(RESEARCH ARTICLE)

A study to evaluate the effectiveness of guided imagery on reduction of anxiety among selected pre-operative patients admitted at SDM hospital Dharwad

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Abstract

"A study to evaluate the effectiveness of guided imagery on reduction of anxiety among selected preoperative patients admitted at SDM hospital Dharwad".

Background of the study: Guided imagery is a mind body intervention by which a trained practitioner or teacher helps a participant to evoke and generate mental images that stimulate or recreate the sensory perception of sights, sounds, tastes and images associated with touch. In the use of guided imagery, the therapist and client develop imagery scenes that produce feelings of calmness, tranquility, or pleasure for the client. It is critical that the therapist consult with the client as to the appropriateness of scenes, as a scene thought to be calming may not be relaxing to a particular individual.

Purpose: To evaluate the effectiveness of guided imagery on reduction of anxiety among selected preoperative patients.

Methodology: An evaluative approach was adopted for this study with pre-experimental one group pre and post-test design. By non-probability convenience sampling technique. 40 preoperative elective abdominal surgery patients were selected. Modified Hamilton Anxiety Scale was used to collect the data and collected data was analyzed by descriptive and inferential statistics.

Results: The results of the study showed that pre-test level of anxiety of elective abdominal surgery patients was 12 (30%) of them had mild level of anxiety, 28 (70.00%) had severe level anxiety. In pre- test the mean score was ±30.77 and SD was± 4.58 whereas the mean post-test score was ±12.82 and SD was ±4.04. The calculated 't' value was ±21.88 which was higher than the table value i.e.2.02 which was significant at p ≤0.05 level. Hence the research hypothesis was accepted.

Conclusion: The study concludes that Guided Imagery Technique was effective in reduction of anxiety among preoperative elective abdominal surgery patients.

Keywords: Anxiety; Perception; Imagery; Evaluate; Surgery; Significant

1. Introduction

Anxiety is described as an unpleasant state of uneasiness or tension, which may be associated with abnormal hemodynamics as a consequence of sympathetic, parasympathetic and endocrine stimulation. Hospitalization is a critical negative life events that lead to the experience of considerable anxiety in patients may perceive on the day of surgery as the biggest and the most threatening day in their lives. The burden of emotional states such as anxiety, depression and stress in people undergoing surgery is in disputable. Preoperative anxiety is a common reaction

experienced by patients who are admitted to the hospital for surgery. The unpleasantness is as a result of patients fear and doubts before surgery.

Physically, preoperative anxiety can lead to many complications and risks related to surgery such as increased heart rate, blood pressure, palpitation, vasoconstriction, nausea, vomiting, and cardio pulmonary changes leading to need for more anesthesia during surgery and analgesics after surgery have been reported .In addition, patients also become so nervous and apprehensive that they are unable to understand or follow simple instructions, prolonged postoperative recovery and is linked to hospital stays. Those of negative effects may increase treatment costs and might become a burden to patient and their families. Moreover, preoperative anxiety leads to high risks of morbidity and mortality in patients.

The patients who are hospitalized for surgery, experiences anxiety. Preoperative Anxiety also affects the patient's perception of postoperative pain and has a negative impact on recovery from anesthesia. Management of preoperative anxiety is one of the challenges faced by the nurse and also responsibility to make an attempt to reduce it so as to enable patient to feel hospitalization and surgery a pleasant experience. The reduction of anxiety can be managed by non-pharmacological agent such as guided imagery.

Guided imagery is a mind body intervention by which a trained practitioner or teacher helps a participant or patient to evoke and generate mental images that stimulate or recreate the sensory perception of sights, sounds, tastes, and images associated with touch.

In the use of guided imagery, the therapist and client develop imagery scenes that produce feelings of calmness, tranquility, or pleasure for the client. It is critical that the therapist consult with the client as to the appropriateness of scenes, as a scene thought to be calming may not be relaxing to a particular individual. The scenes are embellished with as much sensory detail as possible, both to make the imagery seem more real and to completely involve or "absorb" the client in the experience. Note the sensory detail in these scene instructions: Close your eyes, sit back, take a few deep breaths, and relax. While your eyes remain closed, sitting in the chair and feeling relaxed, think about yourself on a tropical island. Make this image as real as possible, as if you really are there. As you look up, there are a few wispy clouds scattered across the brilliant blue sky. The turquoise ocean tumbles toward the shore in gentle, foam-capped waves. Gulls fly overhead; you hear their distant squawks. You feel the bright, warm rays of sun over your entire body and the light breeze blowing over your skin. You taste the salt from the air, as the wind blows in from the water. Walking along the beach, you encounter pleasing flowery scents from the nearby groves of tropical trees[5]. It has positive effect on heart rate, blood pressure, breathing and oxygen rates, brain waves, temperature and hormone balance. Guided imagery help, to relieve symptoms caused or made worse by stress, and anxiety.

