

Development of a Preoperative Expectations Survey for Adolescent Idiopathic Scoliosis

Sara N Kiani, Alejandro Sebastian Cazzulino, Kian Niknam, Sarah K Coufal¹, Ishaan Swarup

¹Orthopedic Surgery

INTRODUCTION:

Adolescent idiopathic scoliosis (AIS) is associated with deformity, pain, effects on body image and psychological well-being, and can be treated with posterior spinal fusion (PSF). Across several elective orthopedic procedures, positive preoperative expectations have been shown to be associated with improved patient reported outcomes. A methodical way of measuring these expectations is the first step towards developing methods to modify them. The purpose of this study is to develop and validate a survey utilizing patient/guardian provided expectations relating to PSF in patients with AIS.

METHODS:

Based on previous studies, 15 patients undergoing PSF for AIS with 3 orthopedic surgeons at a single pediatric academic hospital and their guardians were preoperatively interviewed utilizing a structured interview format to collect expectations relating to their surgery. Qualitative research techniques were used to create two separate 10-item Likert scale surveys, one for patients and one for guardians. An additional 15 patients/guardians completed the survey twice 1 week apart preoperatively to validate the survey. Cohen's linear kappa was calculated for each survey item. Inclusion criteria included English speaking patients under the age of 18 undergoing PSF for AIS.

RESULTS:

In the interviews, the three most cited expectations identified between patients/guardians after full recovery from surgery was return to physical/sporting activities, improvement in pain, and changes in physical appearance, and these were utilized to create two draft surveys (Figure 1). In the validation portion of this study, guardians on average were more consistent in their answers than patients ($\kappa=0.67$ versus 0.54). Patients and guardians had substantial agreement ($\kappa=0.75$) on only one question, with poor to moderate agreement ($\kappa<0.6$) throughout most of the survey.

DISCUSSION AND CONCLUSION:

Two surveys were generated from structured interview responses by patients/guardians who were undergoing PSF for AIS. Initial validation data showed fair to great agreement between baseline and validation surveys, but that patient and guardian expectations are not well-aligned. This study has the potential to allow surgeons to better counsel patients and their guardians to align expectations to improve outcomes. The strength of this survey relies on patient/guardian generated survey responses based off structured interviews, rather than items generated by physicians. Future investigations will correlate survey responses to patient reported outcomes, surgical outcomes, and patient satisfaction.