Original Article

"Effect Of Preoperative Education On Length Of Stay Of Patients Undergoing Abdominal Surgeries: An Experimental Study." In A Tertiary Care Hospital In Northern India

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Abstract

The health care system has received much attention in recent years as efforts are made to reduce costs while maintaining or improving the quality of care. Studying outcomes has been one method of evaluating health care delivery. One commonly measured outcome of interest is length of stay (LOS).

Objectives: To determine the effectiveness of video assisted education on length of stay of patients undergoing abdominal surgeries.

Materials and methods: An experimental study was undertaken to assess the effect of video assisted education on length of stay on patients undergoing abdominal surgeries. Total 63 samples in the control group and 63 in the experimental group aged 18 years and above were selected by random sampling from all surgical wards (male and female wards) where patients were admitted for surgery. Patients in the intervention group were prepared for surgery one day prior to the surgery in the surgical wards during preoperative period by showing them videos on what to expect before, during and after surgery and were monitored for performing exercises regularly every three to four hours post operatively. The length of stay in the hospital was marked including the day of surgery and days spent in ICU and post operative wards by an observational checklist. Descriptive and inferential statistics was used for the analysis of the tabulated data.

Results: Out of 63 in experimental group respondents' maximum respondents 16 (25%) were from age group of 38-47 years. Majority of the respondents 33 (52%) were male, 57(90%) were married, 20 (32%) of the participants were Graduates.
In control group, majority 17 (27%) of the participants were in the age group 48-57 years. 36 (57%) were male and 55 (87%) were married, 26 (41%) of the participants educational status were less than 10th standard.
In the experimental group 45 (72% i.e majority of the participants stayed 5-8 days in hospital and in the control group also majority of the participants 41(65%) stayed 5-8 days in hospital. There was no significant difference in the length of stay in the hospital for surgery in both the groups The video assisted education did not show any significant effect on the length of stay of patients admitted for abdominal surgeries**.**
Our study results is consistent with the study findings by (Kalogianni, et al,216) indicated "the preoperative teaching minimize the postoperative complication but did not affect the effectiveness on length" of hospital stay.
From a time where a postoperative stay of 10 days was not uncommon, patients are now routinely discharged on postoperative day 2–3

Key words : Video assisted education , length of stay, abdominal surgeries , post operative complications.

INTRODUCTION:

Postoperative complications often result in increase in hospital stay as well as economic loss. High quality outcomes for patients undergoing surgery can be achieved through joint efforts of various health personnel. Optimizing outcome for the patients undergoing surgery requires the collaborative and coordinated efforts of physicians, nurses, and allied health personnel.

1. REVIEW OF LITERATURE:

(a) Samantha Jones et al evaluated the impact of a pre-operative education programme on length of hospital stay after surgery for primary and revision knee arthroplasty patients. The results of the study revealed that the mean length of stay was significantly reduced from 7 days in the Conventional group to 5 days in the Education group ($P < 0.01$). In addition, 20% more patients were discharged early (within 1-4 days) in the Education group compared to the Conventional group ($P < 0.01$).

(b) Results of a experimental study conducted by Lobo to investigate the effectiveness of preoperative teaching in promoting postoperative outcome, showed most 98.4% of patients did not develop any postoperative complications. Furthermore, it was found that more than half 54% of the patients were discharged with in 3 days, and less than half 46% were discharged on 4 to7 days.
(c) It was also found that the duration of hospital stays for patients undergoing abdominal surgery is longer than for other procedures, with an average hospital stay of 13–36 days (Howes et al). A long stay can adversely impact the patient financially.

2. MATERIALS & METHODS:

An experimental study was undertaken to assess the **effect of preoperative education on length of stay on patients undergoing abdominal surgeries**. Total 63 samples in the control group and 63 in the experimental group aged 18 years and above were selected by random sampling from all surgical wards (male and female) where **patients** were admitted for surgery. A self administered questionnaire was prepared which consists of questions to assess demographic profile & length of stay was taken from the hospital / patient's records to note the duration of stay in the hospital for surgery.
Patients in the intervention group were prepared for surgery by showing them videos on what to expect before , during and after surgery and were monitored for performing exercises regularly every three to four hours post operatively. The length of stay in the hospital was marked including the day of surgery and days spent in ICU and post operative wards by an observational checklist. Data analysis was done by descriptive & inferential statistics