2. Significance and need for study

Nursing involves being a competent practioner in the physical social and psychological care of the patient in the preventive, promotive, curative and rehabilitative spheres. This also applies to preoperative nursing care which has more bearing on post- operative outcome of the patient. The need to promote psychological well-being of the patient and prevent psychological factors which may influence the patient adverse.

Anxiety is an emotional state characterized by apprehension and fear resulting from the anticipation of a threatening event. The incidence of preoperative anxiety ranges from 11% to 80% in adult patients and also varies among different surgical groups. Preoperative anxiety may lead to various problems and a wide range of physiological and psychological responses, such as autonomic fluctuations, delayed jaw relaxation and coughing during induction of anesthesia, and increased an aesthetic requirement. In addition, it also has been correlated with increased pain, nausea, and vomiting in the postoperative period, prolonged recovery, and increased the risk of infection. A wide range of responses may be caused by anxiety such as physiological responses include tachycardia, hypertension, elevated temperature, sweating, nausea and psychological responses include changes in behavior such as increased tension, nervousness, and aggression.

Many studies have revealed that a significant number of adult patients undergoing surgical procedures experienced high levels of preoperative anxiety. In a study of patients scheduled for neurosurgery, the frequency of preoperative anxiety is high that is 89% with around 60% to 90% of all surgical patients in the Western population compare to other surgeries.

According to Indian study the incidences of preoperative anxiety have been reported up to 11 percent to 80 percent of adult patients. High preoperative anxiety levels may lead to increased postoperative analgesic requirement, prolonged

hospital stay and significant contribution to adverse Perioperative outcome and poor patient satisfaction, so most surgeons postpone operations in cases with high anxiety. Therefore it's necessary to prevent and reduce the anxiety among preoperative patients with certain non-pharmacological techniques like guided imagery**.**

Another finding of study conducted in safdarjung hospital, New Delhi, India, showed that females were significantly more anxious than male on the day of surgery and their anxiety began sooner, during waiting for the surgery, significant symptoms of depression due to fear, worries, and uncertainties about surgery were experienced. A long time waiting for surgery with little information caused the preoperative anxiety[2]**.**

The incidence of preoperative anxiety was also reported in Karnataka which is as high as 60 percent of surgical patients, according to survey 450 patients are involved in that study. Fear regarding anesthesia was reported in 34.4 percent in women and 17.7 percent in men whereas fear regarding surgery was stated as 24.2 percent in women and 21 percent in men**.**

Various steps have been taken to reduce preoperative anxiety. Sedative, premedication are routinely administered to reduce preoperative anxiety. However, sedatives have their own side effects which can be minimized by the use of non-pharmacological intervention such as Guided imagery.

Guided imagery is a natural treatment giving to reduce the anxiety, fear and insomnia that accompanies surgery. The benefits of guided imagery include anxiety reduction, decreased muscle tone, improved comfort during medical procedures, improvement in immune system, decreased recovery time following surgery, and reduction in sleeping problems. There are high degrees of preoperative anxiety in patients scheduled for surgery. Perioperative anxiety is often overlooked but it is associated with poor surgical outcome. Preoperative use of Guided imagery techniques with proper education regarding surgery will help in reducing anxiety and improving the quality of care**.**

Nurses are able to understand the factors related to preoperative anxiety is the first step to improve the quality of preoperative nursing care. Nurses must concentrate not only on physical and physiological factors but also psychological and emotional factors. Through guided imagery technique nurse can reduce the anxiety of the patient. Hence, it is necessary to conduct this study in Hospital.

Anticipating surgery can be stressful and many patients suffer from preoperative anxiety, which can cause serious health complications such as hypertension, rapid pulse and sugar metabolism changes. Israeli researchers from the University of Haifa have found that complementary medicine, combined with standard use of anti-anxiety drugs prior to entering the operating room can significantly reduce preoperative anxiety levels and improve outcomes**.**

Objectives of the study

- To assess the level of anxiety among selected preoperative patients.
- To determine the effectiveness of guided imagery on anxiety among preoperative patients
- To find an association between preintervention level of anxiety of preoperative patients and selected demographic variables

2.1. Hypotheses

2.1.1. Hypotheses of the study are tested at 0.05 level of significance.

- **H$_1$** – There is a significant reduction in preoperative anxiety among patients undergoing surgery after implementation of the guided imagery.
- **H$_2$** - There is a significant association between preintervention level of anxiety of preoperative patients and selected demographic variables

2.2. Assumptions

2.2.1. The assumptions of the study are

- The physical and physiological care of patients undergoing surgery has been preferred but the psychological aspects of care have to greater or lesser extent been neglected. Hence invariably all the patients undergoing surgery experience anxiety.
- Pre-operative patient's anxiety may trigger complications during post-operative period.

