



EFFECT OF PUPPET PLAY IN REDUCING PREOPERATIVE ANXIETY AMONG CHILDREN 6-12 YEARS OF AGE, UNDERGOING ABDOMINAL SURGERY: AN EXPERIMENTAL STUDY

Nursing

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ABSTRACT

Millions of children undergo surgery in the India each year; the overwhelming majority will experience significant anxiety related to pre operative state. A study to assess the effectiveness of Puppet play in reducing preoperative anxiety among children 6-12 years of age, undergoing abdominal surgery at Institute of child health& hospital for children, Egmore, Chennai-8. The tool used for the study consists of demographic data, and Modified Yale preoperative anxiety scale. The population of this study were 60 children of both sexes in the age group of 6 to 12 year. Sample for the study were selected through purposive sampling technique. Conceptual framework used for the study was Wiedenbach's Helping art of Clinical Nursing Model. The findings of the study revealed that on average, children are having 27.5% of reduction in anxiety score. It shows the effectiveness of study. Puppet play in the form of hand puppet with doctor's play set was found to be effective in reducing the preoperative anxiety of the children undergoing surgery. Children need adequate information tailored to their needs, and hospital environments need to be made more children centered.

KEYWORDS

Puppet play; Preoperative anxiety; Abdominal surgery; Experimental study; Children.

INTRODUCTION

Every year many millions of children undergo anesthesia and surgery around the world. On the day of surgery, children and parents typically wait in a preoperative holding area and during this time period, children are fearful about the impending surgery, specifically around the anticipated separation from their parents and pain. Indeed, Kain et al reported that up to 60% of all young children undergoing anesthesia and surgery report significant anxiety. The anxiety felt in the preoperative holding area is increased once children enter the operating room, where monitors are applied, a mask is held over the child's face, and volatile anesthetics are administered. Occasionally the stress and fear are such that children wet themselves, and may attempt to escape from the healthcare providers. Indeed, up to 25% of young children who have not received sedative premedication or parental presence need to be forcefully held down during the induction of anesthesia.

Preoperative anxiety is characterized by subjective feelings of tension, apprehension, nervousness, and worry. Preoperative anxiety (anxiety regarding impending surgical experience) in children is a common phenomenon that has been associated with a number of negative behaviours during the surgery experience (e.g. Agitation, crying, spontaneous urination, and the need for physical restraint during anaesthetic induction). Preoperative anxiety has also been associated with the display of a number of maladaptive behaviours post surgery, including postoperative pain, sleeping disturbances, parent-child conflict, and separation anxiety.

One estimate suggests that 60% of children experience significant anxiety before anaesthesia induction and surgery, and literature from around the world indicates that preoperative anxiety is a global concern for health care providers, the challenge that nurse's face is to better manage children's anxiety in today's fast paced world.

Therapeutic play comprises activities that are dependent on the developmental needs of the child as well as the environment, it can take many forms. For example, therapeutic play can be delivered through interactive puppet shows, Creative or expressive arts, puppet and doll play, and other medically oriented play. It can be directive or non-directive in approach and may include re-enactments of medical situations to facilitate children's adaptation to hospitalization.

Zahr LK, (1998) conducted a study on Therapeutic play for hospitalized preschoolers in Lebanon. Therapeutic play in the form of an interactive puppet show was administered to 50 preschool children one day before surgery in a hospital in Lebanon. A control group of 50 preschool children received routine care, but no therapeutic play, the children who had received therapeutic play had significantly lower scores on all six factors of the Post Hospital Behavior Questionnaire.

MATERIALS AND METHODS

A pre- experimental research design, one- group pretest -posttest design was used to assess the effectiveness of Puppet play in reducing

preoperative anxiety among children 6-12 years of age, undergoing abdominal surgery at Institute of child health, Egmore, Chennai-8. The sample size for the present study is composed of 60 children (6- 12 yrs) who are admitted in preoperative surgical wards for abdominal surgery at Institute of Child Health and Hospital, Egmore, Chennai-08. The tool used for the study consists of demographic data, and Modified Yale preoperative anxiety scale. The population of this study were 60 children of both sexes in the age group of 6 to 12 year. Sample for the study were selected through purposive sampling technique. Conceptual framework used for the study was Wiedenbach's Helping art of Clinical Nursing Model. This study was conducted after the approval from the ethical committee madras medical college, Chennai-3. All respondents were carefully informed about the purpose of the study and their part during the study and how the privacy was guarded to ensure confidentiality of the study result. After obtaining written permission from the Medical Superintendent and Nursing Superintendent, the investigator started the study in surgical ward. On the first day of data collection, the investigator introduced her self and explained the nature and purpose of the study to the mothers of children undergoing abdominal surgery. Informed Consent was obtained from the mothers to participate in the study and confidentiality of their responses was assured.

RESULTS

Socio demographic data of study subjects

Majority of children, 58.3% are between 11-12 yrs of age, 68.3% children are male children, most of them 40.0% children live in rural areas, 53.3% children are born as a first child in their family, 36.7% children's are studying 5-6 standard, 68.3% families are nuclear family, majority of children 75.0% are not having history of surgery, 90.0% children's are Hindus, 45.0% mothers are belongs to middle adulthood, majority of the mothers 58.3% are homemakers.

