

EFFECTIVENESS OF NURSE LED PREOPERATIVE AWARENESS PROGRAM ON ANXIETY OF PATIENTS UNDERGOING INGUINAL HERNIA SURGERY

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Abstract:

During the time of surgical episode, preoperative anxiety is often viewed by patients as a worst part of the surgical episode. This study aims to evaluate the effectiveness of nurse led preoperative awareness program on anxiety of patients undergoing inguinal hernia surgery at selected hospitals in Rajkot. Gujarat. The research design selected was true experimental design. Totally 40 patients were recruited through simple random technique. and in each group 20 samples were allocated. One day prior to the surgery pre – anxiety level and on 2nd post – operative say the post – anxiety level of the samples in both groups were assessed. Samples in experimental group had received the preoperative awareness program led by nurses and those who were in control group had received routine nursing care. Tool used for data collection consisted of two sections. Section – I was designed to obtain information on samples demographic and clinical variables, whereas Section – II consists of State Trait Anxiety Inventory Y1 questionnaire (STAI – Y1 form). Data collection technique was self – reporting questionnaire method. Results of the study shows the mean and standard deviation preoperative anxiety scores among the patients in “experimental group was 32.9 ± 8.13 , and among the control group samples 66.50 ± 8.8 ”. the mean difference in anxiety level between the samples in two group was 33.6. Independent ‘t’ test score was 12.45 for the degree of freedom 38 which was significant at the ‘P’ value ≤ 0.001 . It was also found that the anxiety score before intervention to the samples in experimental group was having a significant association with demographic variables like history of surgery (‘F’ = 276.119, ‘df’ = 1 ‘P’ < 0.001) and risk factors (‘F’ = 6,515, ‘df’ = 5 ‘P’ < 0.003). the study concluded that the nurse led preoperative awareness program was an effective anxiety reduction strategy among patients undergoing inguinal hernia surgery. Nurses working with preoperative patients are in a good position to deliver preoperative anxiety reduction awareness program. Similar type of study can be done with patients undergoing any other surgeries.

Key Words: Effectiveness, Nurse led preoperative awareness program, Anxiety, Inguinal Hernia Surgery

Introduction:

Anxiety is considered as the most frequent issue among patients undergoing any types of surgeries during the preoperative periods. This can lead to a number of postoperative issues such as increased postoperative pain, a slower rate of recovery, and an extended hospital stay. “Anxiety is defined as a feeling of unease, worry, fear, tension and apprehension. It is a response to external or internal stimuli that can have behavioural, emotional, cognitive and physical symptoms”,¹ The preoperative care of patients is a difficult concept. Preoperative anxiety is common., especially for patients having their first few surgical procedures, and is a normal response to the uncertain and sometimes life – threatening situations involved in surgery.²

A difficult issue in the preoperative management of patients is preoperative anxiety, in particular for a patient having their first surgical response, a common low level of anxiety is an expected reaction to the uncertain and potentially life – threatening situations. However, a higher and prolonged level of preoperative anxiety causes a delay in wound healing, necessitates a higher anaesthetic dosages and results in a poor recovery. Anxiety is a typical patient response that is experienced by the majority of patients throughout the preoperative periods.³⁻⁴

The most frequent procedure in general surgery is inguinal hernia repair surgery.⁵ “An inguinal hernia is a protrusion of abdominal cavity and its contents through the inguinal canal. It is very common in men with lifetime risk of 27 % and 3 % for women”.⁶ The most prevalent type of abdominal wall hernias are inguinal hernia. Although, the exact prevalence of inguinal hernia is unknown., roughly 500,000 instances are treated by doctors annually.⁷ Inguinal hernia complications can result in incarceration, intestinal obstruction, and strangulation of bowel, with older people at the higher risk. Inguinal hernia accounts for more than 95 % of all groin hernia repairs and they are a popular general surgery procedure for both adult and children.⁸

Preoperative anxiety has been linked to a variety of issues, including higher risk of infection, nausea, vomiting and cardiovascular changes like tachycardia and hypertension. Studies have revealed that a significant part of patients undergoing surgery report having significant preoperative anxiety, which is said to affect between 60 and 80percent of surgical patients.⁹ Preoperative education plays a very crucial role in easing anxiety and minimizing patients’ problems brought on by anxiety. The desire of this “experimental, pre-test/post-test” study was to investigate the effectiveness of nurse led preoperative awareness program on anxiety of patients undergoing inguinal hernia surgery.

