

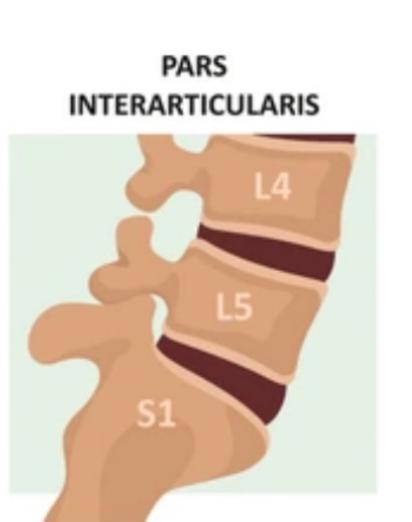
Conservative or Surgical Treatment? Developing a Parent-Centered Decision Tool with Conjoint Analysis in Low-Grade Pediatric Spondylolisthesis

NEW ORLEANS School of Medicine Department of Orthopaedics

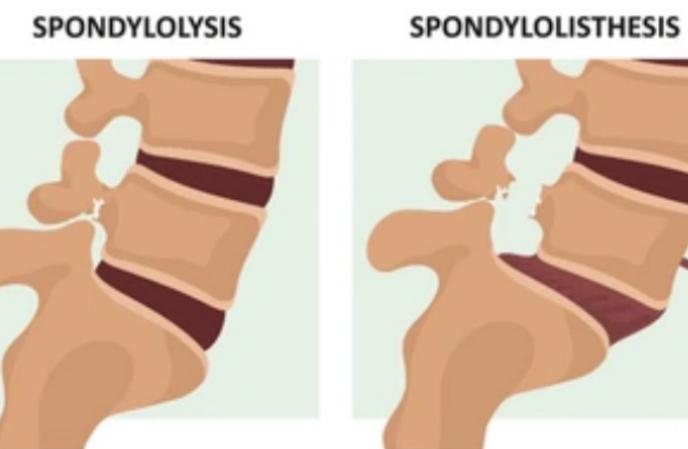
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Introduction and Objective

- > Pediatric spondylolisthesis involves forward vertebral slippage due to congenital, traumatic, or degenerative causes.
- ➤ Graded 1–4 by slip severity; typically, high grade is treated surgically while low grade can be treated surgically or conservatively.
- > Conjoint analysis is widely used to study patient preferences in orthopedics but has not been applied to low-grade pediatric spondylolisthesis.
- > Objective is to quantify parent preferences for surgical vs. non-surgical treatment using conjoint analysis to identify key factors in shared decision-making.







Results

Attributes	1	2	3
Likelihood of surgery (3 days in hospital, 1 week out of school)	15%	60%	100%
Risk of treatment failure necessitating later surgery and second recovery period (1 week out of school, 6 months out of sports)	<5%	10%	15%
Risk of serious surgical complication potentially requiring another operation (eg infection, incomplete healing, or pain)	<1%	2.5%	5%

(Rumalla, 2018), (Klein, 2009)

Discussion and Limitations

- > Purpose: Determine attribute preferences for parents with a child with low-grade spondylolisthesis.
- > Hypothesis: Risk of requiring surgery after initial treatment will be the most important factor for parents.
- > Limitations: Variable time between symptom onset and clinical presentation

Acknowledgements

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Methods

- Online conjoint survey via Prolific to assess U.S. parents' preferences for surgical vs. nonsurgical treatment of low-grade pediatric spondylolisthesis.
- ➤ Participants: Adults ≥18 with a child aged 13–17.
- Analyzed in Sawtooth Software with scenarios varying by surgical risk, treatment failure, and complications.
- > Anonymous self-reported data; ~200 participants recruited.



(1 of 10)% Likelihood of treatment course involving surgery (approximately 3 days in the hospital and 1 week out of school, post-operative pain is typically well controlled)

If your child had this type of stress fracture at the bottom of their back with

chronic/frequent pain, which of these 4 treatment courses would you choose?

% Risk treatment fails, necessitating later surgery and second recovery period (eg 1 week out of school and 6

% Risk of a serious surgical complication potentially requiring another operation (such as infection, incomplete healing, or pain)



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For the remainder of this survey, please imagine that your 13-17 year-old child has this type of stress fracture. You will be presented with several scenarios and asked to choose their treatment plan.