Introduction: Back pain is one of the most common health problems, leading to the utilization of healthcare resources, work loss, and sick benefits. Patient expectations influence post-treatment outcomes, both surgical and non-surgical. There is little research on the importance of pre-operative expectations in spine surgery. Existing studies evaluate the technical aspects of interventions and functional outcomes but fail to take into account patient expectations. This retrospective analysis of prospectively collected multi-center data aims to explore the relationship between pre-operative expectations and post-operative outcomes and satisfaction in lumbar and cervical spine surgery. The authors hypothesized that expectations dramatically affect spine patient satisfaction independent of functional outcomes.

Methods: Prospectively collected patient entered data from lumbar and cervical spine patients from two study centers collected using a web based patient health survey system was analyzed. The study included patients who underwent operative intervention (decompression with or without fusion) with at least a 3-month period of follow-up. Pre-operative expectations were measured using the MODEMS expectation survey. Post-operative satisfaction and fulfillment of expectations were measured using the MODEMS satisfaction survey. Post-operative functional outcomes were measured using the ODI and SF-36. Multi-variate ordinal logistic regression modeling was used to examine predictors of post-operative satisfaction. Multi-variate linear regression modeling was used to examine predictors of functional outcomes.

Results: 402 patients were included in the study. Significant predictors of increased satisfaction include: higher fulfillment of expectations regarding work (p=0.003) and pain relief (p=0.008), greater post-operative SF-36 (p=0.04), and lower pre-operative expectations regarding ability to exercise (p=0.03). Lumbar spine patients were more satisfied than cervical-spine patients. Significant predictors of better post-operative function include: higher expectations regarding sleep (p< 0.0002), fulfillment of expectations regarding work (p< 0.0001), sleep (p=0.03), and daily activities (p=0.02). Cervical spine patients had better functional outcomes (p=0.006).

Conclusions: This study showed that pre-operative expectations and their fulfillment influence post-operative satisfaction in lumbar and cervical spine patients. This underlines the importance of taking pre-operative expectations into account in order to obtain an informed choice based on patient preferences.