Anxiety level of subjects before and after intervention

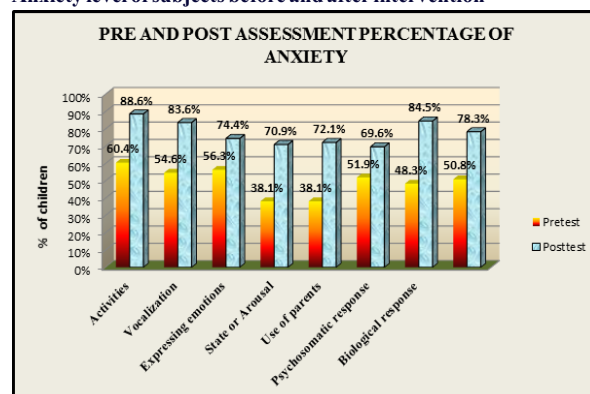


Figure 1: Comparison of anxiety domains before and after intervention.

Table 1: Comparison of mean anxiety score

Categories	Anxiety scores				Student's Paired t-test
	Pre assessment		Post assessment		
	Mean	SD	Mean	SD	
Activities	7.25	2.06	10.63	1.37	t=17.37, P=0.001*** Significant
Vocalization	6.55	1.79	10.03	1.90	t=21.04, P=0.001*** Significant
Expressing emotions	4.50	1.00	5.95	.96	t=18.04, P=0.001*** Significant
State or Arousal	3.05	.89	5.67	1.20	t=15.87, P=0.001*** Significant
Use of parents	3.05	.89	5.77	.95	t=21.19, P=0.001*** Significant
Psychosomatic response	4.15	1.56	5.57	1.48	t=13.57, P=0.001*** Significant
Biological response	1.93	.78	3.38	.88	t=13.49, P=0.001*** Significant

* Significant at $P \leq 0.05$ ** highly significant at $P \leq 0.01$ *** very high significant at $P \leq 0.001$

Table No. 1 compares pre assessment and post assessment mean anxiety score. Statistical significance was calculated by using student's paired 't' test.

Association between anxiety and socio demographic variables

Association between anxiety reduction and children demographic variables was calculated. Younger, less standard education, joint family and elder mother's children are reduced in the anxiety more than others. Statistical significance was calculated using chi square test.

DISCUSSION

Post assessment level of anxiety, is around 78.3 % (47) children are in mild anxiety and 21.7% (13) children are in moderate anxiety, no children are in severe anxiety after the children are exposed to Puppet play. These findings are consistent with the study findings done by **Ky nurse (2002)** noted the value of puppet play, as therapeutic play, to decrease anxiety in hospitalized preschoolers Children require that the Puppet play is to express themselves about their feelings regarding surgery. Child life specialist may also be able to assess changes in function as it is represented in the child's activities.

Schulz JB, Raschke D, Dedrick C, Thompson M. (1981) conducted a study on effects of a preoperative puppet show on anxiety levels Of hospitalized children, Subjects were 28 children, ages 2-7 years inclusive, randomly assigned to treatment and non treatment groups. Treatment consisted of a puppet show designed to familiarize patients with hospital routines and operational procedures. Two PSI measures were collected for each subject. Treatment was associated with a significant reduction in anxiety from the time of admission to the period immediately following the puppet show.

In this study it is proved that children with younger age, less standard education, joint family and elder mother's children having significant anxiety reduction. It is consistent with the study conducted by **Bossert (1994)** on factors influencing the coping of hospitalized school aged children, indicated that a priority area of paediatrics nursing interventions is the alleviation of fears and anxieties of hospitalized children and their parents. The most anxious children were male, black, and rural.

REFERENCES

1. Kain ZN, Mayes LC, O'Connor TZ, Cicchetti DV. Preoperative anxiety in children. Predictors and outcomes. *Arch Pediatr Adol Med.* 1996;150(12):1238–1245. [PubMed] [Google Scholar]
2. Kain Z, Mayes L, Borestein M, Genevro J. Anxiety in children during the perioperative period. In: Anonymous, editor. *Child Development and Behavioral Pediatrics.* Lawrence Erlbaum Associates; Mahwah, NJ: 1996. pp. 85–85. [Google Scholar]
3. Kain Z, Mayes L, Caramico L, Hofstadter M. Distress During Induction of Anesthesia and Postoperative Behavioral Outcomes. *Anesth Analg.* 1999;88:1042–1042. [PubMed] [Google Scholar]
4. Burton L, Verma V. Anxiety relating to illness and treatment. In: Anonymous, editor. *Anxiety in Children.* 1st. Methuen Croom Helm; New York: 1984. pp. 151–151. [Google Scholar]
5. Kain ZN. Postoperative maladaptive behavioral changes in children: incidence, risks factors and interventions. [Review] [1 refs] *Acta Anaesthesiologica Belgica.* 2000;51(4):217–226. [PubMed] [Google Scholar]
6. Kain ZN, Caldwell-Andrews A, Maranets I, et al. Preoperative anxiety, emergence delirium and postoperative maladaptive behaviors: are they related? A new conceptual framework. *Anesthesia & Analgesia.* 2004 Dec;99(6):1648–1654. [PubMed] [Google Scholar]

7. Voepel-Lewis T, Malviya S, Tait AR. A prospective cohort study of emergence agitation in the pediatric postanesthesia care unit. *Anesthesia & Analgesia.* 2003;96 (6): 1625–1630. [PubMed] [Google Scholar]
8. Kain ZN, Caldwell-Andrews AA, Maranets I, et al. Preoperative anxiety and emergence delirium and postoperative maladaptive behaviors. *Anesthesia & Analgesia.* 2004 Dec;99(6):1648–1654. table of contents. [PubMed] [Google Scholar]
9. Vernon DT, Schulman JL, Foley JM. Changes in children behavior after hospitalization. *Am J Dis Child.* 1966;111:581–581. [PubMed] [Google Scholar]
10. Vernon D. Use of modeling to modify children's responses to a natural, potentially stressful situation. *J Applied Psychol.* 1973;58(3):351–356. [Google Scholar]