A Study on Effectiveness of Selected Nursing Interventions in Reducing Pre-operative Anxiety among Children Undergoing Surgeries in a Selected Hospital

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Abstract

Anxiety is an emotion concerned with the future. In this study effectiveness of selected nursing interventions in reducing pre-operative anxiety among children was studied using Stait Trait Anxiety Scale. The research design used in the study was one group pre-test and post-test Pre-experimental design. Nursing interventions selected for reducing pre-operative anxiety among children included: Desensitization by showing photographs, tour to operation theatre and allowing mother to leave the child to the operation theatre. Levels of pre-operative anxiety were assessed twice before and twice after the implementation of selected nursing interventions. The conceptual framework of the study was based on Roy's Adaptation model. Study was conducted among 30 children whose age was between 11 and 13 years. The study revealed that the preoperative anxiety was significantly reduced after implementation of selected nursing interventions. The effectiveness of selected nursing interventions was independent of the selected background factors.

Keywords: Pre-operative Anxiety; Children; Surgeries; Nursing Interventions.

Introduction

Anxiety is a vague subjective, non specific feeling of uneasiness tension apprehension and sometimes dread or impending danger which occurs due to threat to one's biologic, physiologic, or social integrity arising from external influences. Anxiety is an emotion concerned with the future. Hospitalization and surgery imposes at least five threats to children of all ages which include physical harm or bodily injury, separation from parents and the absence of trusted adults, the strange and unknown, uncertainty about limit and acceptable behavior, loss of control, autonomy and competence.

Objectives

1. To assess the pre-operative anxiety among children prior to the implementation of selected interventions.

2. To assess the pre-operative anxiety among children after the implementation of selected nursing interventions.

3. To evaluate the effectiveness of selected nursing interventions in reducing pre-operative anxiety among the children.

4. To find out the association between the selected background factors and pre-operative anxiety among the children.

Research Hypothesis

H_1: There will be significant difference in the level of pre-operative anxiety among children before and after implementation of selected nursing interventions.

H_2: There will be significant association between the selected background factors and pre-operative anxiety among children.

Methods and Procedure

In this study effectiveness of selected nursing interventions in reducing pre-operative anxiety among children was studied using Stait Trait Anxiety Scale. The research design used in the study was one group pre-test and post-test Pre-experimental design. Levels of pre-operative anxiety were assessed twice before and twice after the implementation of selected nursing interventions. The conceptual framework of the study was based on Roy's Adaptation model. Study was conducted among 30 children whose age was between 11 and 13 years. The data was collected and analyzed based on objectives of the study using descriptive and inferential statistics.

Description of the tool

Part 1: Questionnaire on demographic factors.

Part 2: Questionnaire on assessment of the level of preoperative anxiety using Stait Trait Anxiety Scale.

The content validity of the tool was previously established as it was standardized tool. The background factors were corrected by the experts after incorporating the suggestions according to the experts' opinion. The reliability was tested using Karl Pearson method and co-relation co-efficient of Hindi questionnaire was Trait anxiety r = 0.96, and Stait anxiety r = 0.85 which found to be high. The tool was reliable. Nursing interventions selected for reducing pre-operative anxiety among children included the following:

❖ Desensitization by showing photographs.

❖ Tour to operation theatre.

❖ Allowing mother to leave the child to the operation theatre.

Findings and interpretation

1. Findings related to background factors of children

- Majority of the samples in the study were in the age group 11 years 12(40.0%), were males 17(56.7%) were studying in 6th standard, 15 (50.0%), were Hindus, 20(66.67%).

- Majority of children had been previously hospitalized 19(63.3%), had not undergone surgery previously 23(76.7%), had seen their parents/ relatives/ siblings and / or friends who had undergone surgery 16 (53.3%) and duration of illness for them was acute 2(40.0%).

- Majority of children did not have toy with them 17(56.7 %), their parents were worried about their disease/ problem 19(63.3 %), and their usual way of ventilating their fears/ worries was telling to parents 16(53.3%).

2. Findings related to the pre operative anxiety among children prior to the implementation of selected nursing interventions

- Majority of children 20(66.7 %) reported moderate Trait anxiety and least 2(6.67%) reported both mild and panic level of preoperative anxiety.

- Regarding stait anxiety score after information on the need of surgery majority of children 17(56.67 %) reported severe preoperative anxiety and least children 1(3.33 %) reported mild level of preoperative anxiety.

- The obtained t' value 3.47(p<0.05) was statistically significant. There was significantly high level preoperative anxiety in children in pre test measured at the time of admission and after providing the information on the need for surgery.