- Guided imagery technique may be an effective technique in reducing anxiety among preoperative patients, where nurses can practice it and does not produce any side effects on the patients practicing it.

2.3. Delimitations

2.3.1. The study is delimited to,

- Patients admitted in SDM hospital, surgical wards for elective abdominal surgeries.
- Selected preoperative patients who are having mild to moderate anxiety.

2.4. Conceptual frame work

The conceptual framework selected for this study was based on Modified Rosemarie Rizzo Parse Human becoming School of thoughts nursing theory. The human becoming school of thought posits quality of life from each person's own perspective as the goal of nursing practice states that the nurses who's practical is "guided by the human becoming. Theory lives the process of the parse practice methodology by illuminating meaning, synchronizing rhythms, and mobilizing transcendence. Research guided by the human becoming theory explores the meaning of universal humanly lived experiences such as hope, taking life day-by-day, grieving, suffering and time passing. Here the nurse would guide individuals and/ or families to plan for the changing of lived health patterns.

3. Methodology

3.1. Research approach

In the present study quantitative evaluative approach was used to find the effectiveness of guided imagery on reduction of anxiety among selected preoperative patients.

3.2. Research design

The research design of a study throw lights on the basic strategies that researcher adopt to answer the questions and test the hypotheses. It studies the observable changes that take place in order to establish the cause-and-effect relationship. It directs the selection of a population for the study, procedures for sampling, and methods for measurements and plans for data collection and analysis.

Pre experimental one group pre and post-test research design is used for this study.

Group			
E (Patients undergoing elective abdominal surgeries in SDM Hospital)	O_1	X	O_2

Figure 1 Schematic representation of research design.

3.2.1. KEY

- E = Experimental group
- X = intervention (Guided imagery).
- O_1 = Observation before the guided imagery.
- O_2 = Observation after the guided imagery.

3.3. Variables under the study

In quantitative studies, concepts are usually, referred to as variables which may be qualities, properties or characteristics of person, things or situation that can change or vary. A variable is any phenomenon or attitude under study.

3.3.1. In this study variables are

- Independent variable: Guided imagery.
- Dependent variable: Anxiety of preoperative elective abdominal surgery patients.

3.3.2. Setting of the study

The study was conducted in selected surgical wards of SDM Hospital, Dharwad.

3.3.3. Population

In the present study the population consisted of preoperative elective abdominal surgery patients.

3.3.4. Target population

In the present study target population consisted of preoperative patients undergoing elective abdominal surgery.

3.4. Sample

In this study samples consisted of preoperative patient undergoing elective abdominal surgery admitted in surgical ward of S.D.M. Hospital Dharwad.

3.4.1. Sample size

In the present study the sample consisted of 40 preoperative patients who were undergoing elective abdominal surgery admitted in the surgical wards of SDM Hospital Dharwad.

3.4.2. Sampling technique

In this study non probability, convenience sampling technique was used to select 40 preoperative patients undergoing elective abdominal surgery.

3.4.3. Sampling criteria

3.5. The criteria for selection of sample in this study are

3.5.1. Inclusion criteria

In the present study inclusion criteria are

- Patients who are undergoing abdominal surgeries.
- Patients who are willing to participate in guided imagery.
- Those who are present and available at the time of data collection.
- Patients who are admitted in surgical wards.

3.5.2. Exclusion criteria

Sampling characteristics that can cause person or element to excluded from the target population are,

- Patients who are critically ill.
- Patients who are diagnosed with severe anxiety disorder.

3.6. Development and description of the tool

The most important aspect of any investigation is collection of appropriate information which will provide necessary information provide an answer to the research question in the study. A data collection instrument or tool is a formal document used to collect and record information. An instrument used in research should be the best to obtain the data for drawing conclusions which are pertinent to the study and at the same time add the knowledge in the discipline.

In this study a modified Hamilton Anxiety Scale was used to assess the level of anxiety regarding elective abdominal surgery among pr-operative patients.

3.6.1. The tool was modified by the investigator based on

- Research problem
- Extensive review of related literature
- Discussion and suggestion from the Guide and experts
- Clinical experiences

3.6.2. Tool was developed based on the following points

- Modified Hamilton anxiety scale to assess the pre and post intervention l e v e l of anxiety among the preoperative patients.
- Socio demographic proforma of participants
- Systemic development of guided imagery audio recording developed by the investigator with the help of guided imagery training and known expert guidance and opinions.

