

A quasi Experimental Study to Assess the Impact of Preoperative Patient Education on Selected Physiological Parameter, Anxiety level and Compliance to Education Among Patient Undergoing Abdominal Surgery Admitted in Selected Hospitals at Pune City, Maharashtra.

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Abstract

The preoperative patient education is very necessary to prevent the complication, increasing the awareness regarding the procedure protocol, gain a better understanding of their surgery, decreased postoperative pain and anxiety, reducing the stay of hospital and as soon as possible regain the normal health process of patient without any hospital hazards. Preoperative patient education is very effective on patients undergoing in abdominal surgery & management of anxiety and compliance of education. **The aim of the study:** to assess the impact of preoperative patient education on selected physiological parameter, anxiety level and compliance to education among patient undergoing abdominal surgery. **Material and method:** In present study, researcher adopted Quantitative Approach and Quasi experimental post-test group research design. It was carried out on 60 hospitalized patients in surgery ward. The Non probability purposive sampling method was adopted, data was collected using demographic profile & clinical profiles and preoperative patient education was given to interventional group. The impact of preoperative patient education was assessed by patient's compliance scale & anxiety assessed by Anxiety test for adults **Results:** The study is concluded with majority of patients were having age group 51- 60 years & that is 33.33%. Gender wise majority of patients were having male 63.33% and female were 36.66%. Majority of participant were received secondary education level that is 43.33%. 16.66 % participants were having comorbidity in experimental group. Majority of were age group 51- 60 years that is 33.33%. Female 80.00% and male are 20.00%. Majority of participant received graduate level that is 36.66%. 26.66 % participants were having comorbidity. 95% of patient were having normal parameters and 5 % of patients were having abnormal vital parameters experimental group and control group. Finding shows majority of have high level of anxiety before preoperative education that is 100%. After intervention majority of patient have moderate level of anxiety that is 73.34% and 26.66% have mild level of anxiety in experimental group and finding shows that according the

majority of patient high level of anxiety before surgery that is 100%. After surgery majority of patient have high level of anxiety that is 90.00% and 10.00% have moderate levels of anxiety. A study shows Impact of preoperative patient education among patients undergoing to abdominal surgery in experimental group is analyzed by unpaired t-test. The mean of compliance of preoperative patient education scale experimental group before intervention was 30.43 & after intervention score was 17.50 which indicates the calculated t-value 9.8078 is more than tabulated value. The value of t is 9.8078. So, result is significant at $p < 0.05$. Before Intervention the overall mean score is 30.43, and after intervention the overall mean score is 17.50. the SD before intervention 2.90 and after intervention is 6.62 at the df is 58 it shows that the impact of preoperative patient education is significant. **Conclusion:** From the above findings, the researcher concluded that the preoperative patient education is effective to reduce the compliance of education & anxiety as well as its boost the quick recovery of post-operative patients.

Keywords: Preoperative patient education, impact, anxiety, selected parameters vital abdominal surgery, & compliance to education.

Introduction

Nurses are the back bone of the health care system and treating the patient with help of theoretical and practical knowledge. A small act of nurse towards the patient care that is based on evidence-based practice and proved by nursing scholars. The preoperative patient education is very necessary to prevent the complication, increasing the awareness regarding the procedure protocol, gain a better understanding of their surgery, experience decreased postoperative pain and anxiety, reducing the stay of hospital and as soon as possible regain the normal health process of patient without any hospital hazards. Abdominal surgery is the most common operative procedure including a wide range of both emergency and elective surgical interventions. After the name of surgery, the patient as well as relative are very afraid and taking too much tension because they are not familiar to any kind of operative procedure for that preoperative patient education and relative counselling is very important for the positive postoperative outcome. The overall rate of operation on the abdomen increased with age from 13.4% in patients less than 30 years old to 43.8% in those who above the age of 60. Admission to hospital and the prospect of surgery is accepted as extremely anxiety-provoking. The incidence of preoperative anxiety in adults reported to affect 60–80% of surgical patients. Therefore, the surgical nurses are the key persons in the health care team who have to prepare the patients physically and mentally before the operation in order to relieve their stresses, anxiety, and the possible postoperative complication, so that they can recover more quickly. Few experimental or quasi experimental research studies have explored the impact of preoperative education in patients undergoing abdominal surgery. Evidence of the effect of preoperative education among surgery patients is inconclusive. In view of the above, the researcher felt the need to evaluate the effectiveness of preoperative teaching in promoting postoperative outcome among patients undergoing abdominal surgery

