ORIGINAL RESEARCH PAPER
VOLUME-6 | ISSUE-6 | JUNE-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

MOTHERS ANXIETY DURING CHILD'S SURGERY; EFFECTIVENESS OF A PREOPERATIVE EDUCATIONAL PROGRAMME

Nursing

Sumathi.P.V Assistant Professor, Lisie College of Nursing, Lisie Hospital, Ernakulum, Kerala. India . 682018.

Dr.Sreedevi T.R. Associate Professor, Govt. College of Nursing, Gandhinagar P.O.Kottayam, Kerala. India. 686008.

ABSTRACT

A child's surgery is a stressful event for the parents. Parents are disturbed and anxious when their child is hospitalized and waiting for a surgery. The present study is aimed to determine the effectiveness of a preoperative educational programme on mother's anxiety and to identify the level of satisfaction of mothers regarding the educational programme. A quasi - experimental research with pre test post test control group design was adopted to conduct the study. Purposive sampling technique was used to select the subjects. Sample size was 60, of which 30 mothers were randomly assigned to the experimental group and 30 mothers to the control group. Mothers of children between the ages of 7 and 15 waiting for elective abdominal surgeries and who were able to read the local language (Malayalam) were selected. The experimental group received preoperative educational programme, whereas the control group received routine care. Parental anxiety was measured using state anxiety Form Y1 inventory on admission, and two hours after the intervention. The mean anxiety score of mothers were less in the experimental group compared to the control group after the intervention. The calculated t value was 3.38 which were statistically significant at $p < .001$. Majority (86.67%) of the mothers in the experimental group were fully satisfied regarding the educational programme. The preoperative education programme was found to be effective in reducing mother's anxiety and can be effectively used in pediatric surgical units to support the parents.

KEYWORDS:

Mother's anxiety, surgery, children, educational programme.

Introduction

The operative experience can be frightening not only for the child but also for parents. Child's level of anxiety is positively correlated with the parent's level of anxiety (McGraw 1994). Parents are anxious regarding various aspects of surgery such as duration of the procedure, timing of the surgery, anaesthesia, post surgical recovery, pain and various other events surrounding the child's entry to the operation theatre till their return to the ward. High parental preoperative anxiety is associated with high peri operative anxiety in children undergoing surgery(Kain, Mayes, O'Connor, Cicchetti, 1996)

Shirley, Thompson, Kenward,Johnson (1998) found that forty-two per cent of parents of children scheduled for elective surgery were significantly anxious. Mothers were identified as being more pathologically anxious than fathers. The 'anxious' parents were specifically more anxious about the surgery, anaesthesia, postoperative pain and treatment, and hospitalization in general. Clown intervention was found effective in decreasing maternal anxiety and stress in the preoperative phase (Agostini, Monti, Neri, Dellabartola.Pascalis, Bozicevic, 2014), Booklets are the simplest method of giving information in literate parents. Sadegh Tabrizi J et al (2015) in their study used booklet on data about anaesthesia and operation as educational intervention and found that it reduced the maternal anxiety and mothers expressed satisfaction regarding anxiety management. Audio visual aids may serve as better media to convey information. In a research which used audiovisual information, describing the process of undergoing and recovering from anesthesia, to parents before their child's induction of anesthesia revealed a statistically significant reduction in anxiety (McEwen, Moorthy ,Quantock, Rose.,Kavanagh 2007). Impact of preoperative education programme on parental anxiety at various points of time, on admission, prior to shifting the child to the operation theatre (OT), 6 h, 24 h, and 48 h after the surgery, respectively, found that the mean anxiety score of parents were less in the experimental group.(Aranha, Sams, Saldanha 2016).Combination of methodologies namely, photo file, demonstration of equipment using a role-modelling approach and a tour demonstrated to be effective in reducing the parental anxiety (Finche, Shaw. Ramelet. 2012).Cognitive behavioral programme was effective in reducing the anxiety of parents of children undergoing major elective surgery between the ages of 5-14 years (Dsouza. P , Bhaduri.A , George. A , Renu .G , D'Cru..A. (2013).