Problem Statement

A study to evaluate the effectiveness of nurse led pre-operative awareness program on anxiety of patients undergoing inguinal hernia surgery in selected hospitals in Rajkot. Gujarat.

Objectives

1. To evaluate the level of anxiety among patients having inguinal hernia surgery in the study and control groups before and after the nurse led pre-operative awareness program.
2. To assess the impact of nurse – led pre-operative awareness program on anxiety in the study group of patients having inguinal hernia surgery.
3. To ascertain the relationship between the level of anxiety and the demographic variables of patients undergoing surgery for inguinal hernia in study and control group.

Methodology

In this research, “true experimental research design” was adopted. Population of the study consisted of patients undergoing elective inguinal hernia surgery. Two multi – speciality private hospitals were selected in the city and legal permission were obtained for conducting this study from the hospital authorities.

All patients scheduled for elective inguinal hernia surgery who met the inclusion criteria’s such as being a male or female patients over the age of 18 years with or without a history of prior surgical procedures, were included in the samples. The following samples were excluded, those who were with mental retardation and cognitive impairments, patients who were been diagnosed with anxiety disorder or any other mental disorders. Patients who were on anxiolytic medicates and those who were with communication disabilities were also been excluded from the study.

This study consisted of 40 patients having inguinal hernia surgery. Of 40 patients 20 were placed in the study group while the remaining 20 were in the control group.

Tool for Data Collection

Data collection tool for this study consists of three sections. Section – I includes, demographic data. Section – II had basic clinical variables such as respiratory rate, heart rate, systolic blood pressure and diastolic blood pressure and in Section – III State – trait anxiety inventory (STAI) form Y1 questionnaire was used to measure the level of anxiety during pre-test and post among samples in both groups. This tool was developed by Spielberger et al. STAI (Y1) it is a standardized and valid tool for the assessment of anxiety. This tool had 20 statements which evaluates how samples feels at that point of time and marked in a 4 – point scale and scored. Scores ranges between 20 and 80. With the higher scores correlating to higher anxiety. Reliability and internal consistency of the tool was tested through “test-retest method”. The ‘reliability’ of the tool was 0.65 to 0.75.¹⁰

Data Collection and Analysis

Study was done for the period of 2 months from 1st march 2021 to 30th April 2021. Pre-operative level of anxiety among samples in both groups were measured by giving questionnaire preoperatively prior to the day of surgery and nurse led pre-operative awareness program were given to the samples in study group only followed by the assessment of pre-operative anxiety. One the second post-operative day the post-test was taken from the samples in both groups. Samples were selected randomly by following odd or even number method. All those samples who were in odd number were assigned to study group and those who were in even number series were put in control group. Single samples were selected and intervened at a single time. The duration of nurse led pre-operative awareness program was for 15 – 20 minutes. During the session the following aspects were taught to the samples and it includes pre-operative routines of hospital care on the day prior to surgery, and post-operative exercises. The samples in control group received the routine daily care prior to surgery through the nurses in the health team.

Statistical Analysis

After data collection, researchers utilised "descriptive and inferential statistics" and "frequency and percentage distribution" to analyse demographic factors. Sample anxiety and clinical characteristics were expressed by mean and standard deviation. An independent ‘t’ test was done to compare the effectiveness of nurse led preoperative awareness program on anxiety. Paired ‘t’ test was done for comparing the “level of anxiety” during pre-test and post-test within the group. Chi-square analysis was done to estimate the level of association of anxiety with the demographic variables of the samples in both groups. One – way ANOVA was done to identity association of anxiety with every individual option of demographic variables. For performing statistical analysis, the researcher had used IBM SPSS Statistical Software Version 20. (Armonk, NY, USA: IBM Corp).

