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A Study to Assess the Effectiveness of Nurse Led Interventions on the Level of Knowledge and Pre-Operative Anxiety among Patients Undergoing Cataract Surgery at Shri Vinoba Bhave Civil Hospital, Silvassa

By Krishna V. Gandhi

Abstract- Background: A Cataract is one of the most common disorders affecting the eye and is the leading cause of visual impairment and blindness. Patients who are planning for surgery don't have adequate knowledge & not prepared for the surgery which results in increase anxiety.

Aim: This study aimed to assess the effectiveness of NLI on the level of knowledge and pre-operative anxiety.

Method: An evaluator approach with Quasi experimental non randomized control group design was adopted for the study. The study was conducted on 60 (30 each experimental and control group) patients using non-probability consecutive sampling technique.

Result: In the experimental group the pre-test mean \pm S.D of level of knowledge was 11.5 ± 2.02 were significant difference with post-test mean \pm S.D was 21 ± 1.96 . In the experimental group the pre-test mean \pm S. D of pre-operative anxiety was 84.76 ± 4.95 with post-test mean \pm S.D was 40.26 ± 6.75 .

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Conclusion: The Result showed that there was a significant increase in level of knowledge with reduction in pre-operative anxiety among the patient undergoing cataract surgery in the experimental group after administration of NLI. Thus, NLI as a non-pharmacology tool was an effective intervention in increasing patient's knowledge and reducing the pre-operative anxiety.

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I. INTRODUCTION

Eye is the most important sensory organ that helps to receive or gather information from the surrounding. Sight is the primary sense which keeps us safe and helps us to appreciate, criticize, evaluate other's performance, as age progresses the visual impairment increase in nature. A cataract is such a condition that happens with the human eye where there is opacity or clouding of the eye's natural lens, which if not treated can lead to blindness.

Permanent cure for cataract is surgery that it is to remove the natural lens and replace it with a new artificial lens. Cataract surgery is the most frequently performed operation. It is the most successful and safest procedure performed for cataract patients.¹ Patient who are undergoing surgery will be always anxious & this is due to the fear of unknown. Cataract surgery is performed under local anesthesia and is completed in a relatively short period time. In most cases patients are fully conscious during the procedure; they may be more stressed and evoke anxiety. It is important that they must remain steady. Any unanticipated movement during cataract surgery could result in suboptimal surgical outcomes and may even lead to blindness.

Low vision is a significant psychological stressor for the patient as well as family members². At the time of surgery physical stress is greatly enhanced by the psychological stress of anxiety and worry, which eventually ends up with the use of more energy that is indeed needed in the post-operative period. One's deepest and worst fears are often felt as the surgery is planned.³ The patient's basic needs have to be intervened by a nurse and assist them to meet these needs. According to the Department of Health, individual's needs have to be achieved, maintained or restored to an acceptable level to develop social independence or improve quality of life.⁴

Education is one of the common aspects of the pre-operative preparation performed before almost all

surgical procedures. It is believed that pre-operative education mainly focuses on beneficial outcomes for the patient. It varies from patient to patient with their culture, background and experience. It includes three types of information sensory, process and procedural. It helps to decrease post-operative surgical complications, increase patient satisfaction, shorten the length of hospitalization and promote well-being.⁵

a) *Methodology*

A Quasi experimental non randomized control group design and non-probability consecutive sampling technique was adopted to assess the effectiveness of nurse led interventions (NLI). The sample size was 60 and equally divided into 2 groups, 30 in each (experimental and control group). The nurse led interventions included video assisted teaching on peri-operative cataract management (15min) and binaural

music therapy (15min). Socio-demographic Performa, Self-structured knowledge questionnaire and Modified State Trait Anxiety scale – Adult were used as a tool for the study. Pre-test was conducted a day prior to surgery, followed with the implementation of NLI in the experiment group, in phases; Phase 1: video assisted teaching for 15 minutes and binaural music therapy (15min) along with routine nursing care a day prior to the surgery in IPD and Phase 2: binaural music therapy (15min) was administered one hour before the surgery in IPD. In control group routine nursing care was administered as per need. Post-test for pre-operative anxiety was conducted half an hour before surgery in IPD and level of knowledge was assessed on the post-op day 5 at OPD of ophthalmic department at SVBCON, Silvassa.

