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**Title:** The Effect of a Multimedia Preoperative Education Program on the Anxiety Level of Patients Scheduled for Spinal Surgery

**Purpose and Rationale:** The purpose of this study was to examine the effect of a multimedia preoperative education program on the anxiety level of patients scheduled for spinal surgery.

**Research Questions:**

1. Are spinal surgery patients less anxious prior to surgery after receiving preoperative education using the multimedia method?
2. Does the age of the subject impact the effectiveness of preoperative education using the multimedia method on anxiety?
3. Does participation of a family member or friend in the preoperative education process effect the subject's level of anxiety?

**Synthesis of Review of Literature:** Preoperative teaching is known to improve outcomes in surgical patients (Anderson & Klemm, 2007; Starkweather, 2006, Yeh, Hsing-Hsia & Liu, 2004). Patients scheduled for surgery are anxious (Giraudet-LeQuintrec et al., 2003; Kain, 2001; Mitchell, 1997). The projected increase (Miff, 2008) in the number of patients needing spinal surgery demands methods for preoperative education that are both efficient and cost effective.

**Method/Procedures:** A convenience sample included patients scheduled for inpatient spinal surgery who attended the preoperative class and were not diagnosed with cancer. This study used the one group, pre-and post-test method. The intervention was the preoperative education using the multimedia method. Anxiety was measured by the state survey from the State Trait Anxiety Index (STAI) before the class and after the class and the completion of a web based program.

**Results Part 1:** The original study design, now called Part 1 of the study, was changed as a result of a preliminary analysis that found that four of the nine participants had become significantly more anxious after the multimedia education. The intervention was more effective on the anxiety level of those whose surgery was within 12 days of the class. Overall, the pre and post-intervention scores were higher than normal.

After additional IRB approval was obtained, in Part 2 of the study, the original nine patients were queried by phone regarding the content of the class. In Part 3 of the study, a focus group was held with former spine patients who had not received the multimedia educational program and they were asked the series of questions.

**Results Part 2 and 3:** The participants agreed that it was important to have the information available to them at any time. They found visual aids very helpful and noted that information on care process in the hospital and after discharge was lacking. Those who attended the class or watched the hospital web based education program found them helpful.

The topic of the risks and complications of surgery, the risk for blindness, the equipment in the Operating Room, the neck and back braces, the potential need for more surgery, and the physician's inability to guarantee a return to normalcy were other sources of anxiety.

**Discussion/Application to Practice:** The findings in this study suggest that the unique aspects of spine surgery may warrant the development of a different type of education programs for these patients. Multiple methods of education may be necessary to accommodate their needs. The timing of the education needs to be evaluated.