Need of the study

Surgery is a stressful experience; no one patient is going happily for surgery. Fear of postoperative pain causes anxiety. The purpose of this study was to investigate the impact of patient education on selected physiological parameter management, anxiety level and compliance to preoperative patient education, control of patients' anxiety and behavioral management before abdominal surgery. Practice guidelines for physiological parameter and anxiety management in postoperative patients recommend providing consistent preoperative patient education that includes behavioral techniques to manage the anxiety level and compliance to education. However, literature indicates that most nurses deliver patient education based on personal preferences, time limitations, and availability of teaching content. The purpose of this study was to evaluate patient satisfaction with scripted preoperative patient education to the management of selected physiological parameters (pulse, respiration, spo2 and blood pressure), anxiety level and compliance to education for patients undergoing abdominal surgery. **UMRAN DAL YILMAZ, ET.LA (2019)** They are conducted a descriptive cross sectional study on Nurses practice of preoperative patient education in Cyprus which are consisted of 80 employed nurses in surgical clinics of a state hospital and university hospital in Nicosia. The study was conducted on the nurses, out of whom 70% had a bachelor's degree, 88.8% provided patients with teaching before the operation, 62.5% offered patients with this education at the time of hospitalization for surgery and 88.7% of those who offered education preferred verbal explanation and 67.6% used print training materials. It was determined that 72.5% included the patient's family and relatives to the education process, 71.2% considered cultural characteristics and habits while offering education to the patient and patient's family, 62.5% were able to determine the suitable time and duration while offering education to the patient, 72.5% paid attention to not use medical terms in education and 81.2% allowed the patient and patient's family to ask questions. It was determined that the nurses mostly provided teaching before the operation but there were some deficiencies in the realization of education. It is recommended to develop education materials/brochures and suitable tools and equipment for surgical nurses to offer comprehensive and effective preoperative education.

Aim of study

Aim of preoperative patient education to prevent the post-operative complication of the abdominal surgery, reduce anxiety, pain and reduced the length of stay in the hospital

Materials and methods

In this study a quasi experimental – post-test group design was applied for the study. The sample size which was selected for this study was 60 patients with abdominal surgery. Experimental Group 30 patient and Control Group 30 patient. **Sampling Technique** In this study, the non-probability purposive sampling technique was used. **Sampling Criteria** **Inclusion Criteria** Those who are undergoing abdominal surgery admitted in selected hospitals at Pune city Maharashtra. Patient who can understand Hindi or English or Marathi, **Exclusion Criteria** Critically ill patients those are intubated and unconscious and Patient with the History of previous abdominal surgery **Variables under Study Independent**

variable is impact Preoperative patient education and **dependent variables** are selected physiological parameters, anxiety level and compliance to preoperative patient education. **Selected Variables** In the study selected variables are Age, gender, education qualification, previous illness and surgery, any comorbidity and use of any prosthetic. **Research setting** is selected hospitals of Pune city in Maharashtra. **Population** Patients undergoing abdominal surgery. **Accessible Population** Patients undergoing abdominal surgery at selected hospitals of Pune city, Maharashtra. **Sample** Patients undergoing abdominal surgery at selected hospitals of Pune city, Maharashtra. **Setting** Selected Hospitals at Pune city, Maharashtra. **Sample Size** 60 patients who are undergoing abdominal surgery admitted in selected hospitals at Pune city Maharashtra. **Sampling Method** Non probability purposive sampling method was adopted in the study and samples selected for data collection were those who fallow inclusion criteria.

Results and discussions

Finding related to Demographic variables and clinical variables.

Showing the frequency and percentage of demographical variables for experimental group.

The majority of participants belong to age group of 51- 60 years that is 33.33%. Gender wise distribution shows majority of participants were male 63.33% and female are 36.66%. 46.33% had received secondary education well as 16.66% participants were having comorbidity, no history of previous illness & surgery. None of participant were using any prosthetic.

Showing the frequency and percentage of demographical for control group.

The majority of participants were belonging to in age group 51- 60 years that is 33.33%. Majority were female 80.00% and 20.00% are male. Majority of participant belong to graduate level that is 36.66%. 26.66 % participants have comorbidity and not have history of previous illness & surgery. None of the participant was using any types of prosthetic.

