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A study to assess the effectiveness of preoperative instructions on post-operative measure among undergoing abdominal hysterectomy in saveetha medical college and hospital

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Abstract

The Abdominal Hysterectomy is a surgical procedure that removes your uterus through an incision in your lower abdomen. The majority of cases, hysterectomy is performed through the abdomen. Incidence of 30% of women by the age of 60; 590,000 procedures annually in the USA. It remains the fall back option, the uterus cannot be removed by another approach. Mini-AH refers to an approach to hysterectomy where the abdominal incision does not exceed 7cm. The present aim of the study was to assess the effectiveness of preoperative instructions on post-operative outcomes measure among undergoing abdominal hysterectomy in saveetha hospital.

Objectives: 1.To assess the pre-test and post-test level of post-operative outcomes among women undergoing abdominal hysterectomy in experimental and control group.2.To assess the effectiveness of preoperative instructions on post-operative outcomes among women undergoing abdominal hysterectomy.3.To associate the post-test level of post-operative outcomes among women undergoing abdominal hysterectomy with the selected demographic variables in the experimental group.

Methodology: The data was collected from 50 women's undergoing hysterectomy with non-probability purposive sampling technique in SMCH Chennai. In this one group pre experimental with post-test control group research design was used to conduct the study. The data was collected by using closed ended structured knowledge questionnaire. The data collected period and STD was 07-06-2021 to 07-07-2021.

Result: Among 50 samples of women undergoing abdominal hysterectomy the pre-test of control group, 20(80%) had low level of awareness and 5(20%) had moderate level of awareness. Whereas in the post test, 19(76%) had low level of awareness and 6(24%) had moderate level of awareness among women undergoing hysterectomy. The study shows there will be a significant association between the post-test levels of post-operative outcomes among women undergoing abdominal hysterectomy in the experimental group.

Conclusion- The respiratory status of the patients who received pre-operative teaching on post-operative exercise was significantly higher than the patients who did not receive pre-operative teaching on post-operative exercises. The post-operative complications of the patients who received pre-operative teaching on post-operative exercise was significantly less than those who did not received pre-operative exercises was significantly higher than those patients who did not received pre-operatively.

Keywords: Knowledge, abdominal hysterectomy

Introduction

Post-operative pain is the greatest fear of patients who undergo any surgical procedure. Prevention and treatment of post-operative pain and complications such as post-operative nausea and vomiting continues to be a major challenge in post-operative care and plays an important role in the early mobilization and wellbeing of the surgical patients. The one of the most common types of surgery is Hysterectomy. Hysterectomy is still the only definitive treatment of dysfunctional uterine bleeding (DUB) and, compared with most other alternative therapies, has acceptable satisfaction. In the majority of cases, hysterectomy is performed through the abdomen, even though in many cases, vaginal surgery is considered less complicated than abdominal hysterectomy.

Gabapentin, a structural analogue of gamma-amino butyric acid, is used as an anticonvulsant drug. In addition, it has been effective in neuropathic pain, diabetic neuropathy, post herpetic neuralgia, and reflex sympathetic dystrophy. Pre-treatment with Gabapentin can block the development of hyperalgesia.

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Hysterectomy for benign gynaecological disease, mostly abnormal uterine bleeding, prolapse or uterine fibroids, is one of the most frequent gynaecological procedures (30% of women by the age of 60; 590,000 procedures annually in the USA). It can be performed through several approaches. Abdominal hysterectomy involves removal of the uterus through an incision in the lower abdomen. Vaginal hysterectomy involves removal of the uterus via the vagina, without an abdominal incision. Laparoscopic hysterectomy involves 'keyhole surgery' through small incisions in the abdomen. The uterus may be removed vaginally or, a Nermorcellation (cutting it up), through one of the small incisions. There are various types of laparoscopic hysterectomy, depending on the extent of the surgery performed laparoscopically compared to that performed vaginally. More recently, laparoscopic hysterectomy has been performed robotically. In robotic surgery, the operation is done by a robot, while the (human) surgeon steers the robot from a chair in the corner of the operating room. It is important to be well informed about the relative benefits and harms of each approach to make best informed choices for each woman needing hysterectomy for a benign disease.

Routes for hysterectomy include abdominal, vaginal, laparoscopic, or combined approaches. Traditional abdominal hysterectomy (AH) is one of the most common gynaecological surgical procedures in the treatment of benign gynaecological diseases.