3. RESULTS : -

- In experimental group, majority of the participants i.e. 25% belonged to age group 38-47 years
- In control group, majority 27% of the participants belonged to age group 48-57 years

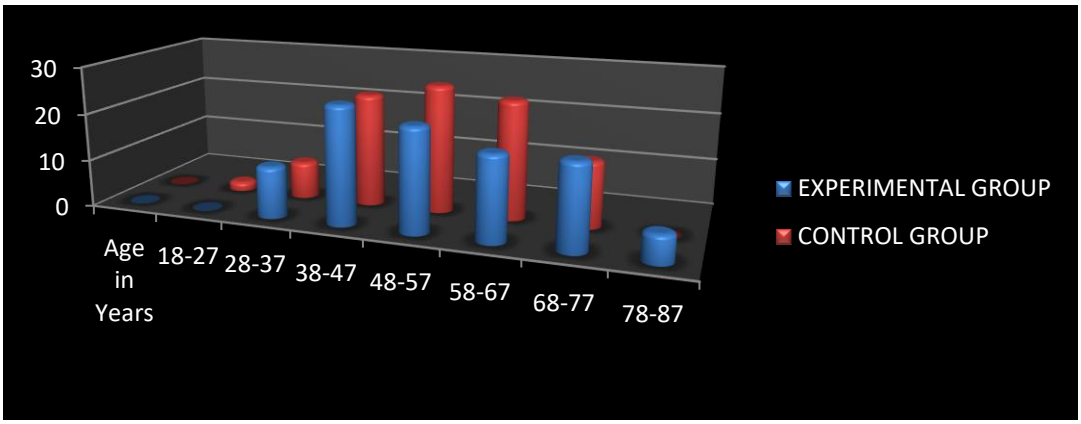

FIG 1: Distribution of samples as per age in years

• In experimental group, 52% of the participants were males and 48% were females. In control group, 57% were males and 43% were females.

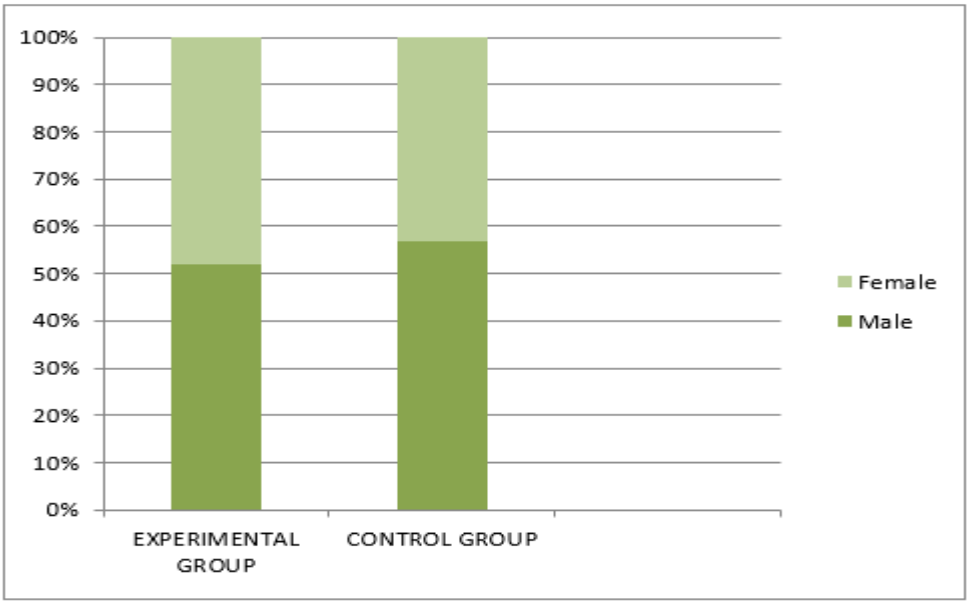

FIG 2 : Distribution of samples as per Gender

- In the experimental group , Majority of the samples i.e 48% were married.
- In the control group, Majority of the samples i.e 43% were married.