SECTION- (II)

Finding related to Selected Physiological parameters (pulse, respiration, temperature and blood pressure) impact of preoperative patient education.

EXPERIMENTAL GROUP

The distribution of vital parameters 95% of patient were having normal parameters and 5 % of patients were having abnormal vital parameters experimental group

CONTROL GROUP

The distributions of vital parameters 95% of patient were having normal parameters and 5 % of patients were having abnormal vital parameters control

SECTION (III)

Finding related to Anxiety assessment scale in Experimental group and control group.

Table 01: Showing the frequency and percentage of Anxiety assessment in Experimental group.

n=30

SR/NO	ANXIETY LEVEL BEFORE INTERVENTION		FREQUENCY	PERCENTAGE
1.	MILD	20 -37	00	00.00%
2.	MODERATE	38 -44	00	00.00%
3.	HIGH	45 -80	30	100%
	ANXIETY LEVEL AFTER INTERVENTION			
1.	MILD	20 -37	08	26.66%
2.	MODERATE	38 -44	22	73.34%
3.	HIGH	45 -80	00	00.00

Table 01: The data depicted in table shows that majority of participant were having high level of anxiety before preoperative education that is 100%. After intervention majority of patient were having moderate level of anxiety that is 73.34% and 26.66% were having mild level of anxiety.

Finding related to Anxiety assessment scale in Experimental group before intervention and after intervention

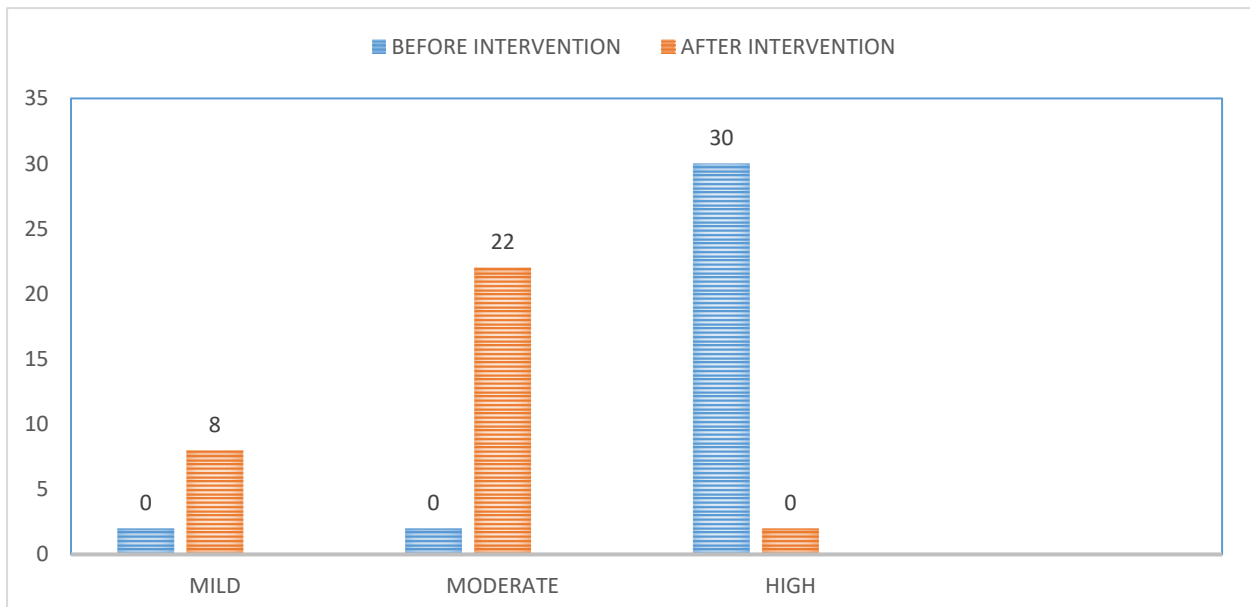


Figure 01: The data depicted in bar diagram shows that majority of participant were having high level of anxiety before preoperative education that is 100%. After intervention majority

of patient were having moderate level of anxiety that is 73.34% and 26.66% were having mild level of anxiety.

