

The Correlation of ODI and the 4-Question Scales for Pain and Physical Function from PROMIS

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Introduction

There has been an increasing focus on the importance of patient reported outcomes (PROs) in spine surgery. The Oswestry Disability Index (ODI) is one of the most commonly used PRO instruments, but is limited by the time and effort required to complete the 10 question survey. The Patient-Reported Outcomes Measurement Information System (PROMIS) is an alternative means of measuring physical, mental and social health that can be applied to spinal surgery outcomes. This study assesses whether a simpler and quicker 4 question survey from the PROMIS initiative could be a surrogate for the ODI.

Methods

Patients evaluated in the adult neurosurgery spine clinic at a single institution were included. Patients filled out ODI, PROMIS 4 question Physical Function Scale, and PROMIS 4 question Pain Scale at various time points including: baseline, 1-year, and more. Standard descriptive statistical analysis and correlation calculations were utilized on all surveys, baseline surveys, and 1-year follow-up.

Results

A total of 343 sets of completed surveys were obtained involving patients seen at the initial visit and those who in follow-up after surgery. There were a total of 147 baseline surveys. The physical function and pain scale correlations with ODI were, 0.7 ($P < 0.00001$) and 0.69 ($P < 0.00001$), respectively. These results demonstrate strong and moderate positive correlations. There were a total of 52 1-yr follow-up surveys. The physical function and pain scale correlations with ODI were, 0.86 ($P < 0.00001$) and 0.88 ($P < 0.00001$), respectively. These results demonstrate strong positive correlations.

Conclusions

There appears to be a strong positive correlation between ODI and both 4 question scales provided by the PROMIS initiative. Given the strong positive correlation noted on these scales we can consider replacing the cumbersome ODI with a more efficient questionnaire with hopes of more reliable completion and less burden for the patients and providers.

Learning Objectives

By the conclusion of this session, participants should be able to describe the relationship of the ODI to the the PROMIS 4 questions pain and physical function scales.

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