Results

Socio-demographic characteristics:

Table – I: Samples Distribution Based on the Socio-demographic Characteristics

(N = 40)

SNo	Demographic Variables		Study Group		Control Group	
			Frequency	Percentage	Frequency	Percentage
1	Age	18 – 35	3	15.0	8	40.0
		36 – 55	13	65.0	3	15.0
		> 55	4	20.0	9	45.0
2	Gender	Male	10	50.0	15	75.0
		Female	10	50.0	5	25.0

3	Education	Primary School	2	10.0	2	10.0
		Middle School	6	30.0	6	30.0
		High School	7	35.0	7	35.0
		Intermediate / Diploma	4	20.0	4	20.0
		Graduate	1	5.0	1	5.0
4	Occupation	Unemployed	7	35.0	9	45.0
		Employed	11	55.0	8	40.0
		Retired	2	10.0	3	15.0
5	Family Monthly Income	68967 - 92185	0	0.0	1	5.0
		46095 - 68961	6	30.0	10	50.0
		27654 – 46089	8	40.0	7	35.0
		9232 – 27648	6	30.0	2	10.0
6	Marital Status	Unmarried	3	15.0	5	25.0
		Married	17	85.0	15	75.0
7	Residence	Rural	13	65.0	13	65.0
		Urban	7	35.0	7	35.0
8	History of Surgery	No	17	85.0	14	70.0
		Yes	3	15.0	6	30.0
9	Type of Anaesthesia	Epidural	1	5.0	2	10.0
		General	8	40.0	6	30.0
		Regional	2	10.0	4	20.0
		Spinal	9	45.0	8	40.0
10	Position of Hernia	Left side	5	25.0	5	25.0
		Right side	13	65.0	10	50.0
		Bilateral	2	10.0	5	25.0
11	Type of Hernia	Direct	4	20.0	7	35.0
		Indirect	16	80.0	13	65.0
12	Risk Factors	Smoking	2	10.0	1	5.0
		Alcohol	2	10.0	4	20.0
		Heavy Objects Lifting	5	25.0	7	35.0
		Chronic Cough	4	20.0	2	10.0
		Family History	2	10.0	5	25.0
		Bowel / Bladder Disturbances	5	25.0	1	5.0

In this study, with regard to age of the samples, majority 13 (65.0 %) were in the age between 36 – 55 years in experimental group, in control group 9 (45.0 %) of the samples were in the age > 55 years. About the distribution of gender among the samples in ‘study group’, male

and female were equally distributed 10 (50.0 %) were as among the samples in control group three fourth of the total samples were males 15 (75.0 %). Samples distribution according to education reveals in both group majority 7 (35.0 %) were with high school certificate and among samples. Occupation of the samples shows in study group majority 11 (55.0 %) are employed and in case of ‘control group unemployed were majority 9 (45.0 %). Samples family monthly income represents in study group majority 8 (40.0 %) has 27654 Rs – 46089 Rs, and among the samples in control group one half of the total samples 10 (50.0 %) had 46095 Rs – 68961 Rs. In view of marital status of the samples in both groups married samples were maximum 17 (85.0 %) in ‘study group’ and 15 (75.0 %) in ‘control group’. Residence of the samples reports that in both group equal numbers of samples 13 (65.0 %) belongs to rural area. In both groups majority were had no history of surgeries 17 (85.0 %) in study group and 14 (70.0 %) in ‘control group’. For majority of the samples in ‘study group’ 9 (45.0 %) and in ‘control group’ 8 (40.0 %) had spinal anaesthesia. Right side hernia was found to be present commonly among samples in both groups 13 (65.0 %) in ‘study group’ and 10 (50.0 %) of the samples in ‘control group’. Type of hernia among the samples reveals indirect was more common 16 (80.0 %) in ‘study group’ and 13 (65.0 %) in ‘control group’. With regard to the risk factors for inguinal hernia lifting heavy objects was common among samples in ‘study group’ 5 (25.0 %) and in control group 7 (35.0 %),

Table – II: Clinical Variable Characteristics of the Samples

(N = 40)

Clinical Variables	Study Group		Control Group	
	Pre – Test	Post – Test	Pre – Test	Post – Test
Respiratory Rate	16.42 ± 8.12	15.11 ± 6.81	16.28 ± 8.04	16.34 ± 8.18
Systolic BP	132.32 ± 13.85	130.49 ± 11.05	132.42 ± 13.03	132.51 ± 13.14
Diastolic BP	78.12 ± 7.92	76.00 ± 6.20	77.52 ± 8.10	78.28 ± 8.44
Heart Rate	76.01 ± 32.01	73.62 ± 28.40	77.21 ± 33.60	76.41 ± 32.01