II. RESULTS

Table 1: Frequency and Percentage Distribution of Socio Demographic Variables in the Experimental and Control Group.

Sr No.	Demographic data	Control group (n=30)		Experimental group (n=30)	
		f	%	f	%
1.	Age in years:				
	41-50 years	10	33.33	2	6.67
	51-60 years	4	13.33	9	30
	61-70 years	13	43.33	15	50
	Above 70 years	3	10	4	13.33
2.	Gender:				
	Male	10	33.33	9	30
	Female	20	66.67	21	70
3.	Residential area:				
	Urban	10	33.33	11	36.67
	Rural	20	66.7	19	63.33
4.	Marital status:				
	Married	23	76.67	23	76.67
	Unmarried	2	6.67	1	3.33
	Widowed	5	16.67	6	20
5.	Education:				
	Illiterate	14	46.67	10	33.33
	Primary school	8	26.67	14	46.67
	Middle school	3	10	1	3.33
	High school	2	6.67	3	10
	Intermediate/diploma	2	6.67	2	6.67
	Graduate	1	3.33	0	0
6.	Occupation:				
	Professional	2	6.67	0	0
	Semi professional	2	6.67	1	3.33
	Clerical/shop/farm	4	13.33	6	20
	Skilled worker	0	0	1	3.33
	Unskilled worker	3	10	3	10
	Unemployed	19	63.33	19	63.33



7.	Income per Month: 10,002 – 29,972 ≤10,001	19	63.33	11	36.67
		11	36.67	19	63.33
8.	Previous Knowledge: Yes: a) From Relatives b) Television, Newspaper, Magazine c) Doctors, Nurses No	4	13.33	5	16.66
		2	6.66	0	0
		4	13.33	2	6.66
		20	66.67	23	76.67

Table 2: Mean, Sd, Mean % and t-value to Assess the Level of Knowledge Among Patients Undergoing Cataract Surgery.

N=30

Knowledge	Max score	Experimental Pre-Test			Experimental Post - Test			Effectiveness in Mean%	t-value	p-value
		Mean	SD	Mean %	Mean	SD	Mean %			
Overall	26	11.53	2.02	44.2	21	2.16	80.7	36.5	15.23	P<0.001 (HS)

In the experimental group the pre-test knowledge mean score was 11.5 with standard deviation of 2.02 and mean % was 44.2 whereas in post-test the mean score was 21 with standard deviation of 2.16 and mean % 80.7, the effectiveness of mean % was 36.5. The obtained "t" value (15.23>2.00).

Table 3: Mean, Sd, Mean % and t-value to Assess the Level of Pre-Operative Anxiety Among Patients Undergoing Cataract Surgery.

N=30

Pre-Operative Anxiety	Max score	Experimental Pre-Test			Experimental Post - Test			Effectiveness in Mean%	t-value	p-value
		Mean	SD	Mean %	Mean	SD	Mean %			
Overall	100	84.76	4.95	84.76	40.26	6.75	40.26	44.5	28.2	P<0.001 (HS)

The maximum pre-operative anxiety score was 100, In the experimental group pre-test pre-operative anxiety mean score was 84.76 with standard deviation of 4.95 and mean % 84.76 whereas in post-test the mean score was 40.26 with standard deviation of 6.75 and mean % 40.26, the effectiveness of mean % was 44.5. The obtained "t" value (28.2 > 2.00).

Table 4: Correlation between the level of knowledge and pre-operative anxiety among patients undergoing cataract surgery.

