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Perioperative nursing information on postoperative outcome and level of satisfaction among patients undergoing selected surgeries

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***Abstract*---**Background: Currently, considerable inconsistencies are apparent in Nursing Information on Perioperative Care given to patients on their condition, surgery and its outcome during the hospital stay. When this was evidently witnessed by the Investigator, a study was conducted with the aim to find out the effectiveness of Perioperative Nursing Information on Postoperative Outcome and level of satisfaction among patients undergoing selected surgeries. Methodology: A true experimental with pretest posttest, control group design was used to conduct the study at R.L.J Hospital & R C, Kolar. Probability simple random sampling technique (Lottery Method) was adopted in order to select the samples of 400 patients who were planned to undergo surgery and who fulfilled the selection criteria. Samples were divided into 200 experimental and 200 control group randomly. The pre-test data was collected from experimental and control group using validated knowledge questionnaire, observational checklists and modified Aldrete scale along with Likert Satisfaction Scale consisting of 35 items which emphasized on the patient satisfaction, through interview method on one to one basis. After pre-test Perioperative Nursing Information on postoperative outcome was given to experimental group. Level of satisfaction was assessed on the day of discharge in both experimental and control group. Data was analyzed using descriptive and inferential statistics. Results: the major findings of the study showed that the level of satisfaction and positive post operative outcome on perioperative care aspects was higher in experimental group (84.5%) when compared with control group (15.5%). Conclusion: the present findings of the study showed that perioperative nursing information was evidently effective in enhancing the level of satisfaction and positive post operative outcomrs among patients by ensuring quality nursing care.

***Keywords*---**perioperative nursing, postoperative outcome, satisfaction level, perioperative nursing information.

Introduction

Health is both personal and an economical asset. Optimal health is the best physiological and psychological condition which an individual can experience. Disease is an inability to adequately counteract physiological stresses that can cause disruption of the body's homeostasis. The treatment of a wide variety of illnesses, injuries and human conditions includes some type of Medical & Surgical interventions.[1] Surgery is almost always viewed as life crises and evokes anxiety and fear. Surgical patients has the right to know what to expect and how to participate effectively during surgical experiences. Perioperative teaching increases patient satisfaction and also reduces postoperative pain, fear, anxiety, nausea and stress. It can also reduce complications during hospitalization and recovery time following the surgical procedures. [2] Perioperative nursing is a specialized area of nursing practice. As a fundamental member of the surgical team, the nurse works in collaboration with other health care professionals.[3] She provides nursing care to the patient preoperative, intraoperative and postoperative, which help to promote positive outcome and achieve optimal level of satisfaction.[4]

They are in a key position to provide preoperative teaching and responding to patients questions and concerns. New demands and new expectations of patients are armed with the information from media as well as the guidelines developed by the health planners and by the health care team.[5] Especially the nursing personnel with expectations of quality care with the highest standards with technological of quality of care with highest standards, advancements in technology have provided nurses with the opportunity to improve and intensify the preoperative educational strategies and serves as a standard of nursing practice within the surgical settings.[6]

Patient satisfaction is a subjective and complex concept. Dissatisfaction arises, if the patient experiences a discrepancy between expected and provided care and information.[7] Effectiveness of perioperative teaching depends on learning needs, style, and preference of the patient. It's a situational information given as psychological support to patient based on expected sensation during perioperative period of hospital stay.[8]

Statement of the problem

"An experimental study to evaluate the Effectiveness of Perioperative Nursing Information on Postoperative Outcome among the Patients undergoing Selected Surgeries at Selected Hospital of Kolar, Karnataka".

Objectives

The objective of the study is to

1. To assess the level of satisfaction among patients undergoing selected surgery in experimental and control group using aldrete liker satisfaction scale at selected hospital, kolar.

2. Evaluate the effectiveness of the perioperative nursing information on post-operative outcome and level of satisfaction among patients undergoing selected surgery in experimental and control group using Aldrete Likert Satisfaction Scale at selected hospital, kolar.
3. To find out the association between level of satisfaction scores on post-operative outcome with selected demographic variables in experimental and control group.