Table – II talks about the mean and standard deviation values of samples clinical variables such as respiratory rate, heart rate, systolic and diastolic BP. Among samples in ‘study group’ during pre-test the mean respiratory rate was 16.42 (SD 8.12), mean systolic BP was 132.32 (SD 13.85), mean diastolic BP was 78.12 (SD 7.92) mean heart rate was 76.01 (SD 32.01). Similarly at the time of post – test the mean respiratory rate was 15.11 (SD 6.81) mean systolic BP was 130.49 (SD 11.05), the mean diastolic BP was 76.00 (SD 6.20) and mean heart rate was 73.62 (SD 28.40).

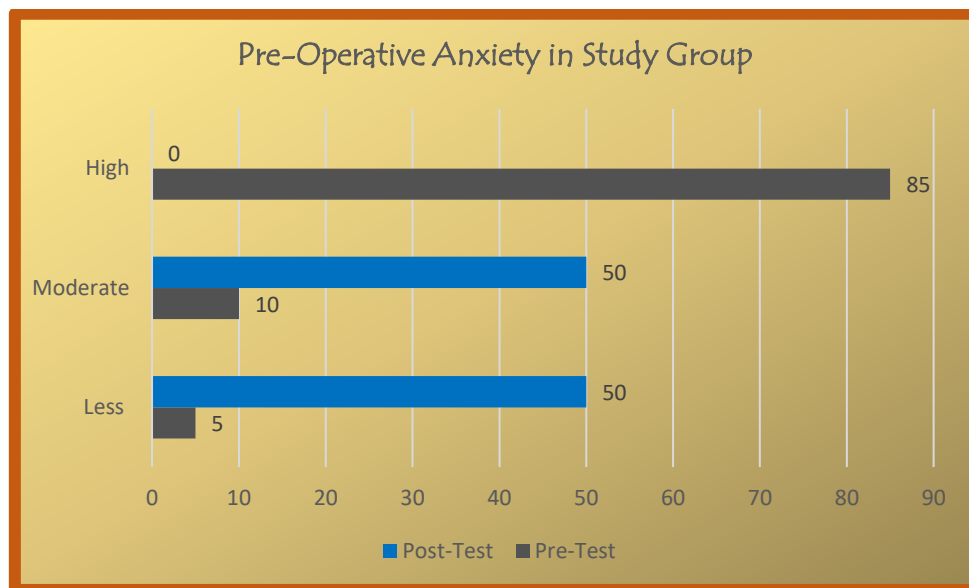


Figure – I: Clustered Bar – Chart Showing the Distribution of Pre-Operative Anxiety (Study Group)

Percentage distribution of samples in ‘study group’ according to level of anxiety were depicted in figure – 1. During pre-test an overwhelming majority of the samples 18 (85.0 %) had high level of anxiety and in post – test equal number of samples 10 (50.0 %) had moderate and low levels of anxiety.