- The observed mean Stait Preoperative Anxiety 48.93 was higher than the Trait Preoperative Anxiety Score 35.91. It is inferred that there was difference in Preoperative Anxiety among children in the two observations made before the implementation of selected nursing interventions.

3 Findings related to the preoperative anxiety among children after implementation of selected nursing interventions

- Majority of children 18 (60%) reported moderate Stait anxiety and least 3 (10.0%) reported panic

Table 1: Frequency and percentage distribution of pre-test on pre-operative anxiety $\quad\quad$ N = 30

Sr. no.	Preoperative Anxiety score	Level of anxiety							
		Mild		Moderate		Severe		Panic	
		No	%	No	%	No	%	No	%
1	Trait anxiety (O₁)	2	6.67	20	66.7	6	20	2	6.67
2	Stait anxiety (O₂)	1	3.33	7	23.33	17	56.67	5	16.7

Table 2: Comparison of mean, standard deviation and 't' value on level of preoperative anxiety among children in pre test observation

Observations	Mean	SD	t value (P value)
Trait anxiety (O₁)	35.97	14.57	
			t = 3.47 (P<0.05)
Stait anxiety (O₂)	48.93	15.57	(S)

level of preoperative anxiety after the implementation of selected nursing interventions.

- Regarding Stait anxiety score just before surgery, majority I9 (63.3%) reported moderate Preoperative anxiety and least 2 (6.67%) reported both mild and panic levels of Preoperative anxiety.

- It is inferred that for majority of children the level of anxiety was significantly reduced after the implementation of selected nursing interventions and just before the surgery.

Table 3: Frequency and percentage distribution of post-test Stait Pre-operative anxiety scores

Sr. no.	Post-test Pre-operative anxiety scores	Level of anxiety							
		Mild		Moderate		Severe		Panic	
		No	%	No	%	No	%	No	%
1	Stait anxiety (O₃)	4	13.3	18	60.0	5	16.6	3	10.0
2	Stait anxiety (O₄)	2	6.67	19	63.3	7	23.3	2	6.7

4. Findings related to effectiveness of selected nursing interventions in reducing preoperative anxiety of children

- The reported mean Trait preoperative anxiety score was little less than the mean post test Stait anxiety scores. The obtained' values 0.26 (P<0.05) and 0.38 (P<0.05) were not significant. Therefore the trait Preoperative Anxiety was different from the mean post test Stait anxiety.

- The mean Stait preoperative anxiety score 48.93 was higher than the mean Trait preoperative anxiety scores 35.97 before the information on need for surgery.

- The mean Stait post test level of preoperative anxiety scores 36.9 and 37.5 reported after the implementation of selected nursing interventions were less than the mean Stait preoperative anxiety score before the information on need of surgery.

- The obtained' value 3.47 (p<0.05) regarding pre-test preoperative anxiety scores was significant. The Stait preoperative anxiety score were significantly different from the Trait preoperative anxiety score with regard to information on need for surgery.

- The obtained' values 2.05 (p<0.05) and 3.31 (p<0.05) regarding the post test Stait Preoperative Anxiety scores were significantly different from the pre-test Stait Preoperative Anxiety Score in relation to the nursing interventions. Therefore the null hypothesis (H₀₁) was rejected and research hypothesis (H₁) was accepted.

- The study revealed that the preoperative anxiety was significantly reduced after implementation of selected nursing interventions. The reduction in the post test preoperative anxiety was effected by the nursing interventions.

5. Findings related to the association between the selected background factors of children and the post test level of pre operative anxiety

- The obtained chi-square value 0.85; 0.06; 0.33; 0.26; 6.56; 2.28; 3.33 and 0.07 at (p<0.05), regarding age; gender; previous hospitalization; previous surgery; previous exposure to post operative patients; duration of illness;

Table 4: Mean Standard Deviation and paired't' value of preoperative anxiety in pre test (0_1, 0_2) and post test (0_3, 0_4) among children.   N=30

| 0_1 | | 0_2 | | 0_3 | | 0_4 | | 't' values (p<0.05) | |
Mean	SD	Mean	SD	Mean	SD	Mean	SD	Anxiety scores	't' values
35.97	14.7	48.93	15.7	36.9	16.5	37.5	14.5	01 Vs 02	3.47
								01 Vs 03	0.26
								01 Vs 04	0.38
								02 Vs 03	2.05
								02 Vs 04	3.31
								03 Vs 04	0.18

availability of toy and reaction of parents were not significant. Therefore the null hypothesis (H_{02}) was accepted and the research hypothesis (H_2) was rejected.

- It is inferred that there was no significant association between background factors and post test level of Pre operative anxiety among children.

- The effectiveness of selected nursing interventions was independent of the selected background factors.