

P93 Predicting physical function from standardized physical performance, PROMIS and activity monitor measures in older adults

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Objective: Physical therapists use a wide array of measures to determine an older adult's physical function. Measures include PROMIS measures, standardized physical performance (SPP) tests, and activity monitor (AM) data. Which of these measures best predict an older adult's perceptions of physical ability is not clear. The purpose of this analysis was to examine the independent and combined ability of SPP, PROMIS, and AM data to predict older adults' PROMIS Physical Function (PF).

Methods: Cross-sectional data was collected on 89 older adults (age: 75.4 ± 7.1 years, sex: 67% female, body mass index: 26.1 ± 7.1 kg/m²). Volunteers were assessed using SPP measures including the Timed Up & Go, Sit to Stand (STS), 10-meter walk test (10MWT), 2-minute Step Test (2MST), 4-Stage Balance Test, and Single Leg Stand Test (SLST). The PROMIS measures included were PF, pain interference (PI), Fatigue, Depression, General Self-Efficacy (SE), and Ability to Participate in Social Roles (APSR). The hip-worn activePal[®] AM was worn for 4 days after the initial testing. The AM variables included average daily step count, standing time, sitting time, and lying time. SPSS Automatic Linear Modeling was used to calculate accuracy (r^2) and importance of variables that predict PF using the following model sets: 1) SPP measures, 2) PROMIS measures, 3) AM measures, and 4) a combination of measures.

Results: Accuracy predicting PROMIS PF was 39.9% for SPP measures, 54.3% for PROMIS measures, 18.9% for AM measures, and 56.6% for a combination of measures. For SPP measures, the importance was 2MST (0.35), 10MWT (0.30), and SLST (0.25). For PROMIS measures, importance was APSR (0.41), Age (0.19), PI (0.16), Gender (0.15), and GSE (0.09). For AM measures, no variables were significant. For a combination of measures, the importance was APSR (0.37), PI (0.18), Age (0.13), Gender (0.12), GSE (0.10), and STS (0.10).

Conclusions: Although SPP tests are more frequently used clinically, PROMIS measures are more important for predicting an older adult's PROMIS PF score. Of the PROMIS measures included, APSR was the most important. This data reinforces the importance on the social meaning of physical function limitations rather than emphasizing SPP tests.