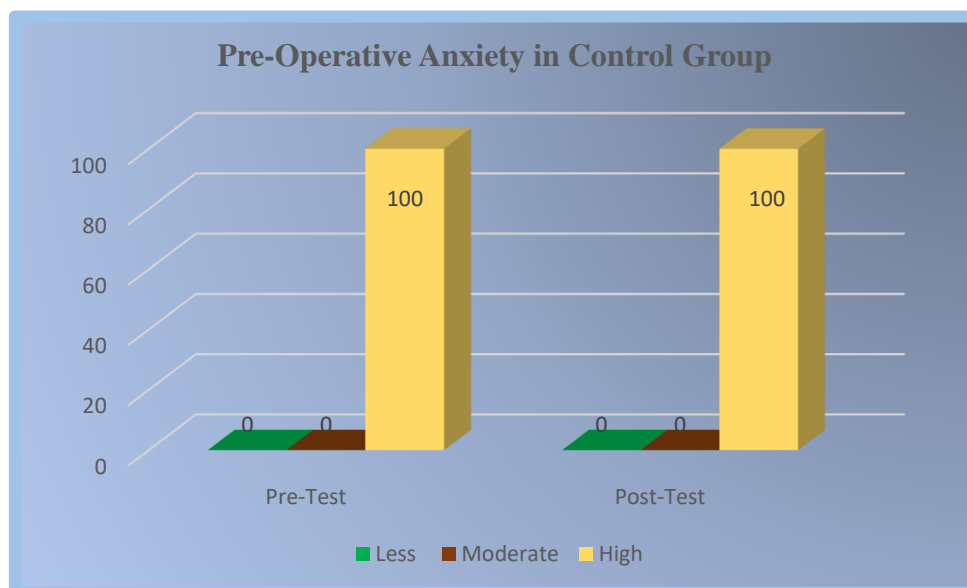


Figure – 2: Clustered Bar – Chart Showing the Distribution of Pre-Operative Anxiety (Control Group)

Level of anxiety of the samples in ‘control group’ were illustrated in figure – 2. All the samples 20 (100.0 %) were with high levels of anxiety during ‘pre and post – test’.

Table – III: Comparison of Pre-Operative ‘Anxiety Level’ Among Samples in Both Groups

(n = 20)

Group	Test	Mean	Standard Deviation	Paired ‘T’ test Value	‘P’ Value
Study	Pre-Test	65.4	11.89	12.37 (df = 19)	0.001***
	Post-Test	32.9	8.13		
Control	Pre-Test	66.65	9.12	0.154 (df = 19)	0.879 ^{NS}
	Post-Test	66.50	8.88		

*** - Highly Significant, NS – Not Significant

Table – III shows the paired ‘t’ test values of level of anxiety among samples in ‘study and control group’. With regard to ‘study group’, the pre-test mean and standard deviation anxiety scores were 65.4 + 11.89 and the post-test mean and standard deviation anxiety scores were 32.9 ± 8.13. the paired ‘t’ test valued was 12.3 for the degree of freedom 19 and it was significant at the ‘P’ value < 0.001. In ‘control group’, the pre-test mean and standard deviation anxiety scores were 66.5 ± 9.12 and the post-test mean and standard deviation anxiety scores were 66.50 ± 8.88. the paired ‘t’ test value was 0.154 for the degree of freedom 19, it was not significant at the ‘P’ value < 0.879.

Table – IV: Comparison of Post – Operative Anxiety Mean, Mean Difference, Standard Deviation and Independent ‘t’ test Among Samples in Both Groups

(n = 20)

Post - Test	Mean	Mean Difference	Standard Deviation	Independent ‘t’ test	‘P’ value
Study	32.9	33.6	8.13	12.45 (df = 38)	0.001***
Control	66.50		8.88		

*** - Highly Significant

The above table shows the post-test mean and standard deviation values of anxiety among samples in ‘study group’ as 32.9 ± 8.13. similarly, in ‘control group’ it was 66.50 ± 8.88. the difference in mean of 33.6 and the independent ‘t’ test value was 12.45 for degree of freedom 38. It was significant at the ‘P’ value < 0.001.

Table – V: Association of Pre-operative Anxiety on Socio-Demographic Variables
(n = 20)