3.6.3. Description, Scoring and Interpretation of tool:

Hamilton anxiety scale was a standard tool developed by Hamilton which is four-point Scale, consists of 14- items; this standard tool was modified as for the guidance of the research expert so as to achieve the intended objective of the study. The tool consisted of 14 questions related to the feelings experienced by the preoperative patients. There are four alternative response columns; for each question like Not present, mild, moderate and severe about the anxiety. Among 14-items all 14 were positively worded hence scored as; 0, 1, 2, and 3 respectively. The total modified Hamilton anxiety score ranges from 0- 42.

3.6.4. The Score was interpreted as follows:

- Mild anxiety = 00-14
- Moderate anxiety = 15-28
- Severe anxiety = 29- 42

3.7. Testing of the tool

3.7.1. Content validity of the Tool

Content validity examines the extent to which the measurement includes all the major elements relevant to the construct being measured.

The developed tool with the objectives and entire content was given to seven experts from the M edical Surgical Nursing Department, C linical P sychologist and S tatistician. The final tool was prepared as per the suggestions & advices given by the experts.

Modifications were made based on the recommendations and suggestion of experts. After consulting guide and statistician, the final tool was refined and reframed. It was found to be valid and suitable for current study.

3.7.2. Pilot study

The pilot study was conducted at SDMCMS & Hospital, Dharwad. Formal permission was obtained from the authorities and purpose of the study was explained to the subjects and confidentiality was assured. Written consent was obtained from subjects to participate in the study. Subjects are selected by non- probability convenience sampling technique. On the first day, pre-test was done for the group by assessing Hamilton anxiety scale. On the same day, Guided Imagery interventions of preoperative patients were administered followed by the post test on 3rd day. The tool and study design were found to be feasible and practicable. Data analysis was done by using descriptive and inferential statistics.

3.7.3. Reliability of the tool

The reliability of the tool was established by using test –retest method. (Karl Pearson co- efficient of correlation method) which measure the co-efficient of internal consistency. The reliability coefficient **"r"** value of modified Hamilton anxiety scale regarding preoperative anxiety with the elective abdominal surgery interventions of guided imagery was 0.91, and developed tool found to be reliable

3.7.4. Data collection method

The study was conducted in SDMCMS & Hospital Dharwad. The data was collected, prior to data collection permission was obtained from the concerned authorities. The data collection procedure carried out by the researcher.

3.7.5. Steps followed in data collection process:

- Subject are collected according to the selection criteria and assured the confidentiality of the sample
- Written consent was obtained from subjects to participate in the study
- Samples are selected by non-probability convenient sampling technique
- On the first day, pre-test was done for the group with Modified Hamilton Anxiety Scale
- On the same day guided imagery technique was administered to the group followed by the post test on 3rd day (just before the surgery). With the same scale.

3.7.6. Plan for data analysis

Following steps were carried out while the collection of data was processed the expert advice and direction of statistician was sought.

- Organized data in master sheet.
- Computed frequency and percentage to be used for analysis of baseline data.
- Mean and standard deviation for the obtained score were calculated.
- Paired "t" test was used to evaluate the effective role of guided imagery on anxiety among preoperative patients.

Yeates correction for chi-square ($X2$) test was used to find out the association between level of anxiety of preoperative patients score and selected demographic variables.

4. Results

The data were collected from sample of 40 preoperative patients admitted in surgical wards by using modified Hamilton anxiety scale to evaluate the effectiveness of guided Imagery. The data, which are necessary for the study, were collected through Modified Hamilton anxiety scale and analysed by using relevant descriptive and inferential statistics.

4.1. The data were analysed on the basis of objectives of the study

- To assess the level of anxiety among selected preoperative patients.
- To determine the effectiveness of guided imagery on anxiety among preoperative patients
- To find an association between preintervention level of anxiety of preoperative patients and selected demographic variables

4.2. Organization of the findings

4.2.1. The data is organized and presented under the following sections

- **Section 1:** frequency and percentage distribution of subjects according to the demographic variables
- **Section 2:** Pre-test level of anxiety score of preoperative patients undergoing elective abdominal surgery
- **Section 3:** Post-test level of anxiety score of preoperative patients undergoing elective abdominal surgery
- **Section 4:** Comparison of mean pre-test and post-test level of anxiety scores to evaluate the effectiveness of Guided Imagery technique.
- **Section 5:** Association between pre-test level of anxiety of preoperative patient's undergoing elective abdominal surgery and selected demographic variables.