Hypothesis

H_1- the mean post-test level of satisfaction score of patients undergoing selective surgery will be significantly higher than the mean pre-test level of satisfaction score in experimental group as compared to the control group at 0.05 level of significance.
H_2- There will be a statistically significant association between pre-test level of satisfaction scores and selected demographic variables in the experimental group as compared to control group at 0.05 level of significance.

Materials and Methods

An experimental, pre-test post-test, control group design was adopted. The study was conducted on patients who are admitted at R.L.J Hospital & R C, for undergoing gastro-intestinal and genito-urinary surgeries. The samples were selected by simple random sampling technique (lottery method) with the sample size of 400 patients who fulfills the selection criteria and divided into 200 experimental and 200 control group. Modified Aldrete Likert Satisfaction Scale consisting of 35 items which emphasized on the patient satisfaction was adopted to assess the level of satisfaction. Through interview method on one to one basis data was collected. The score was interpreted as, if it is above 106, it is considered as patients are fully satisfied, score 72-105, it is considered as moderately satisfied and score less than 71 is considered as not satisfied.

Formal permission was obtained from the Institutional ethical committee and concerned approval was taken from the authority of hospital, the investigator has explained the purpose of the study to the participants and written informed consent was obtained. The pre-test data was collected from experimental and control group using modified Aldrete Likert Satisfaction Scale, followed by perioperative nursing information on postoperative outcome was given to experimental group on same day and post-test level of satisfaction was taken on the day of discharge in both experimental and control group. Confidentiality and anonymity was maintained during the process of data collection. Statistical analysis was done using descriptive and inferential statistics.

Results

Sociodemographic Variables

With regard to sociodemographic variables of patients, majority 75 (37.5%) of the sample in experimental group were between the age of 41-50 years. In control group majority 79 (39 %) of the sample were between the age of 31-40 years. on

gender, the majority of the samples were males in both experimental 136 (68%) and control 134 (67%)group. With regard to Educational Status, the majority of the sample were illiterates, in both experimental 123 (61.5 %) and control 83 (41.5 %) group. With regard to type of occupation, majority130 (65%) of the sample in the experimental group were self-employed, in the control group majority 116 (58%) were self-employed. In terms of Marital status**,** the majority of the sample in both experimental 165 (81%) and control 160 (80 %) groups were married. With respect to religion**,** the majority of the sample in both experimental 150 (75%) and control 153 (76.5%) groups were Hindus. With regard to family income, majority 98 (49 %) of the sample in the experimental group belonged to the income of Rs.2001-5000, whereas in the control group majority 81 (41.5%) of them belonged to the income of Rs. 5001-7000. With regard to Exposure to Mass Media, the majority 172(86%) of the sample was not exposed to any kind of mass media on information related to perioperative care aspects within six months period in experimental and in control 181(90%) group. (Table 1).

Level of satisfaction among patients in Experimental and Control groups before Intervention

Findings related to level of satisfaction before intervention showed that, in experimental group majority 129(65%) of the patients expressed that they were not satisfied, 62(31%) were moderately satisfied and 9(4%) were satisfied. In control group Majority 148(74%) expressed they were not satisfied and 52(26%) patients expressed they were moderately satisfied. (Table 2).

Level of satisfaction among patients in Experimental and Control groups after Intervention

The findings of the study related to level of satisfaction among patients in experimental and control group after intervention showed that, in experimental group, Majority 169(84.5%) of the patients expressed they are moderately satisfied and 31(15.5%) were fully satisfied. In control group majority 193(96.5%) informed they were not satisfied and 7(3.5%) were moderately satisfied.(Table 3).

Comparison of level of satisfaction of patients in experimental and control group

The findings of the study showed that, there was a significant difference between mean levels of satisfaction (95.70) of experimental compared to mean level of satisfaction (57.65) in control groups. The calculated't'**,** value (t' 399=3.290, $P<0.05$) was greater than the table value. Hence perioperative nursing information on postoperative outcome was proved to be effective. (table 4).

