P128 Use of 3-month STarT back screening tool in predicting PROMIS-29 domains

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Objective: Early STarT Back Tool (SBT), a 9-item measure assessing disability risks through questions on pain, pain-interference, and psychosocial risk factors, has little evidence in predictive ability of post-operative outcomes. The purpose of this study is to examine to what degree 3-month SBT is associated with physical function (PF), depression (DEP), anxiety (ANX), fatigue (FAT), and pain interference (PI) and intensity (PAIN), at 12-month post-lumbar spine surgery.

Methods: Spine Registry patients who received non-deformity lumbar spine surgery for degenerative disk disease, had 3-month SBT and 12-month patient reported outcomes (PRO), and ≥18 years were included in this study. The PROs included 12-month PROMIS-29 PF, DEP, ANX, FAT, and PI domains as well as PAIN. Patient's risk levels of low, medium, and high were classified using the 3-month SBT. Multivariable logistic regressions were used to assess the impact of adding 3-month SBT risk levels (block 2) to block one which included patient, clinical, and surgical characteristics. Change in R-square and F-statistics, regression coefficients, and standardized beta, for effect size, are presented.

Results: Two hundred and fifty-one patients met inclusion criteria with 182 (73%) patients low, 47 (19%) medium, and 22 (9%) high risk. Change in R-square with the addition of SBT risk levels in model two was significant ($p<0.05$) for PF, DEP, and PI. Although there were slight increases in R-square for ANX, FAT, and PAIN model two, they were not significant. Compared to low risk patients and controlling for confounders, high risk had significantly lower PF (B= -3.2, 95%CI=-6.2, -0.2) and higher DEP (B= 5.1, 95%CI=1.8, 8.4), FAT (B= 3.8, 95%CI=0.1, 7.4), PI (B= 6.2, 95%CI=2.3, 10.2), and PAIN (B= 1.0, 95%CI=0.1, 1.9). Medium risk group also had significantly lower PF (B= -2.4, 95%CI=-4.4, -0.4) and higher PI (B= 3.2, 95%CI=0.5, 5.9). Effect sizes were small according to standardized betas (β), ranging from 0.10 to 0.18.

Conclusions: Risk levels of the SBT collected early post-lumbar spine surgery may offer some insight into a patient's postoperative rehabilitation needs beyond 3-months. Further evidence is needed to better understand the needs of medium and high-risk patients.