4.3. Section 1: frequency and percentage distribution of subjects according to the demographic variables

Table 1 Frequency and percentage distribution of preoperative patients [n=40]

Sr.No	Demographic Variables	Frequency	Percentage
01	Age (In Years)		
	a) 30-40	11	27.5
	b) 41-50	09	22.5
	c) 51-60	10	25
	d) above 60	10	25
02	Gender		
	a) Male	26	65
	b) Female	14	35
03	Religion		
	a) Hindu	34	85
	b) Christian	01	2.5
	c) Muslim	05	12.5
	d) Others	00	00
04	Marital Status		
	a) Married	33	82.5
	b) Unmarried	05	12.5
	c) Widow	00	00
	d) Widower	02	5
05	Educational Qualification		
	a) Informal	06	15
	b) Primary	17	42.5
	c) Secondary	08	20
	d) Degree	09	22.5
	e) Post graduate	00	00
06	Type Of Family		
	a) Nuclear	21	52.5
	b) Joint	15	37.5
	c) Extended	04	10
07	Occupation		
	a) Skilled worker	15	37.5
	b) Semi-Skilled worker	21	52.5
	c) Un skilled worker	04	10
08	Monthly Family Income (In Rupees)		
	a) Below 5000/-	09	22.5
	b) 5001-10000/-	14	35
	c) 10001 -15000/-	10	25
	d) Above 15000/-	07	17.5

09	Dietary Pattern		
	a) Vegetarian	06	15
	b) Mixed	34	85
10	Previous History Of Surgery		
	a) Yes	17	42.5
	b) No	23	57.5

The data presented in the table -1 shows that maximum 11 (27.50%) of the patients were in the age group between 30 – 40 years each 10 (25%) of subjects were belongs to 51 – 60 year 10 (25%) and above 60 years of age respectively whereas 09 subjects (22.50%) were belongs to 41 – 50 years of age group.

With regard to gender, data presented in the table 1 shows that, among 40 patients 26 (65%) are male and remaining 14 (35 %) were female.

The data presented in the table 1 shows that, majority 34 (85%) of patients were belongs to Hindu religion, 01 (2.5%) were Christian and 05 (12.5%) are Muslim

The data presented in the table 1 shows that, majority of the patients 33 (82.50%) are married, 05 (12.50%) patients are un married and 02 (5.00%) are widower and none of the patients are widow

Pertaining to education, the data presented in the table 1 shows that, majority of the patients 17 (42.50%) were educated up to primary school, 06 (15%) were informal, 08 (20%), were educated up to high school, 09 (22.50%) were educated up to degree level and none of the subjects have completed post-graduation.

The data presented in the table 1 shows that, majority of the patients 21 (52.50%) belongs to nuclear family, 15 (37.50%) patients were belongs to joint family and 04 (10%) patients were belongs to extended family.

The data presented in the table 1 shows that, majority of sample 21 (52.50%) are semi-skilled worker, 15 (37.50%) were skilled worker and 04 (10%) of them were non-skilled worker.

The data presented in the table 1 shows that, majority of the patients 14(35%) belonged to the Rs 5001-10000 income group, 09(22.50%) of the patients belonged to below Rs 5000 income group, 10(25%) of the patients belonged to Rs 10001-15000 income group and 07 (17.50%) patients belonged to above 15000 income group.

The data presented in the table 1 shows that, majority of patients 34 (85%) were having mixed diet and other 06 (15%) were consuming vegetarian diet.

The data presented in the table 1 shows that, majority of patients 23 (57.50%) were had the previous history of surgery and other 17 (42.50%) of the patients are don't have the history of previous surgery.

4.4. Section 2: Pre-test level of anxiety score of preoperative patients undergoing elective abdominal surgery.

Table 2 Frequency and percentage Distribution of subjects by pre-test levels of preoperative anxiety. [n=40]

Level of Anxiety	Frequency	Percentage
Mild anxiety	00	00.00
Moderate anxiety	12	30.00
Severe Anxiety	28	70.00
Total	40	100.00

