison of means of pre-test and post-test pain scores (NRS and CPOT) in control group



(3) Comparison of means of anxiety scores between control and experimental groups

Discussion

Present study shows that the guided imagery is helpful in reducing pain and anxiety. A similar study was done by Deborah Schwab, Dana Davis, MPH, Tracy B, Lucy A et al. in 2007 to describe the pre-surgical guided imagery program and assess its impact on surgical outcome, patient satisfaction and cost saving. The retrospective study was conducted in Blue Shield of California for 905 samples. The result shown that the intervention yield 74% adoption rate with respect to adoption of the program and also reported significant reduction in anxiety (before listening 47% shown

high or very high anxiety and after intervention 1.6% shown high or very high anxiety) , higher satisfaction, a shorter hospital stay (8% reduction, *P*=.07) reduced pharmaceutical cost (14% reduction, *P*=.181), average saving was $2003 per procedure and additional finding like pain anticipation of 57% patients responded less experience of pain than the expected

A study done by Pinto PR1, McIntyre T, Ferrero R, Almeida A et al. to examine the joint role of demographic, clinical, and psychological variables as predictors of acute postsurgical pain and anxiety in patients undergoing total knee arthroplasty and total hip arthroplasty in 2013. A significant positive correlation between postsurgical anxiety and acute pain was also confirmed. Whereas in the present study, it is found that the there is no co relation between pain and anxiety in post cardiac surgery patients of control and experimental group as the Pearson correlation method shows the calculated '*r'* value is 0.179 and 0.148 respectively which is less than the Pearson '*r'* table value of 0.05, however it is noteworthy that the type of samples in the both the studies vary and more studies may be needed to further establish the correlation between pain and anxiety among post surgical patients.

Conclusion

Pain and anxiety among post cardiac surgery patients increase the morbidity and death rates. The present study brought into light that guided imagery helped in reducing pain and anxiety in post cardiac surgery patients during their first ambulatory stage which helped to enhance the health seeking behavior in patients and hasten the recovery. Investigator recommends the inclusion of guided imagery in the hospital policies to improve the nursing services.

References

1. A A and J. Mind-Body Therapies for the Management of Pain. Cinical J Pain. 20(1):
2. V B. Guided Imagery as a therapeutic recreation modality to reduce pain and anxiety. Recreat J. 2009;43:43–55. 27–32.
3. Petsikas D. Pain Medicine News. The impact of pain and depression on recovery after coronary artery bypass grafting. http://www.apm.org/library/articles-archive/2010-10_pm72b.shtml
4. G SKR and S. Effectiveness of Guided Imagery in reducing student examination anxiety. Nightingale Nurs Times. 7(6):57–9.
5. Cupal, Deborah D;Brewer BW. Effect of relaxation and guided imagery on knee strength, reinjury anxiety, and pain following anterior cruciate ligament reconstruction. Rehabil Psychol.Fab 2001; 1:28–48