The AH has traditionally been the surgical approach for gynaecological malignancy, when other pelvic pathology is present such as endometriosis or adhesions, and in the context of an enlarged uterus. It remains the 'fallback option' if the uterus cannot be removed by another approach. Mini-AH refers to an approach to hysterectomy where the abdominal incision does not exceed 7 cm. Several patient factors may influence the surgeon's choice of approach to hysterectomy. For example, multiparous women with heavy menstrual bleeding who opt for hysterectomy may well be suitable for a vaginal approach. However, in the same case but with the suspicion of endometriosis based on dysmenorrhoea, dyspareunia or both, the surgeon will more likely be inclined to an abdominal or laparoscopic approach. With regards to enlarged myomatous uteri, surgeons' experience and skills will largely determine the surgical approach to hysterectomy.

Methods and Materials

The quantitative approach with descriptive research design was adopted for the present study. After obtaining ethical clearance from the Institutional Ethical Committee (IEC) of Saveetha Institute of Medical And Technical Sciences and a formal permission from the department head the study was conducted. A total of 50 women undergoing abdominal hysterectomy who are admitted in ward (n=25) and the women undergoing abdominal hysterectomy who met the inclusion criteria were selected as the study participants by using non probability purposive sampling technique. The inclusion criteria for the study participants were the women undergoing abdominal hysterectomy between the age group of 20- 50 years, who are willing to participate and able to read, write and understand Tamil and English. The exclusion criteria for the study participants were women undergoing abdominal hysterectomy who are not able to read Tamil and English. The purpose of the study was explained by the investigator to each of the study participant and a written informed consent was obtained before collecting the data. The demographic data and the current level of knowledge was collected was obtained from them. The demographic data and the existing level of knowledge was collected by using the self-structured questionnaire and the collected data were tabulated and analysed by using descriptive and inferential statistics.

Results and Discussion

Section A: Description of the demographic variables of women undergoing abdominal hysterectomy

Among 10(40%) were in the age group of 21 – 30 and 31 – 40 years, 20(80%) were Hindus, 14(56%) had higher secondary education, 14(56%) were unemployed, 14(56%) had a family income of Rs.5001 – 10,000 per month, 14(56%) had the habit of consumption, 12(48%) were weighing 35 – 45 kg, 17(68%) had the height of 145 – 150 cm, 18(72%) were hospitalized for 7 days and 21(84%) belonged to nuclear family.

Section B: Assessment of level of awareness on post-operative outcome among women undergoing abdominal hysterectomy.

Table 1: Frequency and percentage distribution of level of awareness on post-operative outcome among women undergoing abdominal hysterectomy in the experimental group N = 25

Level of Awareness	Low (0 – 10)		Moderate (11 – 15)		High (16 – 20)	
	No.	%	No.	%	No.	%
Pre-test	20	80.0	5	20.0	0	0
Post Test	0	0	6	24.0	19	76.0

Table 1 shows that in the pretest of experimental group, 20(80%) had low level of awareness and 5(20%) had moderate level of awareness. Whereas in the post test,

19(76%) had high level of awareness and 6(24%) had moderate level of awareness among women undergoing hysterectomy

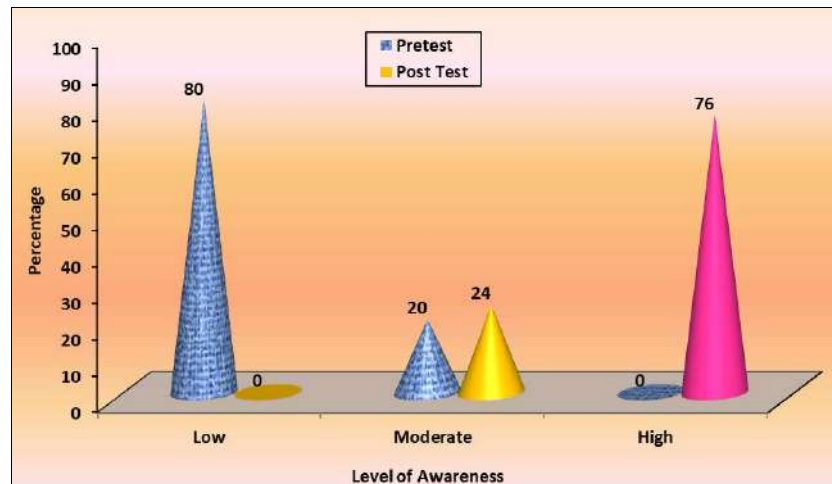


Fig 1: Percentage distribution of level of awareness on post-operative outcome among women undergoing abdominal hysterectomy in the experimental group

Table 2: Frequency and percentage distribution of level of awareness on post-operative outcome among women undergoing abdominal hysterectomy in the control group n = 25

Level of Awareness	Low (0 – 10)		Moderate (11 – 15)		High (16 – 20)	
	No.	%	No.	%	No.	%
Pre-test	20	80.0	5	20.0	0	0
Post Test	19	76.0	6	24.0	0	0

The above table 3 shows that in the pre-test of control group, 20(80%) had low level of awareness and 5(20%) had moderate level of awareness. Whereas in the post test,

19(76%) had low level of awareness and 6(24%) had moderate level of awareness among women undergoing hysterectomy.

