O42 Implementation and validation of Patient-Reported Outcomes Information System (PROMIS) in patients with fibromyalgia

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Objective: To validate and compare the longitudinal change in PROMIS surveys in patients diagnosed with fibromyalgia and participating in the fibromyalgia treatment program at Mayo Clinic.

Methods: This is a prospective observational study. Clinical and research surveys, including the Revised Fibromyalgia Impact Questionnaire (FIQR), PROMIS Cognitive Function, PROMIS Pain Intensity, PROMIS Pain Interference, and PROMIS Fatigue will be administered electronically to adult patients diagnosed with fibromyalgia at their baseline evaluation, 3 months, and 6 months. Percent change will be calculated at each time point for each survey. Internal consistency and convergent validity of the PROMIS surveys will be validated against the respective FIQR domains, which is the current gold standard for assessing patient symptoms.

Results: A total of 64 participants completed the baseline surveys, with 36 having completed the 3 months surveys currently. The Cronbach's alpha measuring internal consistency was greater than 0.89 for the PROMIS Pain Interference, Fatigue, and Cognitive Function as well as the FIQR. The Pearson correlation test of convergent validity when compared to the corresponding FIQR domain or subsection was 0.9 for Pain Intensity, 0.7 for Pain Interference, 0.5 for Fatigue, and -0.7 for Cognitive Function. The average percent change in each survey from baseline to 3 months was -10.1% ± 35.2 for Pain Intensity, -9.8% ± 18.5 for Pain Interference, -7.5% ± 17.4 for Fatigue, 27.7% ± 47.7 for Cognitive Function, and -17.8% ± 25.7 for FIQR. There was a statistically significant change in the mean difference in all surveys between baseline and 3 months, corresponding to Cohen's d measure of effect size between 0.4-0.7.

Conclusions: The use of PROMIS allows for trending of important patient-reported outcomes longitudinally in a streamlined and reliable manner with fewer questions than the FIQR and other surveys used in patients with fibromyalgia. The PROMIS surveys have high internal consistency and moderate convergent validity when compared to the FIQR at various timepoints. The PROMIS surveys allow for specific disease symptom severity to be studied, allowing for higher quality research and better assessment of treatments in patients with fibromyalgia.