Table 02: Shows the frequency and percentage of Anxiety assessment in control group.
n=30

SR/NO	ANXIETY LEVEL BEFORE SURGERY		FREQUENCY	PERCENTAGE
	1.	MILD		
2.	MODERATE	38 -44	00	00.00%
3.	HIGH	45 -80	30	100%
ANXIETY LEVEL AFTER SURGERY				
1.	MILD	20 -37	00	00.00
2.	MODERATE	38 -44	03	10.00%
3.	HIGH	45 -80	27	90.00%

Table 02: The data depicted in table 0.6 shows that majority of participant were having high level of anxiety before surgery that is 100%. After surgery majority of patient were having high level of anxiety that is 90.00% and 10.00% were having moderate level of anxiety.

SECTION- (IV)

Finding related to compliance of preoperative patient education.

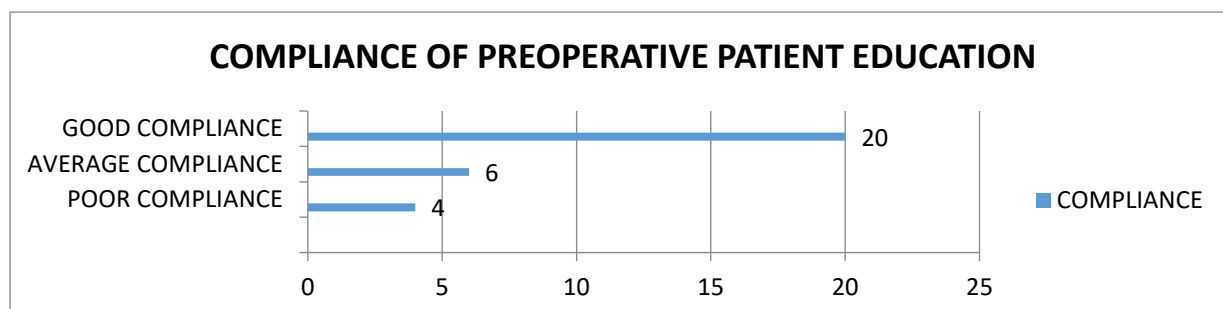
Table 03: Shows the frequency and percentage of the compliance of preoperative patient education of, patients who underwent abdominal surgery in experimental group.

SRNO	COMPLIANCE TO PREOPERATIVE PATIENT EDUCATION	SCORE	FREQUENCY	PERCENTAGE
1.	GOOD COMPLIANCE	27-28	20	66.66 %
2.	AVERAGE COMPLIANCE	13-26	6	20.00 %
3.	POOR COMPLIANCE	0-12	4	13.33%

The data depicted in table 07 show that majority of patients were having good compliance that is 66.66% and 20.00% were having average compliance well as 13.33% were having poor compliance.

Similar study was conducted by AU- Masry, Samah in 2018 on the Effect of preoperative educational intervention on preoperative anxiety and postoperative outcomes in patients undergoing open cholecystectomy. The study stated that planned education preoperatively diminished preoperative anxiety and lead to better surgical outcome as fewer post-operative symptoms, early recovery, effective pain control and early mobility.

Figure no 02: Finding related to compliance of preoperative patient education



The above data shows that majority of patients were having good compliance that is 66.66% and 20.00% were having average compliance well as 13.33% were having poor compliance

SECTION-(V)

Table No 04: Findings related to compliance of preoperative patient education among patients undergoing abdominal surgery in experimental group.

Experiment al group	N	MEA N	SD	df	t- value	p- value	REMAR K
Before Intervention	30	30.43	2.90	58	9.8078	<0.0001	Significant
		17.50	6.62				
After intervention	30						

The finding shows that Impact of preoperative patient education among patients undergoing abdominal surgery in experimental group is analyzed by unpaired t-test. The calculated t-value >9.8078 is more than tabulated value at the level of <0.05 so preoperative patient education is effective to reducing anxiety level of patients underwent abdominal surgery in experimental group.

Findings related to association between impact of preoperative patient education on anxiety with demographical variables in experimental and control group.

Association between the demographic variables and compliance of preoperative patient education in experimental group

The association between demographic variables and compliance of preoperative patient education which is calculated by chi-square test. All the calculated values are less than tabulated value at the level of 0.05 it indicates there is no significant association between demographic variables and compliance of preoperative patient education in experimental group.