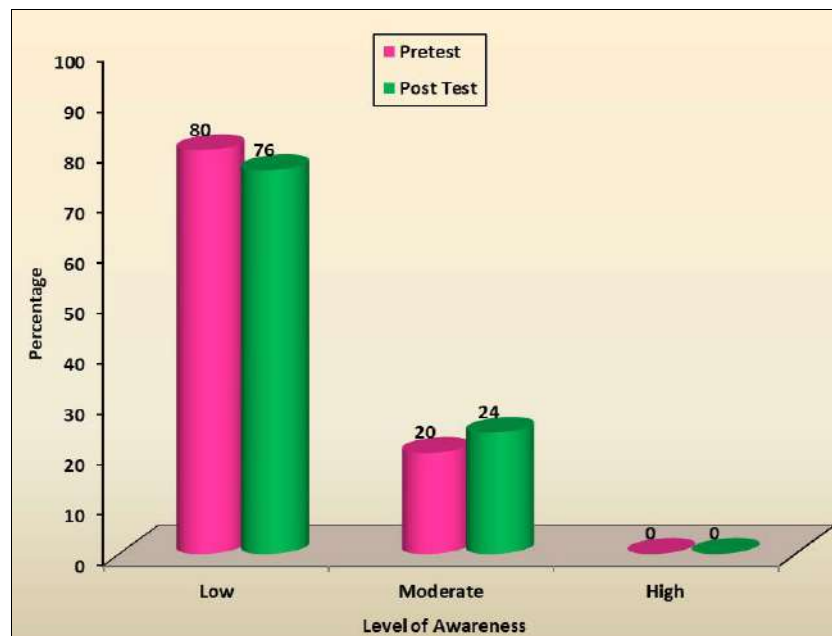


Fig 2: Percentage distribution of level of awareness on post-operative outcome among women undergoing abdominal hysterectomy in the control group

Section C: Effectiveness of post-operative instructions on knowledge on post-operative outcomes among women undergoing abdominal hysterectomy

Table 4: Effectiveness of post-operative instructions on awareness on post-operative outcomes among women undergoing abdominal hysterectomy in the experimental group n = 25

Awareness	Mean	S.D	Paired 't' test Value
Pretest	8.68	2.27	
Post Test	16.84	2.01	t = 17.054 p = 0.0001 S***

p<0.001, S – Significant

The table 4 depicts that in the experimental group, the pretest mean score of awareness was 8.68 with standard deviation 2.27 and the post-test mean score was 16.84 with standard deviation 2.01. The calculated paired 't' test value of $t = 17.054$ was found to be statistically significant at $p < 0.001$ level. This clearly infers that post-operative instructions on post-operative outcomes administered to women undergoing abdominal hysterectomy was found to be effective in improving the post-test level of awareness.

Table 5: Comparison of pretest and post-test level of awareness on post-operative outcomes among women undergoing abdominal hysterectomy in the control group $n = 25$

Awareness	Mean	S.D	Paired 't' test Value
pre-test	8.64	2.31	$t = 2.009$ $p = 0.056$ N.S
Post Test	8.88	2.22	

N.S – Not Significant

The table 5 depicts that in the control group, the pretest mean score of awareness was 8.64 with standard deviation 2.31 and the post-test mean score was 8.88 with standard deviation 2.22. The calculated paired 't' test value of $t = 2.009$ was not found to be statistically significant. This clearly infers that there was no significant difference between pre-test and post-test level of awareness on post-operative outcomes administered to women undergoing

abdominal hysterectomy in the control group.

