Managing Children's Preoperative Anxiety: A Descriptive and Feasibility Pilot Study


Preoperative anxiety affects up to 6 million children in North America each year. Numerous attempts have been made to reduce perioperative anxiety in children, but few are readily available because of high costs and time constraints. We developed a novel virtual reality program that recreates the hospital experience in order to manage preoperative anxiety as well as post-operative morbidity in children. Prior to the use of this intervention, we first conducted a pilot study to describe the stability of perioperative anxiety that exists before and after surgery and to examine feasibility issues.

We recruited 30 children aged 8-13 years who underwent outpatient surgeries at McMaster Children’s Hospital. Children’s and parents’ anxiety levels were measured using validated self-reports and behavioral checklists at three time points: 1 week before surgery at pre-op, the day of surgery and 1 month after surgery.

This initial pilot study provided empirical evidence that children’s anxiety remained stable across. We demonstrated that issues related to initial recruitment and measurement of anxiety were feasible. We also identified an issue of reduced retention during the post-op visit, since many outpatients do not return to the clinic after day surgery. A further pilot is being conducted to assess the feasibility of completing the post-surgical visits over the phone in order to increase retention. The long term goal of this work is to test the inexpensive, non-invasive and easily transferable virtual reality intervention program we developed to help manage perioperative anxiety and its effects on children.