Table: 2 and Fig: 02 shows the classification of preoperative patients on pre-test level of anxiety undergoing abdominal surgery. Among 40 preoperative patients no one patients are belongs to mild anxiety 30% (12) of them had moderate anxiety level, 70.00% (28) had severe level of anxiety[n=40]
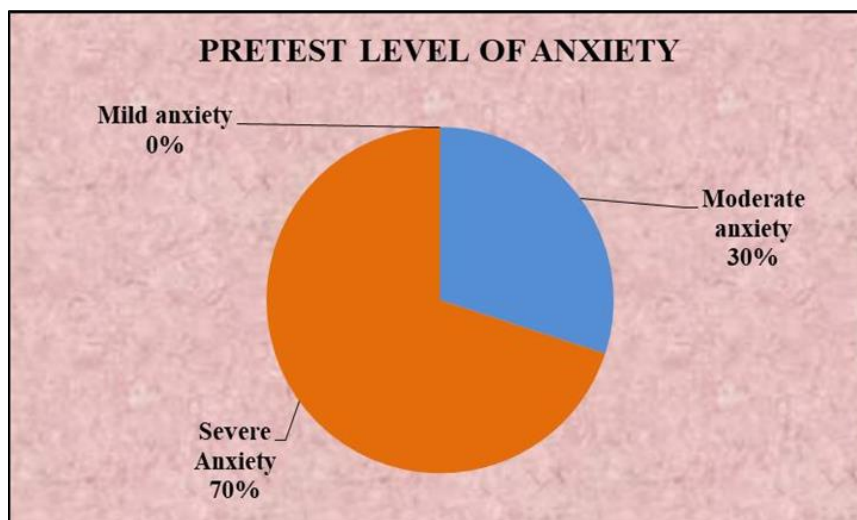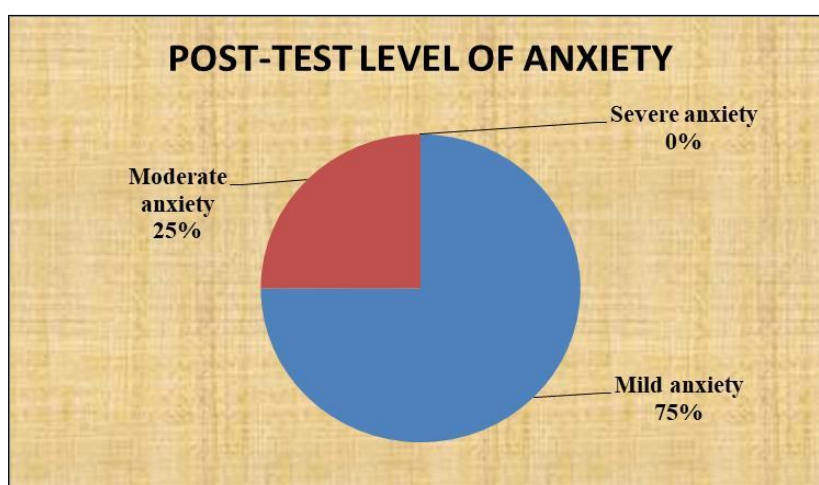
Figure 2 Pre-test level of anxiety scores of preoperative patients undergoing abdominal surgery

Section 3: Post-test level of anxiety score of preoperative patients undergoing elective abdominal surgery.

Table 3 Frequency percentage Distribution of subjects by post-test levels of preoperative anxiety. [n=40]

Levels of anxiety	Frequency	Percentage (%)
Mild anxiety	30	75.00
Moderate anxiety	10	25.00
Severe anxiety	00	00.00
Total	40	100.00

Table: 3 and Fig: 03. Shows the classification of preoperative patients on post- test level of anxiety regarding abdominal surgery injury. Among 40 preoperative patients 75% (30) patients are belongs to mild anxiety, 25.00% (10) of them had moderate anxiety level, and no one patients are belongs to severe level of anxiety. [n=40]

Figure 3 Post-test level of anxiety scores of preoperative patients undergoing abdominal surgery
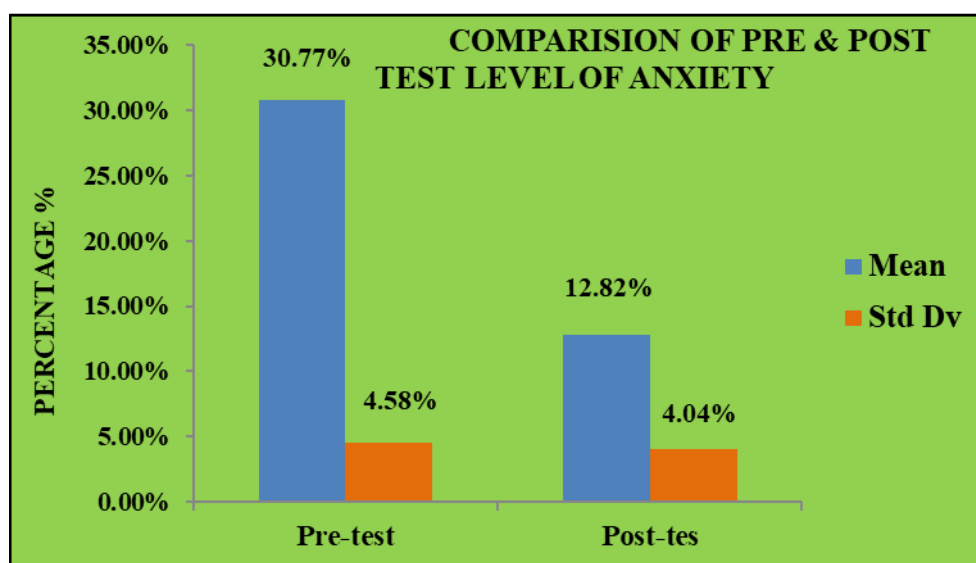
Section 4: Comparison of mean pre-test and post-test level of anxiety scores to evaluate the effectiveness of Guided Imagery technique.

