The Evaluation of Video Teaching on Preoperative Anxiety in the Outpatient Pediatric Surgical Patient
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Background
• Each year, more than 5 million children undergo surgery in the United States, of which up to 75% experience preoperative anxiety (Perry, Hooper, & Masiogale, 2012).
• Preoperative anxiety is shown to prolong patient recovery, hospitalization, and wound healing, increase use of narcotics and anesthesia, and impact patients’ ability to understand healthcare information (Wotman et al., 2017).
• Additionally, “preoperative anxiety in children is associated with a number of unfavorable postoperative outcomes such as increased distress in the recovery phase and postoperative regressive behavioral disturbances such as nightmares, separation anxiety, eating disorders, and bedwetting” (Perry, Hooper, & Masiogale, 2012, p. 69).
• Proper preoperative education can greatly reduce preoperative anxiety for both patients and families (Kassai et al., 2016).
• Video-based preoperative information is shown to alleviate preoperative anxiety in adult patients undergoing spinal anesthesia (Cakmak et al., 2018).

References

Purpose
• The purpose of this MSN Thesis was to evaluate the effect of preoperative video teaching on preoperative anxiety, as measured by the State-Trait Anxiety Inventory for Children (STAI-CH), in pediatric patients age seven to fourteen undergoing outpatient surgery at Monroe Carell Jr. Children’s Hospital at Vanderbilt in Nashville, TN.

Sample
• Sixty patients undergoing outpatient surgery at Monroe Carell Jr. Children’s Hospital at Vanderbilt in Nashville, TN were enrolled in the study.
• Thirty patients were randomized to the control group and did not watch the preoperative teaching video.
• Thirty patients were randomized to the study group and watched the preoperative teaching video.
• Patients were English-speaking children and ranged in age from seven years to fourteen years.
• Subjects were excluded from the study for any of the following reasons: any child younger than age 7 or older than age 14; any parent or child that does not speak English; any child that has a genetic syndrome or developmental disability which could impact the ability to complete the State-Trait Anxiety Inventory for Children; patient is a current hospital inpatient, or will be admitted to the hospital following surgery.

Methods
• Preoperative anxiety was measured using the State-Trait Anxiety Inventory for Children (STAI-CH), a 40 question survey that measures both State (S) and Trait (T) anxiety in school-aged children.
• The State-Anxiety Inventory consists of 20 questions that measure “how you usually feel right now, at this very moment.”
• The Trait-Anxiety Inventory consists of 20 questions that measure “how you usually feel.”
• The study operated as a two group, post-test comparison study, in which a convenience sample of participants were randomized to either the control or study groups. In addition, those watching the preoperative teaching video were analyzed as a pre-post comparison study of the effect of preoperative video teaching on a child’s State-Anxiety.
• All patients enrolled in the study completed the STAI-CH survey, with the S-Anxiety Inventory administered first, followed by the T-Anxiety Inventory. Patients assigned to the study group then watched the preoperative teaching video. After viewing the video, participants in the study group again completed the S-Anxiety Inventory.

Results

Conclusions
• Preoperative video teaching decreases overall preoperative state-anxiety in the outpatient pediatric surgical patient.
• 61% of patients that watched the preoperative video reported reduced preoperative anxiety after watching the video.
• On a 3-point Likert Scale where 1=Not Nervous, 2=Very Nervous, and 3=Very Very Nervous, level of nervousness decreased from 1.68 to 1.43 after watching the video.
• 92% of parents “agree” or “strongly agree” that preoperative video teaching is beneficial for their child.
• On a Visual Analog Scale from 0 to 100 where 0=“No, I was Bored” and 100=“Yes, it was fun”, patients enrolled in the study rated their enjoyment of the video as a mean of 63.10

Limitations
• Preoperative anxiety is multifactoral
• Length of STAI-CH survey
• Variations in level and type of previously provided preoperative education and preparation
• Covariate analysis is needed to assess differences in preoperative anxiety between patients that have had surgery before and those that are having surgery for the first time.
• Covariate analysis is needed to assess differences in preoperative anxiety between demographics such as age, sex, and scheduled surgery.

Implications for Nursing
• Preoperative video teaching can be used to reduce preoperative anxiety, and should be further evaluated for the effect on patient satisfaction and postoperative outcomes including pain and length of stay.
• Preoperative video teaching is inexpensive and convenient, and can decrease patient anxiety.
• Preoperative video teaching should not replace other forms of surgical preparation, but should be used in conjunction with current preparation and education.
• Preoperative video teaching may increase anxiety in certain patients and should be evaluated for use on an individual basis.
• Parental anxiety may also be influenced by preoperative video teaching, and should be evaluated in future studies.