Effectiveness of a multimedia educational programme for children and their parents regarding preparation for hospitalization on anxiety, pain intensity and selected post operative complications among children undergoing elective abdominal surgery in a selected hospital of Kerala

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ABSTRACT

Introduction: Children are vulnerable to the impact of illness and hospitalisation. Surgery creates a series of traumatic and stressful events. Preparing children and their family is essential in facing the events positively in order to promote speedy recovery without much complication. The present study evaluated the effectiveness of a multimedia educational programme on anxiety, pain intensity and selected post operative complications among children undergoing elective abdominal surgery.

Objectives: The objectives of the study were to assess the level of anxiety, pain intensity, respiratory status and wound status of children undergoing elective abdominal surgery, evaluate the effectiveness of multimedia educational programme on anxiety, pain and selected post operative complications and to determine the association of anxiety of children undergoing elective abdominal surgery with selected demographic variables.

Methodology: The study was conducted in a Tertiary care Hospital, Ernakulam, Kerala. The theoretical framework for the study was based on Sister Callista Roy’s adaptation model. The tools used for the study were demographic data sheet of child and parent and clinical profile of child, anxiety rating scale, numerical pain rating scale, respiratory assessment scale and wound assessment scale. Experimental pre test post test control group design was adopted for the study. Purposive sampling was adopted and the children between the age group of 7 and 15 years were randomly and equally assigned to control (n=50) and experimental (n=50) conditions. A pre measurement of anxiety was done by administering the anxiety rating scale to the child. Multimedia educational programme was given to each of the parent-child dyad in the experimental group 10-12 hours before surgery for 30 minutes using laptop. Post intervention anxiety was assessed using the same scale in children after one hour of intervention. Post operatively on the day of surgery pain was assessed using numerical pain rating scale. Respiratory status and a second assessment of anxiety were done on the first postoperative day. Wound assessment was performed on the eighth post operative day. All these were done in the control group except for the intervention.

Results: The baseline variables were homogeneously distributed in both the groups. The mean pre-test anxiety of children in the control group was 76.92 (SD 20.11) and in the experimental group was 76.40 (SD 20.93) and after the intervention post anxiety scores in the control group was 79.54 (SD 20.18) and 74.58 (SD 19.05) and in
the experimental group was 65.26 (SD 16.20) and 61.12 (SD 15.63) respectively. An independent sample t test showed a significant education of anxiety in the experimental group in the post test 1 (p = 0.001) and post test 2 (p = 0.0001). The mean pain scores of children in the experimental group was 2.86 (SD 0.16) which was lower than the control group mean of 6.2 (SD 1.44) which was statistically significant (p= 0.0001, Mann Whitney U test value 124.50). The mean respiratory status scores of children in the experimental group was 10.44 (SD 0.812) which was lower than the control group mean of 12.66 (SD 1.89). The calculated Mann Whitney test U value was 365.50 which was statistically significant (p = 0.0001). The mean wound score of children in the control group was 6.26 (SD 0.944) which was higher than the experimental group score 5.22 (SD 0.465) which was statistically significant (p=0.0001). Association of pre test anxiety of children undergoing elective abdominal surgery with demographic variables showed that there is a significant association with gender ($\chi^2 =7.70$, df 2, p, <.05). Age, class of study, type of surgery, previous history of hospitalisation and previous history of surgery, education of parent, previous experience of mother in child’s hospitalisation and previous experience of mother in child’s surgery did not show a significant association with pre test anxiety of children.

**Conclusion:** The results suggests that providing multimedia educational programme for children along with their parents had significantly reduced anxiety at various points of time, pain intensity and thereby preventing respiratory and wound infections. School age children are better able to comprehend and hence they are benefitted by the programme. Findings of the study have implications in nursing practice, nursing education and nursing research.

**Key words:** Multimedia educational programme, children, anxiety, pain, respiratory status, wound status, elective abdominal surgery.