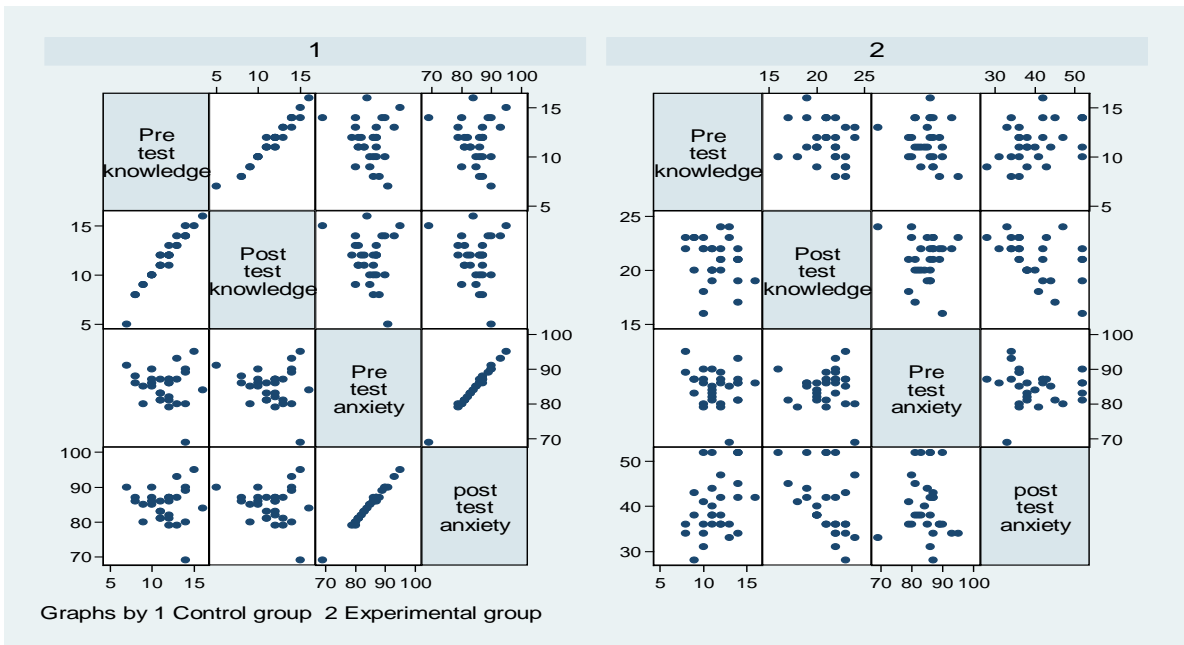


Figure 1: Correlation between the level of knowledge and pre-operative anxiety among patients undergoing cataract surgery.

Figure 1 indicates that

In the control group, there was weak positive correlation between the pre-test level of knowledge and pre-test level of pre-operative anxiety ($r = 0.099$), also there was a weak positive correlation between post-test level of knowledge and post-test level of pre-operative anxiety ($r = 0.083$). In the Experiment group, there was weak positive correlation between the pre-test level of knowledge and pre-test level of pre-operative anxiety ($r = 0.2$). There was a moderate positive correlation between the post-test level of knowledge and post-test level of pre-operative anxiety ($r = 0.469$).

III. CONCLUSION

The present study was conducted to assess the effectiveness of nurse led interventions on the level of knowledge and pre-operative anxiety among patients undergoing cataract surgery at Shri Vinoba Bhava Civil Hospital, Silvassa. Based on the findings of the study the following conclusion was drawn. The patient in age group 61-70 years went more for the cataract surgeries in which females are more operated and majority of them resides in rural community. The pretest revealed that majority of the samples had moderate knowledge and severe pre-operative anxiety. In the experimental group, after the administration of nurse led interventions the post-test scores revealed adequate knowledge and mild pre-operative anxiety among the patients undergoing cataract surgery. Thus, the investigator concluded that the nurse led interventions (Video assisted teaching and Binaural music therapy) was an effective non - pharmacological intervention in increasing the level of knowledge and reducing the level

of pre-operative anxiety among patients undergoing the cataract surgery.

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