

PROMIS-PF

As the focus in [spine surgery](#) has shifted from radiographic to patient-centric [outcomes](#), [patient reported outcomes measures](#) (PROMs) are becoming increasingly important. They are linked to patient [satisfaction](#), and are used to assess healthcare [expenditure](#), determine [compensation](#) and evaluate [cost effectiveness](#). Thus, PROMs are important to various [stakeholders](#), including [patients](#), [physicians](#), [payers](#) and healthcare [institutions](#). Thus, it is vital to establish methods to interpret and evaluate these [outcome measures](#).

To evaluate the correlation between [Neck Disability Index](#) (NDI), [Patient Reported Outcome Measurement Information System Physical Function](#) (PROMIS-PF) and [Short Form-12 Physical Health Score](#) (SF-12 PHS) in [cervical spine surgery](#) in order to determine the validity of [PROMIS-PF](#) in these patients.

Retrospective review of prospectively collected data
PATIENT SAMPLE: Consecutive patients who underwent cervical surgery for degenerative spinal pathology with a minimum of 3 months follow-up
OUTCOME MEASURES: Self-reported measures i.e. PROMs, including NDI, PROMIS-PF and SF-12 PHS
METHODS: No funding was received for this study. The authors report no relevant conflict of interest. PROM collected pre-operatively and at each follow-up were analyzed using Pearson product-moment correlation.

Of the 121 patients included, 66 underwent [ACDF](#), 42 [cervical disc replacement](#), 13 [posterior cervical decompression](#) with or without [fusion](#). A statistically significant improvement was achieved in all PROMs by 6 weeks and maintained at 1 year. Furthermore, the percentage of patients achieving an improvement greater than MCID was similar for NDI and PROMIS-PF, particularly at a follow-up of 3 months or more. A statistically significant negative correlation was seen between [NDI](#) and PROMIS-PF, which was moderate pre-operatively and in the early post-operative period ($r = -0.565$ to -0.600), and strong at 3 months or longer follow-up ($r = -0.622$ to -0.705). A statistically significant, negative correlation was also seen between [SF-12 PHS](#) and NDI, which was moderate pre-operatively and at 6 weeks ($r = -0.5551$ to -0.566); and strong at all other time-points ($r = -0.678$ to -0.749). There was a statistically significant positive correlation between SF-12 PHS and [PROMIS-PF](#), which was strong to very-strong at all time-points ($r = 0.644$ to 0.822), except at 2 weeks ($r = 0.570$).

While [NDI](#) and [SF-12](#) have been used for several years, [PROMIS](#) is a new outcome measure that is increasingly being implemented. The results of this study demonstrate the convergent and discriminant validity of [PROMIS-PF](#), supported by the strong correlation between [SF-12 PHS](#) and [PROMIS-PF](#) at all time-points and the moderate correlation between NDI and PROMIS-PF pre-operatively and in the early post-operative period, respectively. Thus, while PROMIS-PF may not be a good surrogate for disease-specific outcome measures, it may extend value as a precise and efficient general health tool ¹⁾.

1)

Vaishnav AS, Gang CH, Iyer S, McAnany S, Albert T, Qureshi SA. Correlation between NDI, PROMIS and SF-12 in Cervical Spine Surgery. Spine J. 2019 Oct 31. pii: S1529-9430(19)31063-0. doi: 10.1016/j.spinee.2019.10.017. [Epub ahead of print] PubMed PMID: 31678044.

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