Area wise distribution of level of satisfaction of patients in experimental and control group after intervention

Findings related to area-wise level of satisfaction showed that, the mean perioperative level of satisfaction of experimental group with regard to general (*15.02 +1.519*), preoperative (*30.87*± 4.957), intraoperative (*13.44 + 2.149*), postoperative information (*13.62 + 2.342*) and facilities provided (*22.75 + 3.819)*

was found to be higher when compared to control groups. In the control group the mean peri-operative level of satisfaction in general (*10.12+ 1.965*), preoperative (*22.36+ 5.413*), intraperative (*7.27 + 2.540)* postoperative information (*9.24 + 2.632)* and facilities provided (18.78+ 3.869) was found to be less when compared to the experimental group Further findings revealed that the mean satisfaction with regard to preoperative information was higher in both experimental (30.87 ± 4.*957) and control (22.36 ± 5.413) groups,* when compared to other areas. These findings support that the teaching program was effective in enhancing the level of satisfaction. (table 5).

Findings related to association between level of satisfaction with seleted socio demographic variables

Findings related to association showed that, the obtained χ^2 value was greater than the table value in experimental group with regard to age (χ^2 6.911, df= 2, p=0.013), gender (χ^2.4.148, df- 1, p=0.057), education ($\chi^2$6.455, df -2, p=0.055), occupation ($\chi^2$4.023, df -2, p=0.056) and exposure to mass media ($\chi^2$4.138, df -1, p=0.057) in experimental group. Whereas in marital status ($\chi^2$4.287, df -2, p=.098), religion ($\chi^2$2.391, df- 2, p=.292), and family income ($x^2$1.551, df- 3, p=.694), the obtained χ^2 value was less than the table value. In control group none of the variables as age ($\chi^2$5.388, df - 4, p=.242), gender (χ^2.319, df –1, p=.257), educational status ($\chi^2$4.035, df – 2, p=.119), type of occupation, ($\boldsymbol{\chi^2}$1.098, df – 2, p=.667), marital status, religion ($\chi^2$0.734, df – 3, p=.876) income ($\chi^2$2.481, df – 3, p=.464) and exposure to mass media ($\chi^2$0.761, df – 1, p=.492) presented association with level of satisfaction, as the obtained $\boldsymbol{\chi^2}$ value was less than the table value.(Table 6).

Discussion

Section IV- Overall and area-wise level of satisfaction among Experimental and Control groups after Intervention

level of satisfaction among patients in experimental and control group after intervention showed that, in experimental group, Majority 169(84.5%) of the patients expressed they are moderately satisfied and 31(15.5%) were fully satisfied. In control group majority 193(96.5%) informed they were not satisfied and 7(3.5%) were moderately satisfied. The above findings of the study was supported by the study conducted by Caljouls M, Van Band, Boer.[9] the study findings on assessing patient satisfaction with perioperative care information revealed that the majority (80.4%) of the of the sample who received information were satisfied. Similar supporting study was conducted by Pager C K [10], on a randomized controlled trial on pre-operative information to improve satisfaction with cataract surgery. the study findings showed that an intervention such as a videotape explaining to patients the sensations they are likely to experience during surgery, along with common outcomes and risks, reduces anxiety and improves patient satisfaction and has benefits for the patient, surgeons, and the community.

Conclusion

The planned teaching program on perioperative nursing care was effective in increasing the level of satisfaction among patients in experimental group compared to control group.

Implications

- Perioperative nursing team can carry out the activities in a planned way to achieve positive level of satisfaction among patients and family members.
- To achieve evidence based quality nursing are nurses should practice pre-operative instruction as standing instruction in enhancing level of satisfaction among patients.
- Short term in-service education program for nurses is essential to provide specific care of the surgical patients in improving level of satisfaction.
- Nurse's administrator can plan and deliver the health care services in an organized manner throughout all the phases of perioperative nursing care by developing policy on the care of surgical patients.