Table 4 Comparison of mean pre-test and post-test level of anxiety scores [n=40]

Level of anxiety	Mean	Standard Deviation	Degree of Freedom	'p' value	Calculated 't' value	Table 't' value
Pre-test	30.77	4.58	39	0.0001	21.88	2.02
Post-test	12.82	4.04	39			

Table:4 & fig: 04 shows the difference of pre-test and post-test level of anxiety scores of preoperative patients regarding abdominal surgery. In pre- test the mean score was ±30.77 and SD was± 4.58 whereas the mean post-test score was ±12.82 and SD was ±4.04. The calculated 't' vale was ±21.88 which was higher than the table value i.e.2.02 which was significant at p ≤0.05 level. Hence the null hypothesis is rejected and research hypothesis is accepted. This shows that guided imagery technique was effective in the reduction of anxiety among preoperative abdominal surgery patients.

4.5. Comparison of pre and post-test level of anxiety [n=40]

Figure 4 Comparison of mean pre-test and post-test level of anxiety score.

Section 5: Association between pre-test level of anxiety of preoperative patient's undergoing elective abdominal surgery and selected demographic variables.

Table 5 Association between pre-test level anxiety and selected demographic variables [n=40]

Demographic variable	Category	Sample	Level of anxiety						χ^2 Value	df	P value	Inference
			Mild		Moderate		Severe					
Age in years	30-40	11	00	00	04	36.36	07	63.64	2.73	03	7.82	NS
	41-50	09	00	00	02	22.22	07	77.78				
	51-60	10	00	00	03	30.00	07	70.00				
	Above 60	10	00	00	01	10.00	09	90.00				
Gender	Male	26	00	00	05	19.23	21	80.77	1.34	01	3.84	NS
	Female	14	00	00	05	35.71	09	64.29				

Religion	Hindu	34	00	00	09	26.47	25	73.53	4.70	03	7.82	NS
	Christian	01	00	00	00	00	01	100.00				
	Muslim	05	00	00	00	00	05	100.00				
	Others	00	00	00	00	00	00	00				
Marital status	Married	33	00	00	07	21.21	26	78.79	1.53	03	7.82	NS
	Unmarried	05	00	00	02	40.00	03	60.00				
	Widow	00	00	00	00	00	00	00				
	widower	02	00	00	01	50.00	01	50.00				
Education qualification	Informal	07	00	00	00	00	07	100.00	6.72	04	9.49	NS
	Primary	16	00	00	03	18.75	13	81.25				
	Secondary	10	00	00	05	50.00	05	50.00				
	Degree	07	00	00	02	28.57	05	71.43				
	Post graduate	00	00	00	00	00	00	00				
Type of family	Nuclear	22	00	00	05	22.73	17	77.27	2.76	02	5.99	NS
	Joint	15	00	00	03	20.00	12	80.00				
	Extended	03	00	00	02	66.67	01	33.33				
Occupation	Skilled worker	15	00	00	06	40.00	09	60.00	2.37	02	5.99	NS
	Semi-skilled worker	21	00	00	04	19.05	17	80.95				
	Non skilled worker	04	00	00	01	25.00	03	75.00				
Monthly family income (in rupees)	Below 5000/-	09	00	00	00	00	09	100.00	5.78	03	7.82	NS
	5001-10000/-	14	00	00	05	35.71	09	64.29				
	1001-15000/-	10	00	00	02	20.00	08	80.00				
	Above 15000/-	07	00	00	03	42.86	04	57.14				
Dietary pattern	Vegetarian	06	00	00	03	50.00	03	50.00	2.07	01	3.84	NS
	Mixed	34	00	00	07	20.59	27	79.41				
Previous history of surgery	Yes	17	00	00	04	23.53	13	76.47	0.17	01	3.84	NS
	No	23	00	00	06	26.09	17	73.91				

From the above table 5, the association between Age and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi 2= 2.73$ and table value is 7.82 so calculated value is less than table value (chi- square=2.73 and $p<0.05$)

The association between gender and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$= 1.34 and table value is 3.84 so calculated value is less than table value (chi-square= 1.34 and p<0.05)

The association between religion and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$ 4.70 and table value is 7.82 so calculated value is less than table value (chi-square= 4.70 and p<0.05)

The association between marital status and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$=1.53 and table value is 7.82 so calculated value is less than table value (chi-square= 1.53 and p<0.05)