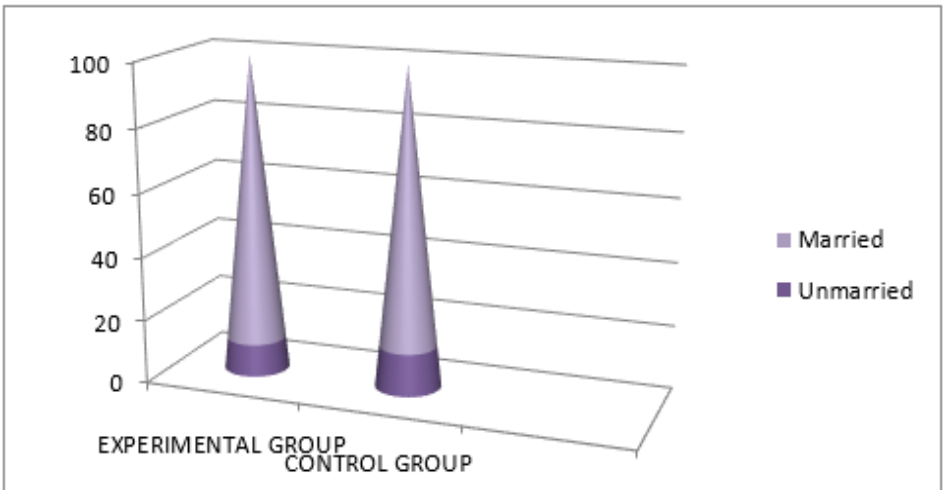

Fig 3 : Distribution of samples as per marital status

- In experimental group, 27% of the participants underwent surgery for hernia. In control group, majority 24 % of the participants underwent surgery for cholelithiasis.
- In experimental group, majority 31% were having nil co-morbidities. In control group, majority 33% had no co-morbidities.
- In experimental group, majority 49% of the participants were in ASA grading I. In control group, majority 46 % of the participants were ASA grading I& II.

Table 1 Comparison of length of stay in hospital of the experimental and control group (n=63+63)

	1-4 Days		5-8 Days		9-12 Days		13-16 Days	
Length of Hospital Stay	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Experimental group	-	-	45	72	18	28	-	-
Control group	03	5	41	65	18	28	01	2

Table 1 depicts that in experimental group 45 (72%) of the participants stayed 5-8 days in hospital and remaining (18) 28% of them stayed 9-12 days in hospital. In control group, 5% of the participants stayed 1-4 days in hospital, 41 (65%) of the participants stayed 5-8 days in hospital, 18 (28%) stayed 9-12 days and remaining 2% of them stayed 13-16 days in hospital n= 63 + 63

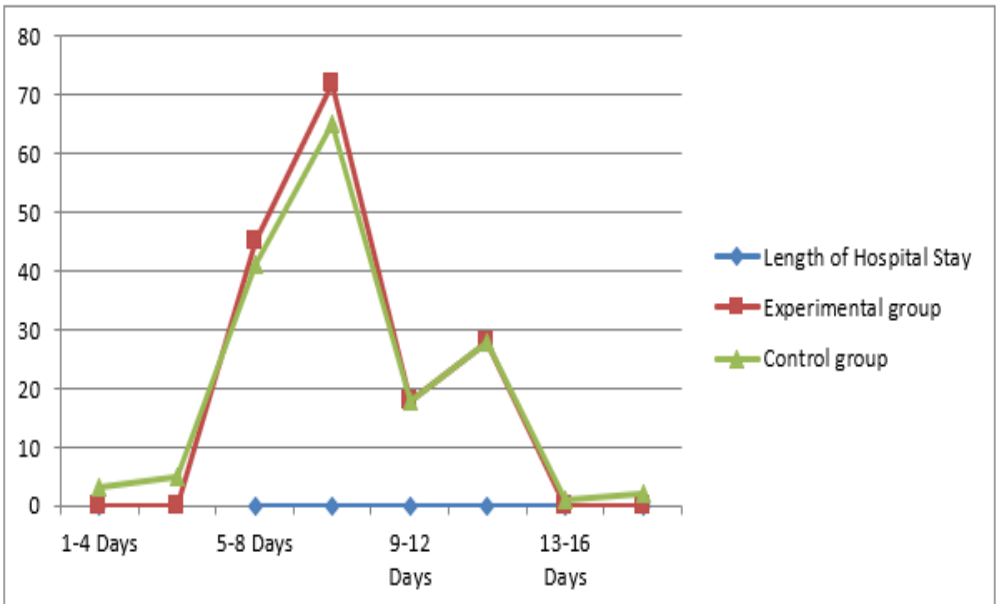

Fig 4 : Distribution of samples as per their length of stay in the hospital for surgery

Table 2 depicts that association of socio-demographic characteristics of experimental group with length of stay in hospital. The analysis revealed that there is no significant association established with the selected socio- demographic variables

Table 2: Association of selected demographic characteristics of experimental group with length of stay in hospital.