Limitations

- Sample size of 400 patients undergoing gastro-intestinal and genito-urinary surgeries.
- Only one setting in R.L.Jalappa Hospital & R C. kolar.
- The data about the patients are self-reported

Recommendations

Based on the experience gained during the period of the study, and the interpretations made and conclusions drawn thereafter, the following recommendations are made:

1. A similar study may be undertaken, using the same tool and teaching plan on a large scale in various settings for longer period for better generalization.
2. A study can be conducted to identify the surgical patients' need and expectations during the perioperative care to provide quality care.
3. A study may be conducted to assess the knowledge on perioperative care aspects among perioperative team members and compare it with quality patient outcomes.
4. A similar study may be undertaken by using planned preoperative nursing teaching for patients posted for ambulatory (day care) surgical procedures.
5. A descriptive study can be done to explore the level of satisfaction on care received by the surgical patient.
6. A descriptive study can be done to explore the needs of surgical patients.
7. An Interventional study among staff nurses can be done to assess the effectiveness of teaching programs in achieving positive Post-operative outcomes.

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Table -1: Frequency and Percentage distribution of samples according to socio-demographic variables

N=400

SI. NO	Demographic Variables	Experimental Group (n_1=200)		Control Group (n_2=200)	
		f	%	f	%

1	Age in years				
	a. 19-30 years	28	14.0	31	15.5
	b. 31-40 years	63	31.5	79	39.5
	c. 41-50 years	75	37.5	44	9.5
	d. 51-60 years	24	12.0	26	13.0
	e. >61 years	10	5.0	20	10.0
2	Gender				
	a. Male	136	68.0	134	67.0
	b. Female	64	32.0	66	33.0
3	Educational Status				
	a. Illiterate	123	61.5	83	41.5
	b. Primary education	53	26.5	65	32.5
	c Others specify ------	24	12.0	52	26.0
4	Type of occupation				
	a. Government employee	19	9.5	31	15.5
	b. Self-employed	130	65.0	116	58.5
	c. Unemployed	51	25.5	53	26.0
5	Marital status				
	a. Married	162	81.0	160	80.0
	b. Unmarried	31	15.5	29	14.5
	c. Divorced	7	3.5	11	5.5
6	Religion:				
	a. Hindu	150	75.0	153	76.5
	b. Muslim	29	14.5	29	14.5
	c. Christian	21	10.5	15	7.5
	d. Any other-------	-	-	3	1.5
7	Family income per month				
	a. Rs.< 2000	35	17.5	13	6.5
	b. Rs. 2001-5000	98	49.0	57	28.5
	c. Rs. 5001-7000	36	1.0	81	40.5
	d. Rs.7001 and above	31	15.5	49	24.5
8	Exposure to mass media				
	a. exposed	28	14.0	19	9.5
	b. not expose	172	86.0	181	90.5

Table 2: distribution of samples according to Level of satisfaction Experimental and Control groups before Intervention

N=400

Variable	Grade	Experimental group-(n_1=200)		Control group (n_2=200)	
		No.	%	No.	%
Level of satisfaction	Not satisfied (<50%)	129	65%	148	74%
	Moderately satisfied (51-74%)	62	31%	52	26%
	Fully satisfied (75-100%)	09	4%		

Table 3: distribution of samples according to Level of satisfaction in Experimental and Control groups after Intervention

N=400

Variable	Grade	Experimental group-(n_1=200)		Control group (n_2=200)	
		No.	%	No.	%
Level of satisfaction	Not satisfied (<50%)	-	-	193	96.5
	Moderately satisfied (51-74%)	169	84.5	7	3.5
	Fully satisfied (75-100%)	31	15.5	-	-

Table 4 : Comparison of Level of satisfaction of patients in Experimental and control groups after intervention

N=400

Variable	Experimental Group (n_1=200)		Control Group (n_2=200)		t' Value (Unpaired)
	Mean	SD	Mean	SD	
Satisfaction	95.70	7.747	57.65	6.836	52.083 *S
*S = Significant	P< 0.05 df=399		t- table value at 399 =3.290		

