



IMPACT OF PRE-OPERATIVE EDUCATION ON POST-OPERATIVE PAIN PERCEPTION IN PATIENTS UNDERGOING ELECTIVE HYSTERECTOMY

Gynaecology

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ABSTRACT

This study was planned to assess the impact of pre-operative education on post-operative pain perception in patients undergoing elective hysterectomy. It was an interventional research in 96 women who were randomly divided into two groups; one group were intervened in terms of pre-operative education and the other group given routine preoperative advice. Each patient of both the groups was then assessed for post-operative psychological changes and pain assessment using VAS. It was seen that 58.33% and 35.42% of the intervention group scored 0 and 2 respectively on the VAS as compared to that of 58.33% and 27.08% of the control group scored 4 and 6 respectively. These results signify that there is relationship between pre-education and perception of pain. Pain perception is significantly reduced in the counseled women in the postoperative period

KEYWORDS

Pre-operative education, postoperative pain perception, elective hysterectomy.

INTRODUCTION-

Hysterectomy is a common surgery done in a large number of women who are in the late reproductive age group for a number of diseases and conditions. In USA annual incidence of hysterectomy is 590,000.¹ About 1/3 of women in US have had hysterectomy operation by the age of 60yrs. However, the prevalence of hysterectomy in India is low.² As compared to a very high frequency of hysterectomy i.e. 10-20% in other countries, there is lower rate 4-6% reported from India.³

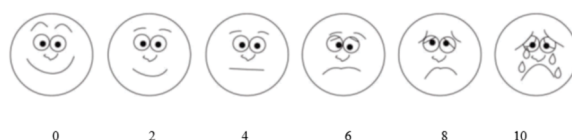
Women who undergo hysterectomy surgery face a multitude of physical and psychosocial problems both before and after the hysterectomy.⁴ While it is established that side-effects of hysterectomy include both positive and negative physical or emotional aspects, there have been no studies examining these effects among Indian rural women.^{5,6} Therefore, there is a need to study the level of knowledge in such patients and then to assess their problems in terms of post-operative pain perception.

Few studies have shown that preoperative intervention based on psychological health education can improve peri-operative negative emotions, psychological stress in young patients undergoing hysterectomy.^{7,8} In few cases preoperative assessment and counseling is a key in optimizing postoperative psychological and sexual outcomes.⁹ Thus the present study was carried out to find out the impact of pre-operative education on post-operative pain in patients who are undergoing elective hysterectomy.

METHODOLOGY-

This was an hospital based study on women admitted in Gynecology ward in a rural hospital for elective hysterectomy during the study period. This was an interventional randomized controlled trial. Preoperative education with information booklet was done Two groups A and B of 48 patients each were formed by simple randomization.

Women in the age group of 38-70 yrs undergoing hysterectomy for benign conditions and willing to be part of study were included. Patients undergoing surgery for malignant conditions, suffering from psychiatric disorder or chronic pain were excluded from the study. Written informed consent was obtained from all participants. Only those candidates were selected who would undergo surgery the very next day. Patients of group A (intervened) were then educated with a pamphlet they were made to read and were also explained in detail the contents of the pamphlet in their local language. The pamphlet was for educating them about the kind of surgery, procedure, how to prepare for the surgery, what to expect after the surgery, and the importance of the surgery. Their queries (if any) were solved and answered in the language that they understood. Patients of group B (control) were only given preoperative advice. Each patient was then asked to fill a questionnaire pre-operatively i.e. the day before surgery. The illiterate patients were verbally conveyed about the information and their responses were taken by the interviewer. Post surgery, pain intensity was done by using VAS- Visual Analogue Scale,



A questionnaire was used to assess: postoperative pain, pain intensity – average and worst pain, frequency of pain, pain location, pain characteristics (type of pain), scar pain.

The questionnaire was then analyzed.

RESULTS-

All together 96 women took part in the study. Mean age in the intervened group was 46) and in control groups was 47.5. Mean education of the intervened group was 6.17 and control group was 5.79 class of schooling. Mean age of menarche was 13.9 8in intervened group and 14.13 in control group and mean age of menopause in the intervened group was 49.88 and control group 49.82. Total 19 patients were post- menopausal. The above data is tabulated in table 1. There is no variation in the baseline variables. Majority of the women were housewives (52.08%).

Table 1 - Mean values for demographic factors.