The association between education qualification and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$= 6.72 and table value is 9.49 so calculated value is less than table value (chi-square=6.72 and p<0.05)

The association between type of family and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$= 2.76 and table value is 5.99 so calculated value is less than table value (chi-square= 2.76 and p<0.05)

The association between occupation and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$=2.37 and table value is 5.99 so calculated value is less than table value (chi-square= 2.37 and p<0.05)

The association between monthly family income and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$= 5.78 and table value is 7.82 so calculated value is less than table value (chi-square= 5.78 and p<0.05)

The association between dietary pattern and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$= 2.07 and table value is 3.84 so calculated value is less than table value (chi-square= 2.07 and p<0.05)

The association between previous history of surgery and level of anxiety regarding elective abdominal surgery are found non-significant at 0.05 level because calculated $\chi2$=00.17 and table value is 3.84 so calculated value is less than table value (chi- square= 0.17 and p<0.05).

5. Conclusion

Pre-operative anxiety and stress are common in surgical patients. Which interfere in post-operative recovery. Hence to reduce the anxiety of the patient is very much important. Guided Imagery technique is one of the method to allivate anxiety to present post-operative complication.

This chapter deals with the important part of concluding the study and Implication on different aspect of nursing. Namely Nursing practice, Nursing administration, Nursing education and Nursing research. It also direct the limitations of the study and suggest a recommendations for further research. In this study total of 40 preoperative patients were selected to test the effect of guided imagery on reduction of preoperative anxiety. The data was collected through modified Hamilton Anxiety scale and analyzed and interpreted by suitable statistical methods.

5.1. Implication of the study

The implication of the study could be discussed under four broad areas, namely

5.1.1. Nursing Practice

Nurses are key personnel of health team who plays a vital role in the health promotion and maintenance. Nursing is a practice of professions so the investigator generally integrates findings into practice.

- The findings of this study helps to plan, develop and utilize various types of guided imagery technique.

- Skillful nurses can teach the patients and relatives about the uses and method of Guided Imagery technique. The study is useful on planning the health care action in different setting.

5.1.2. Nursing Education

The educational background of nursing personnel should equip him / her with the knowledge necessary to function as a health educator. Findings of the study can be used by the nurse educator to highlight the importance of guided imagery technique by assisting the preoperative elective abdominal surgery patients.

- The nurse educator can utilize the findings of the study in developing the material related to Guided Imagery to teach patients, family and health care workers and student Nurse.
- Nurse educator can organize education programme regarding Guided Imagery to promote the positive patient out come in the Hospital.

5.1.3. Nursing Administration

Since this is the era of development of advanced technology, demand for quality and concept care, improved awareness on dignity of life, all poses challenges to nurse administrators should demonstrate their efficiency in providing information regarding guided imagery to the patients and his/relatives to reduce the preoperative anxiety

- Nurse administrator can organize and conduct seminar to make students and staff nurses aware about guided imagery technique and its uses.
- Continue Nurse Education for the staff nurses must include the techniques and uses of Guided Imagery in order to update their knowledge.
- It also helps the nursing administrator to plan for manpower, money, materials, methods and time to conduct successful education programme regarding guided imagery.

5.1.4. Nursing Research

Clinical research studies are needed to improve the quality of the nursing care. Dissemination of findings through conference and professional journals will make application of research findings to be effective.

- The nurse researcher can include evidence based practice in nursing field.
- Nurse researcher can utilize the methodology in further research.

Limitation of the study

The following are the limitation of the study

- The findings of the study could not be generalized because of time constraints
- This study is limited to patients who are undergoing abdominal surgery from SDMCMS & Hospital, Dharwad.
- The samples are less because of the limited time available for data collection.

Recommendations:

Based on the findings of the present study and keeping in mind the limitations of the study, the following recommendation made for further study.

- A study can be undertaken by utilizing other domains like practice and comparative study.
- A similar study can be conducted in different settings to find out the significant difference.
- The same can be conducted with an experimental research approach having a control group.
- This study can be replicated in other parts of the country in larger samples.

- Based on the findings of the study the following conclusions are drown,

The results of the study indicated that in pre-test 30% (12) of the subject had moderate level of anxiety and 70% (28) had severe level of anxiety. In pre-test the mean anxiety score was ±30.77 and SD was± 4.58 whereas the mean post-test score was ±12.82 and SD was ±4.04. The calculated 't' vale was ±21.88 which was higher than the table value i.e. 2.02 which was significant at p ≤0.05 level. Hence the research hypothesis was accepted. This shows that guided

imagery technique was effective in the reduction of anxiety among preoperative elective abdominal surgery patients and none of the demographic variables of the preoperative patients was associated with pre-test level of anxiety.

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