Table 5: Area-wise distribution of the level of satisfaction among patients in Experimental and Control groups after intervention

N=400

Area wise Level of satisfaction	*Experimental Group* (n_1=200)				*Control Group*-(n_2=200)		
	Max. Score	*Range*	*Mean*	*SD*	*Range*	*Mean*	*SD*
General information	*20*	*11-18*	*15.02*	*1.519*	*6-15*	*10.12*	*1.965*
Preoperative information	*48*	*18-46*	*30.87*	*4.957*	*12-35*	*22.36*	*5.413*
Intraoperative information	*20*	*5-20*	*13.44*	*2.149*	*3-16*	*7.27*	*2.540*
Postoperative information	*20*	*7-13*	*13.62*	*2.342*	*3-17*	*9.24*	*2.632*
Facilities provided	*32*	*13-32*	*22.75*	*3.819*	*10-28*	*18.78*	*3.869*
Total	*140*	80-116	95.7	14.8	47-77	57.6	16.5

Table 6 Association between level of satisfaction with selected socio Demographic variables in experimental and control group.

N=400

Variable	Experimental group (n1=200)	Inference	Control group (n2=200)	Inference

	Level of satisfaction				Level of satisfaction			
	Not Sat.	Mod. Sat.	Fully sat.		Not Sat.	Mod. Sat.	Fully sat.	
1. Age in years								
a. <30	-	-	-	χ^2 6.911	28	3	-	$\chi^2$5.388
b. 31-40	-	76	15	df= 2	76	3	-	df - 4
c. 41-50	-	66	9	p=0.013	43	1	-	p=.242
d. 51-60	-	27	7	S*	26	0	-	NS
e. 61and above	-	-	-		20	0	-	
2. Gender				χ^2.4.148				χ^2.319
a. Male	-	114	22	df- 1	130	4	-	df – 1
b. Female	-	55	9	p=0.057	63	3	-	p=.257
				S*				NS
3. Educational Status				$\chi^2$6.455				$\chi^2$4.035
a. Illiterate	-	99	24	df -2	82	1	-	df – 2
b. Primary	-	50	3	p=0.055	63	2	-	p=.119
c higher primary	-	20	4	SS	48	4	-	NS
4. Type of occupation				$\chi^2$4.023				$\chi^2$1.098
a. Govt employee	-	17	2	df -2	29	2	-	df – 2
b. Self-employee	-	105	25	p=0.056	113	3	-	p=.667
c Unemployed	-	47	4	S*	51	2	-	NS
5. Marital status				$\chi^2$4.287				$\chi^2$6.292
a. Married	-	133	29	df -2	157	3	-	df – 2
b. Unmarried	-	30	1	p=.098	26	3	-	p=.071
c. Divorced	-	6	1	NS	10	1	-	NS
6. Religion				$\chi^2$2.391				$\chi^2$0.734
a. Hindu	-	130	20	df- 2	147	6	-	df – 3
b. Muslim	-	22	7	p=.292	28	1	-	p=.876
c. Christian	-	17	4	NS	15	0	-	NS
d. others					3	0	-	
7. Familyincome/mon.	-	27	4	x^{2}1.551	47	2	-	$\chi^2$2.481
a. Rs< 2000	-	28	8	df- 3	80	1	-	df – 3
b. Rs 2001-5000	-	84	14	p=.694	54	3	-	p=.464
c. Rs.5001-7000	-	30	5	NS	12	1	-	NS
d. Rs 7000 & above								
8. Exposure to mass media				$\chi^2$4.138				$\chi^2$0.761
				df -1				df – 1
a. exposed	-	23	5	p=0.057	19	0	-	p=.492
b. Not exposed	-	146	26	S*	174	7	-	NS

NS= Non Significant S*= significant df =1 (3.84), df=2 (5.99), df=3 (7.82), df=4 (9.49),