S. No	Demographic Variables		Pre-Test			Post-Test		
			Mean	SD	P	Mean	SD	P
1	Age	18 – 35	67.33	1.155	0.09 ^{NS}	30.33	9.292	0.33 ^{NS}
		36 – 55	68.46	8.491		34.92	8.088	
		> 55	54.00	19.715		28.50	7.047	
2	Gender	Male	63.50	13.201	0.49 ^{NS}	34.10	8.034	0.54 ^{NS}
		Female	67.30	10.781		31.80	8.496	
3	Education	Primary School	53.00	24.042	0.41 ^{NS}	33.50	12.021	0.66 ^{NS}
		Middle School	65.33	11.622		29.67	8.595	
		High School	70.43	4.117		35.43	8.243	
		Intermediate / Diploma	69.75	2.630		35.00	7.348	
		Graduate	38.00	0		26.00	0	
4	Occupation	Unemployed	7	66.14	0.41 ^{NS}	32.57	8.364	0.27 ^{NS}
		Employed	11	66.91		34.73	8.113	
		Retired	2	54.50		24.50	.707	
5	Family Monthly Income	68967 - 92185	0	0	0.24 ^{NS}	0	0	0.9 ^{NS}
		46095 - 68961	6	64.67		32.17	8.377	
		27654 – 46089	8	70.38		34.00	9.118	
		9232 – 27648	6	59.50		32.33	7.866	
6	Marital Status	Unmarried	72.00	4.000	0.31 ^{NS}	40.33	3.786	0.08 ^{NS}
		Married	64.24	12.503		31.65	8.046	
7	Residence	Rural	65.31	11.506	0.96 ^{NS}	31.92	8.291	0.45 ^{NS}
		Urban	65.57	13.526		34.86	8.092	
8	History of Surgery	No	70.12	3.018	0.01 ^{***}	34.18	8.233	0.11 ^{NS}
		Yes	38.67	3.055		26.00	1.000	
9	Type of Anaesthesia	Epidural	68.00	.0	0.93 ^{NS}	41.00	0	0.41 ^{NS}
		General	63.13	14.701		33.88	7.754	
		Regional	67.00	1.414		25.00	1.414	
		Spinal	66.78	11.734		33.00	8.916	
10	Position of Hernia	Left side	62.80	14.043	0.29 ^{NS}	35.00	8.426	0.8 ^{NS}
		Right side	68.08	8.411		32.08	8.149	
		Bilateral	54.50	26.163		33.50	12.021	
11	Type of Hernia	Direct	62.50	16.442	0.59 ^{NS}	36.50	7.326	0.34 ^{NS}
		Indirect	66.13	11.057		32.06	8.298	
12	Risk Factors	Smoking	69.00	4.243	0.03 ^{***}	34.50	12.021	0.82 ^{NS}
		Alcohol	70.50	3.536		31.50	13.435	

		Heavy Objects Lifting	65.40	13.446		33.00	7.036	
		Chronic Cough	71.25	2.217		36.25	9.605	
		Family History	37.00	1.414		25.50	.707	
		Bowel / Bladder Disturbances	68.60	3.050		33.20	8.556	

NS – Not Significant, * - Significant at ‘P’ value < than 0.05

Table – V shows the pre-test anxiety with the demographic variables such as history of surgery (P value 0.001) and risk factors (P value 0.03), was found highly significant.

Discussion

The present study was done with the objective to evaluate the effectiveness of nurse – led preoperative awareness program on anxiety among patients undergoing surgery for inguinal hernia. Study findings revealed the decrease in ‘anxiety’ among samples in ‘experimental group’ while compared with the samples in ‘control group’. These findings are similar to the results of the following studies.

A study was done by **Mary J.I et al.**¹¹ in a tertiary care teaching hospital at Puducherry with the aim to evaluate the effectiveness of video – assisted teaching program in reducing anxiety level among patients undergoing upper gastro -endoscopy. The results of this study shows the difference in mean level of anxiety before and after the intervention at $P < 0.01$ in experimental group.

Padam A et al.¹² done a randomized control trial with the aim to assess the effect of listening to vedic chants and Indian classical instrumental music on anxiety levels and blood pressure, heart rate and oxygen saturation levels among patients undergoing upper GI endoscopy. Results of the study shows a significant reduction in anxiety state scores was witnessed in the interventional group samples from 40.4 ± 8.9 to 38.5 ± 10.7 , p value < 0.05.

In a quasi-experimental study, which was conducted at Valli hospital. Erode by **Ganesh S and Padmavathi P**¹³ The main objective of the research was ‘to assess the effectiveness of intra-operative video therapy on anxiety among patients under spinal anaesthesia’. As per the findings of the study, the patient’s ‘anxiety’ decreased from the mean value of 36.33 ± 8.96 and 35.67 ± 7.78 to 34.33 ± 8.06 and 28.07 ± 5.54 in control and experimental group respectively.