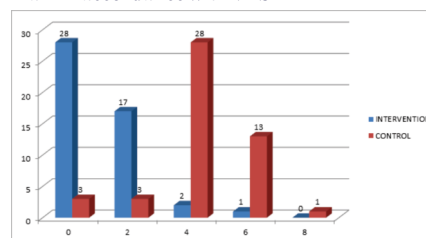
Demographic factors- (n=96)	Intervention	Control
Mean age	46 (1.312)	47.5 (1.438)
Mean age of menarche	13.98 (0.203)	14.13 (0.205)
Mean age of menopause (total observations -19)	49.88 (2.601)	49.82 (1.174)
Mean education	6.17 (0.624)	5.79 (0.639)

The mean parity of the patients was 2.63. 53.19% of the intervened patients and 45.83% of control group were diagnosed with DUB. Post-operative perception-

Pain evaluation-

Pain was assessed by two methods, firstly VAS and a questionnaire, accordingly, 28 patients of the intervened group scored 0 according to VAS whereas 28 patients of the control group scored 4, statistically significant with fisher's exact of 0.0005 (figure 1).

Figure 1- Pain in accordance with VAS



28 patients of intervened group experienced no pain in pelvic area, whereas 39 patients of control group experienced pain, statistically

significant; p value of 0.0005. 32 patients of intervened group experienced pain once a day, whereas 15 patients of control group experienced pain intermittently, statistically significant; fisher's exact of 0.0005. 46 patients of the intervened experienced average pain, whereas 19 patients of control group experienced worst pain, statistically significant; fisher's exact of 0.0005. 45 patients of intervened group were not troubled by the pain, whereas 19 patients of control group were troubled by the pain, statistically significant; p value of 0.0005 (Table 2).

Table 2- Post-operative perception of pain

Variable	Intervention n=48		Control n=48		Pearson chi2	p value	Fisher's exact
	Yes	No	Yes	No			
Perception of pain							
1. pain in pelvic area							
	20	28	39	9	15.88	0.0005	-
2. frequency of pain							
once a day	32		6		-	-	0.0005
twice a day	4		22				
intermittent	10		15				
continuous	2		5				
3. quality of pain							
average worst	46		24		-	-	0.0005
pain disturbing sleep	1		19				
	1		5				
4. troubled by pain							
troubled	2		19		-	-	0.0005
not troubled	45		26				
not tolerable	1		3				

There was no mortality or complication in any of the patients, and the hysterectomy was not associated with any other surgical intervention.

DISCUSSION-

The present study aimed at finding out impact of pre-operative education on post-operative pain perception in rural women of India undergoing elective hysterectomy, in terms of pain evaluation. The results are consistent with previous studies. These findings support the view that, information plus cognitive interventions will decrease anxiety levels in the post-operative period.¹⁰ The results of some studies confirmed that there is a significant correlation between preoperative anxiety and pain and the effect of anxiolytic drugs in reducing pain and overall analgesic consumption.¹¹ A study by Costa showed that improper preoperative preparation of patients and the lack of information regarding their postoperative process was accompanied with unexpected pain and fatigue.¹² Breemhaar argued that the education and support had positive effect on patients' physical and psychosocial well being before and after surgery because education and support maintain and increase the patient's feelings of control.¹³ However, the length of hospital stay was different significantly in the patients who were given pre-surgical education.

Young studied the effects of the preadmission teaching brochures (with sixth-grade reading requirement) on behavioural outcomes in women undergoing abdominal hysterectomy, and found no significant difference between the experimental and control groups. The study did not support the use of preadmission teaching booklets. It was suggested that the higher reading levels of participants might have contributed to the lack of supportive findings. Although most patients claimed to receive preoperative education on postoperative pain management, our findings are that the patient's real concern is never adequately addressed. It is evident from the present study that post-operative pain perception of the patients is significantly low in the intervened group. The pain score according to VAS is also significantly lower in the intervened group when compared with the control group. These findings are consistent with many such similar studies. Results of a meta-analysis suggested that preoperative instruction as an intervention has a favorable effect on operative outcome.

It is evident that preoperative education results in monetary savings through reduced length of hospitalization, which in turn reduces the time that patients spend on the waiting list. Researchers need to understand the factors that influence statistical power so that future studies incorporate strong research designs that are sufficiently sensitive to detect treatment effects. For research to be clinically relevant, it should have the potential to help with clinical decision making with respect to selecting an appropriate intervention.

CONCLUSION-

In hospital settings, the counseling and educating patients is very important. Especially in rural areas women are often apprehensive about the surgical outcomes, and out of fear, often avoid seeking medical/surgical help. To promote healthy lifestyle, proper knowledge about the procedure and its outcomes should be imparted beforehand, thus minimizing the anxiety and fear associated with the surgery. As the patient is ready for the consequences of the procedure, outcomes are more readily acceptable, as in this case the pain experienced was significantly low.

Declaration of interest statement-Both the authors have no conflicts of interest to declare.

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