S.No.	Socio-Demographic Variable	Total Sample (n)	LENGTH OF STAY IN HOSPITAL								Chi- square Table Value, df	Chi-square (p value)
			1-4 days		5-8 days		9-12 days		13- 16 days			
			f	%	f	%	f	%	f	%		
1.	**AGE:**											
	18-27	-	-	-	-	-	-	-	-	-		
	28-37	7	-	-	6	9	1	1	-	-	11.07, 5	6.46 (0.264)
	38-47	16	-	-	9	14	7	12	-	-		
	48-57	14	-	-	11	17	3	5	-	-		
	58-67	11	-	-	10	16	1	1	-	-		
	68-77	11	-	-	6	9	5	8	-	-		
	78-87	4	-	-	3	5	1	1	-	-		
	Above 87	-	-	-	-	-	-	-	-	-		
2.	**GENDER:**											
	Male Female	33	-	-	25	40	8	13	-	-		
		30	-	-	20	31	10	16	-	-	3.84, 1	6.36 (0.425)
3.	**EDUCATION:**											
	Less than 10	17	-	-	10	16	7	12	-	-		
	10-12	17	-	-	13	21	4	6	-	-	7.82, 3	4.45 (0.217)
	Graduate	20	-	-	17	27	3	5	-	-		
	Post-graduate	9	-	-	5	8	4	6	-	-		
	Others	-	-	-	-	-	-	-	-	-		
4.	**BODY MASS INDEX:**											
	Less than 25	45	-	-	34	54	11	17	-	-		
	25-30	18	-	-	11	17	7	12	-	-	3.84, 1	1.31 (0.252)
	31-35	-	-	-	-	-	-	-	-	-		
	36-40	-	-	-	-	-	-	-	-	-		
	More than 40	-	-	-	-	-	-	-	-	-		

Table 3 : Association of selected demographic characteristics of control group with length of stay in hospital.

S.No.	Demographic Variable	Total Sample (n)	LENGTH OF STAY IN HOSPITAL								Chi- square Table Value, df	Chi-square (p value)
			1-4 days		5-8 days		9-12 days		13-16 days			
			f	%	f	%	f	%	f	%		
1.	**AGE:**											
	18-27	1	-	-	1	1	-	-	-	-		
	28-37	5	1	2	4	6	-	-	-	-	24.99, 15	23.40 (0.076)
	38-47	15	1	2	11	17	3	5	-	-		
	48-57	17	-	-	14	22	3	5	-	-		
	58-67	16	1	2	5	8	10	16	-	-		
	68-77	9	-	-	6	9	2	3	1	2		
	78-87	-	-	-	-	-	-	-	-	-		
	Above 87	-	-	-	-	-	-	-	-	-		
2.	**GENDER:**											
	Male Female	36	1	1	24	38	10	16	1	1		
		27	2	3	17	27	8	13	-	-	7.82, 3	1.49 (0.683)
3.	**EDUCATION:**											
	Less than 10	26	1	1	17	27	7	12	1	1		
	10-12	11	-	-	6	10	5	8	-	-	16.92, 9	4.35 (0.88)
	Graduate	16	1	1	11	18	4	6	-	-		
	Post-graduate	10	1	1	7	12	2	3	-	-		
	Others	-	-	-	-	-	-	-	-	-		
4.	**BODY MASS INDEX:**											
	Less than 25	34	3	5	22	35	9	14	-	-		
	25-30	28	-	-	18	28	9	14	1	2	12.59, 6	4.46 (0.614)
	31-35	1	-	-	1	2	-	-	-	-		
	36-40	-	-	-	-	-	-	-	-	-		
	More than 40	-	-	-	-	-	-	-	-	-		

Table 3 depicts that association of socio-demographic characteristics of control group with length of stay in hospital. The analysis revealed that there is no significant association established with the selected socio- demographic variables

CONCLUSION

Research studies supports the need of patient education: Patient education enhances patient knowledge, and the utilization of health care services, and is also financially beneficial. There are many techniques for educating patients, including face-to-face conversation, demonstration, brochures and written instructions, telephone conversation, video, and the Internet which can influence the behavior of the patients thereby improving postoperative outcomes.

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