Routine information on surgical preparations are either delivered verbally or in written forms in the paediatric surgical facilities in Kerala. A comprehensive programme addressing pre-operative, intra operative and post operative care of the child is necessary in reducing the anxiety of the parents. Review of literature reveals a number of interventions are being researched and found to be effective. So there is a need to evaluate the effectiveness of a pre-operative educational programme in reducing the anxiety of mothers of children posted for elective abdominal surgery. Further it is also aimed in assessing the level of satisfaction regarding the educational programme.

Statement of the problem

A study to assess the effectiveness of a preoperative educational programme on anxiety among mothers of children undergoing elective abdominal surgeries in a tertiary care hospital at Ernakulum, Kerala.

Objectives

1. Identify the level of anxiety among mothers of children posted for elective abdominal surgery.
2. Evaluate the effectiveness of preoperative educational programme on anxiety of mothers of children undergoing elective abdominal surgeries.
3. Find out the level of satisfaction of mothers regarding the preoperative educational programme.

Hypothesis

H_1 There is a significant difference in the mean anxiety scores of mothers between the control and experimental group.

Intervention

This included a multimedia education programme with video, audio, text and pictures. The video is a documentary which covers the pre operative, intra operative and post operative period of children undergoing surgery. It emphasized how to provide care before during and after surgery and parental guidance. The programme was developed by reviewing related literature, discussion with experts and incorporating the real life situation of children undergoing surgery and their parents. The objectives of the video sessions were identified and the outline of the content areas prepared. Further content validity was established by ten experts in the field of psychology, paediatric nursing and paediatric surgery. The video was developed in the regional language (Malayalam) and was validated by subject experts and five parents (target audience). Apart from the input of the researcher, editing of the audio and video were done by technical experts in multimedia. The duration of the programme was 30 minutes.

Methodology

A quasi - experimental research with pre test post test control group design was adopted to conduct the study. The study was conducted in the paediatric surgery wards of a tertiary care hospital in Ernakulum, Kerala. Purposive sampling technique was adopted to select the subjects. Sample size was 60, of which 30 mothers were randomly

assigned to the experimental group and 30 mothers to the control group. Mothers of children between the ages of 7 and 15 waiting for elective abdominal surgeries and who were able to read the local language (Malayalam) were selected.

After getting ethical clearance certificate from the Institutional ethical committee, a formal written permission to conduct the research study was obtained from the Director of the concerned Hospital, Ernakulam. Data collection was done over a period of eight months. Data was collected after the admission of the child to the ward which is the day before surgery. Informed consent from the parents was taken. Prior to the data collection, the investigator familiarized her with the subjects and explained to them the purpose of the study. The investigator obtained full co-operation from the participants and assured their confidentiality.

Each mother was interviewed to collect the demographic data which consisted of information such as education, previous experience in child's hospitalization and previous experience in child's surgery.

Mother's anxiety was measured by administering the State-Trait Anxiety Inventory (STAI). The State-Trait Anxiety Inventory (STAI) is a widely used measure of trait and state anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) Form Y1, its most popular version, has 20 items for state anxiety. The tool was translated to Malayalam and back translation was done until a 90% consensus was obtained. Test retest reliability was computed using Karl Pearsons correlation co efficient and was found to be 0.89. Pre testing was done to determine clarity, feasibility and time taken to complete it. Time taken to complete it ranged from 10-12 minutes.

Mothers were instructed to indicate "what they have been feeling when they learned their children being operated" by rating their level of anxiety on a 4 point scale (1=not at all, 2=somewhat, 3=moderately so, 4=very much). Possible scores range from a minimum of 20 to a maximum score of 80. Scores 20 to 37 indicates mild anxiety, 38 to 44 indicates moderate anxiety and 45 to 80 indicates high anxiety (Ruffingo et al 2009).

The intervention was given after the pre assessment. The programme was administered to each of the mothers individually using laptop. The programme was scheduled for 30 minutes. A short debriefing session was conducted by the investigator after the programme. Post assessment of level of anxiety was done after two hours using the same tool. A satisfaction rating scale was given to the mothers regarding the education programme on the day of discharge. Mothers were asked to rate on a four point rating scale ranging from not at all to very much. Total Score is 40. Scores 1 to 15 indicates not satisfied, 16 to 30 partially satisfied and 31 to 40 fully satisfied. The collected data were analyzed using descriptive and inferential statistics.