Association between the demographic variables and compliance of preoperative patient education in control group. The association between demographic variables and compliance of preoperative patient education which is calculated by chi-square test. All the calculated values are less than tabulated value at the level of 0.05 it indicates there is no significant association between demographic variables and compliance of preoperative patient education in control group. Association between the demographic variables and impact of preoperative patient education on anxiety in experimental group.

The association between demographic variables and impact of preoperative patient education on anxiety which is calculated by chi-square test. All the calculated values are more than tabulated value at the level of 0.05 it indicates there is significant association between demographic variables and impact of preoperative patient education on anxiety in experimental group

Association between the demographic variables and impact of preoperative patient education anxiety in control group.

The association between demographic variables and impact of preoperative patient education on anxiety which is calculated by chi-square test. All the calculated values are more than tabulated value at the level of 0.05 it indicates there is significant association between demographic variables and impact of preoperative patient education on anxiety in control group

Discussion

This study has been conducted on to assess the impact of preoperative patient education on selected physiological parameter, anxiety level and compliance to education among patient undergoing abdominal surgery using descriptive and inferential statistics. Experimental group

Finding shows that majority of participants belong to age group of 51- 60 years that is 33.33%. Gender wise distribution shows majority of participants were male 63.33% and female are 36.66%. 46.33% had received secondary education well as 16.66% participants were having comorbidity, no history of previous illness & surgery. None of participant were using any prosthetic. **Control group:** Finding Shows that majority of participants were belong to in age group 51- 60 years that is 33.33%. Majority were female 80.00% and 20.00% ere male. Majority of participant belong to graduate level that is 36.66%. 26.66 % participants have comorbidity and not have history of previous illness & surgery. None of the participant were using any types of prosthetic. **Experimental group** Finding Shows the distribution of vital parameters 95% of patient were having normal parameters and 5 % of patients were having abnormal vital parameters experimental group. **Control group** Finding

shows the distribution of vital parameters 95% of patient were having normal parameters and 5 % of patients were having abnormal vital parameters experimental group. **Experimental group** Finding shows that majority of participant were having high level of anxiety before preoperative education that is 100%. After intervention majority of patient were having moderate level of anxiety that is 73.34% and 26.66% were having mild level of anxiety **Control Group** Finding shows that majority of participant were having high level of anxiety before surgery that is 100%. After surgery majority of patient were having high level of anxiety that is 90.00% and 10.00% were having moderate level of anxiety. **Experimental group** Finding show that majority of patients were having good compliance that is 66.66% and 20.00% were having average compliance well as 13.33% were having poor compliance.

Table no 05. Findings related to impact of preoperative patient education patient undergoing to abdominal surgery in experimental group

Experimen tal group		N	MEA N	SD	d f	t- value	p- value	REMAR K
	Before Interventi on	30	30.43	2.9 0	5 8	9.807 8	<0.00 01	Significa nt
	After interventi on	30	17.50	6.6 2				

Conclusion

The study is concluded with majority of patients age group belong to 51- 60 years that is 33.33%. Gender wise distribution shows majority of male 63.33% and female are 36.66%. Majority of participant belong to secondary education level that is 43.33%. 16.66 % participants have comorbidity in experimental group. Majority of age group belong to 51- 60 years that is 33.33%. Gender wise distribution shows majority of female 80.00% and male are 20.00%. Majority of participant belong to graduate level that is 36.66%. 26.66 % participants have comorbidity. Finding shows majority of patient's vital parameters that is normal in the 95% of patient and abnormal only in 5% in experimental group and control group. Finding shows majority of have high level of anxiety before preoperative education that is 100%. After intervention majority of patient have moderate level of anxiety that is 73.34% and 26.66% have mild level of anxiety in experimental group and Finding shows that according the majority of patient high level of anxiety before surgery that is 100%. After surgery majority of patient have high level of anxiety that is 90.00% and 10.00% have moderate levels of anxiety. Impact of preoperative patient education among patients undergoing to abdominal surgery in experimental group is analyzed by unpaired t-test. The calculated t-value **9.8078** is more than tabulated value. The value of t is **9.8078**. So, result is significant at $p < 0.05$. Before Intervention the overall mean score is 30.43, and after

intervention the overall mean score is **17.50**.the SD before intervention **2.90** and after intervention is **6.62** at the DF is **58** it shows that the impact of preoperative patient education is significant

Conflict of Interest

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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