Table 6: Comparison of post-test level of awareness on post-operative outcomes among women undergoing abdominal hysterectomy between the experimental and control group $n = 50(25+25)$

Awareness	Mean	S.D	Student Independent 't' test Value
Experimental Group	16.84	2.01	$t = 13.267$ $p = 0.0001$ S^{***}
Control Group	8.88	2.22	

S – Significant

The table 6 depicts that in the experimental group, the post-test mean score of awareness was 16.84 with standard deviation 2.01 and the post-test mean score in the control group was 8.88 with standard deviation 2.22. The calculated student independent 't' test value of $t = 13.267$ was found to be statistically significant at $p < 0.001$ level. This clearly infers that post-operative instructions on post-operative outcomes administered to women undergoing abdominal hysterectomy was found to be effective in improving the post-test level of awareness in the experimental group than the control group.

Section D: Association of level of awareness with selected demographic variables.

Table 7: Association of post-test level of awareness on post-operative outcomes among women undergoing abdominal hysterectomy with their selected demographic variables in the experimental group $n = 25$

Demographic Variables	Low		Moderate		High		Chi-Square Value
	No.	%	No.	%	No.	%	
Age in years							$\chi^2=6.908$ d.f=2 $p=0.032$ S^*
21 – 30	-	-	5	20.0	5	20.0	
31 – 40	-	-	0	0	10	40.0	
41 – 50	-	-	1	4.0	4	16.0	
Above 50	-	-	-	-	-	-	
Religion							$\chi^2=0.786$ d.f=2 $p=0.675$ N.S
Hindu	-	-	5	20.0	15	60.0	
Christian	-	-	1	4.0	2	8.0	
Muslim	-	-	0	0	2	8.0	
Others	-	-	-	-	-	-	
Education							$\chi^2=5.028$ d.f=3 $p=0.170$ N.S
Primary	-	-	1	4.0	1	4.0	
Secondary	-	-	3	12.0	4	16.0	
Higher secondary	-	-	1	4.0	13	52.0	
Graduate	-	-	1	4.0	1	4.0	
Post graduate	-	-	-	-	-	-	
Occupation							$\chi^2=0.808$ d.f=2 $p=0.668$ N.S
Student	-	-	-	-	-	-	
Unemployed	-	-	4	16.0	10	40.0	
Self employed	-	-	2	8.0	7	28.0	
Labour	-	-	0	0	2	8.0	
Office worker	-	-	-	-	-	-	
Family income per month							$\chi^2=0.198$ d.f=2 $p=0.906$ N.S
Rs.2001 – 5000	-	-	1	4.0	2	8.0	
Rs.5001 – 10,000	-	-	3	12.0	11	44.0	
>Rs.10,000	-	-	2	8.0	6	24.0	
Personal habits							$\chi^2=0.525$ d.f=2 $p=0.769$ N.S
Smoking	-	-	1	4.0	6	24.0	
Tobacco and betel chewing	-	-	1	4.0	3	12.0	
Consumption	-	-	4	16.0	10	40.0	
None	-	-	-	-	-	-	
Weight of patient							$\chi^2=8.553$ d.f=2 $p=0.014$
35 – 45 kg	-	-	6	24.0	6	24.0	
46 – 55 kg	-	-	0	0	11	44.0	

56 – 70 kg	-	-	0	0	2	8.0	S*
Above 70 kg	-	-	-	-	-	-	
Height of patient							$\chi^2=1.651$ d.f=2 p=0.438 N.S
145 – 150 cm	-	-	4	16.0	13	52.0	
151 – 155 cm	-	-	2	8.0	3	12.0	
156 – 160 cm	-	-	0	0	3	12.0	
Above 160 cm	-	-	-	-	-	-	
Duration of hospitalization							$\chi^2=0.111$ d.f=1 p=0.739 N.S
7 days	-	-	4	16.0	14	56.0	
Above 7 days	-	-	2	8.0	5	20.0	
Family type							$\chi^2=0.003$ d.f=1 p=0.959 N.S
Nuclear	-	-	5	20.0	16	64.0	
Joint	-	-	1	4.0	3	12.0	

N.S – Not Significant

The table 7 shows that in the experimental group, the demographic variables age and weight of the patient had shown statistically significant association with post-test level of awareness on post-operative outcomes among women undergoing abdominal hysterectomy at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with post-test level of awareness on post-operative outcomes among women undergoing abdominal hysterectomy.

Conclusion

The respiratory status of the patients who received pre-operative teaching on post-operative exercise was significantly higher than the patients who did not receive pre-operative teaching on post-operative exercises. The post-operative complications of the patients who received pre-operative teaching on post-operative exercise was significantly less than those who did not received pre-operative exercises was significantly higher than those patients who did not received pre operatively.

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Conflict of interest

Authors declare no conflict of interest.

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