Results

Section 1; Sample characteristics

Majority (60%) of mothers in the control group were having college education whereas majority (53.33%) of mothers in the experimental group was having high school education. Majority of mothers in the control group (83.33%) and the experimental group (80%) had previous experience in child's hospitalization. Majority of mothers in the control group (83.33%) and the experimental group (83.33%) had no previous experience in child's surgery. Both control and experimental group subjects were homogenous in terms of education (χ^2=3.36), previous experience in child's hospitalization (χ^2=0.11) and previous experience in child's surgery (χ^2=0).

Section 2; Level of Anxiety

Level of anxiety was assessed for the mothers of children undergoing elective abdominal surgeries in the control and experimental group which is presented in terms of frequencies and percentages. (Table 1)

Table 1 Frequency distribution and percentage of mothers based on level of anxiety in the control and experimental group

n=60

Level of Anxiety	Control(n=30)		Experimental(n=30)	
	f	%	f	%
Mild (20-37)	5	16.7	9	30
Moderate (38-44)	11	36.7	5	16.7
Severe (45-80)	14	46.6	16	53.3

From the data in the Table 1 it was evident that pre anxiety levels were severe in 46.6% of subjects in control group and 53.3% in the experimental group.

Section 3; Evaluation of effectiveness of preoperative educational programme

Effectiveness of preoperative educational programme on anxiety of mothers of children undergoing elective abdominal surgeries was determined using independent sample t test.

Table 2: Mean, Standard deviation and't' value of pre anxiety scores between control and experimental group

n=60

Group	Pre anxiety		df	t value
	Mean	SD		
Control(n=30)	45.53	10.02	58	0.32N S
Experimental(n=30)	44.37	9.47		

The t value computed between the control and experimental groups as shown in Table 2 indicates that there is no significant difference in the pre-anxiety scores. It implies that the groups were homogenous in terms of anxiety.

Table 3: Mean, Standard deviation and't' value of post anxiety scores between control and experimental group

n=60

Group	Post anxiety		df	t value
	Mean	SD		
Control(n=30)	47.6	10.46	58	3.38***
Experimental(n=30)	38.6	10.16		

***P< .001

Table 3 shows that mean anxiety score in the experimental group was 38.6 as compared to the control group's mean of 47.6.The calculated t value is significant at P< .001.Hence it can be inferred that the preoperative educational programme was effective in reducing mothers anxiety.

Section 4: Level of satisfaction of mothers with the educational programme in the experimental group.

Level of satisfaction of mothers with the educational programme in the experimental group was identified with a rating scale. It was found that 86.67% of mothers were fully satisfied regarding the educational programme, 13.33 % were partially satisfied and none of them reported dissatisfaction.

Discussion

The present study revealed that among the mothers of children undergoing elective abdominal surgeries in the control group, 16.7% had mild anxiety, 36.7% had moderate anxiety and 46.6% had severe anxiety. In the experimental group 30% had mild anxiety, 16.7% had moderate anxiety and 53.3% had severe anxiety. This finding is in tune with earlier researches conducted on parents of children undergoing elective surgeries which reported significant levels of anxiety Shirly.(1998),Kain (1996), Agostini (2014) Aranha P R(2016).

It is essential to manage preoperative anxiety of the parents as it can affect the outcome in children as well. The present study evaluated the preoperative educational programme in reducing mother's anxiety and found effective. The mean anxiety score of mothers in the experimental group was lower than the control group which was statistically significant at p<.001 (t =3.38).This finding concurs with the findings of earlier researchers. Studies using videotaped preoperative information by McEwen, Moorthy, Quantock, Rose and Kavanagh (2007) found effective in reducing anxiety of parents of children undergoing elective surgeries. Aranha, Sams and Saldanha (2016) in a pilot study used video as pre operative information among six parents of children undergoing surgeries and shown that preoperative informational video was useful in reducing the parental anxiety. In this study majority (86.67%) of the mothers were fully satisfied regarding the educational programme. Researchers have conducted focus group discussions on satisfaction of anxiety management and reported that mothers are satisfied (Sadegh Tabrizi et al, 2015) .

Conclusion

Preparing parents along with children is an essential component of

child care. Parents are relieved of their anxiety if they are well prepared. A multimedia educational programme can be successfully implemented in paediatric surgery units within their policies and protocols. In the current setting the mothers are the ones who are always allowed to stay with the children and they are the principal care takers in hospital and at home. As the mothers received this programme it enabled them to prepare well for their child's surgery.

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