Some of the studies were quoted below which do not support the findings of the present study. **Vimala T. J. C et al.**¹⁴ done an experimental study with the aim to evaluate the effectiveness of structured pre-operative education on anxiety level of patients undergoing elective orthopaedic surgery, based on the findings of this study, the author concluded that the structured education did not produce any significant impact on the post-operative anxiety in patients undergoing orthopaedic surgery. In another study done by **Paripoorani D et al.**¹⁵

conducted a quasi-experimental study with the aim to evaluate the effectiveness of instructional video on preoperative anxiety among patients undergoing orthopaedic surgery in selected orthopaedic wards of CMC hospital Vellore. Results of the study depicts that there was no significant association between the preoperative anxiety levels and the demographic variables such as age, sex, education and occupation ($p = > 0.05$).

Nurse led preoperative awareness program was found to be highly effective among the selected samples for this study. All the samples in the experimental group were satisfied by the information given related to the expected pain, anaesthesia effect, pain control interventions during post-operative days. These might help to lower the level of preoperative anxiety in the samples in interventional group.

Conclusion

Most significant finding of this study shows majority of the patients who undergoes surgeries were with moderate or high levels of anxiety. The pre-operative awareness program led by nurses had helped the patients undergoing inguinal hernia surgery to have a significant decrease in their level of pre-operative anxiety. This study also had given the new evidence to the nursing world that all patients who had gone through the nurse led preoperative awareness program had also experienced significant reduction in their clinical variables like respiratory rate, heart rate, diastolic and systolic blood pressure. It is also very essential for the nurses working with preoperative patients to locate the risk factors prompting anxiety and assure that patients are at easeful.

References

1. Videbeck S, Videbeck S. Psychiatric-mental health nursing. 5th edition. Lippincott Williams & Wilkins; 2013
2. Jawaid M, Mushtaq A, Mukhtar S, Khan Z. Preoperative anxiety before elective surgery. *Neurosciences (Riyadh)*. 2007 Apr 1;12(2):145.
3. Boker A, Brownell L, Donen N. The Amsterdam preoperative anxiety and information scale provides a simple and reliable measure of preoperative anxiety. *Can J Anesth*. 2002;49(8):792–798. doi: 10.1007/BF03017410.
4. Vileikyte L. Stress and wound healing. *Clin Dermatol*. 2007;25(1):49–55. doi: 10.1016/j.clindermatol.2006.09.005.
5. Aba YA, Avci D, Guzel Y, Ozcelik SK, Gurtekin B. Effect of music therapy on the anxiety levels and pregnancy rate of women undergoing in vitro fertilization-embryo transfer: A randomized controlled trial. *Appl Nurs Res*. 2017 Aug;36:19-24. doi: 10.1016/j.apnr.2017.05.005. Epub 2017 May 22. PMID: 28720234.
6. John T Jenkins, Patrick J O'Dwyer. Inguinal hernias. *British Medical Journal*. BMJ 336 (7638): 269–272.
7. Everhart JE. Abdominal wall hernia. In: Everhart JE, ed. *Digestive diseases in the United States: epidemiology and impact*. Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases, 1994:471–507.

8. Ein SH, Njere I, Ein A. Six thousand three hundred sixtyonepediatric inguinal hernias: A 35- year review. *J Pediatr Surg.* 2006; 41: 980–86.
9. Mulugeta H, Ayana M, Sintayehu M, Dessie G, Zewdu T. Preoperative anxiety and associated factors among adult surgical patients in Debre Markos and FelegeHiwot referral hospitals, Northwest Ethiopia. *BMC Anesthesiol.* 2018 Oct 30;18(1):155. doi: 10.1186/s12871-018-0619-0. PMID: 30376809; PMCID: PMC6208029.
10. Spielberger CD, Edwards CD, Lushene R, Monturoi J, Platzek D. *State Trait Anxiety Inventory.* USA: Mind Garden Inc; 1977.
11. Immaculate Mary J et.al. Effect of Video Assisted Teaching on Anxiety among Patients Undergoing Upper Gastro Endoscopy.
12. Padam, et al.: Effect of listening to Vedic chants and Indian classical instrumental music in endoscopy
13. Paripoorani D, Babu V, Poongodi K, Cherian VM. Effectiveness of instructional video on preoperative anxiety of patients undergoing orthopedic surgery. *Indian J ContNsgEdn*2015;16:36-41.
14. Vimala, et al.: Effect of structured pre-operative education on anxiety

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