THE DEVELOPMENT AND PSYCHOMETRIC ANALYSIS OF THE SHORT-FORM PULMONARY FUNCTIONAL STATUS SCALE (PFSS-11)

Abstract Information

Presentation Preference: SNRS Podium Presentation

Willing To Submit Poster? Yes

Abstract Categories: Interest Group: Psychometrics/Instrumentation
Thematic Areas: Chronic illness

Introduction: The purpose of this work was the development and psychometric evaluation of a short-form Pulmonary Functional Status Scale (PFSS-11). PFSS-11 was derived from the previously validated 35-item PFSS [Weaver, Narsavage, & Guilfoyle,

**Method(s):**

PFSS content validity was established by an expert panel. PFSS-11 construct validity was determined by principal components factor analysis using data from 179 subjects (120 COPD group/59 normative group). The sample was predominantly white (80%); mean age =77 years COPD vs.75 years normative. 11 items from the PFSS were identified based on item-response distribution and factor-analysis extraction coefficients >0.60. Construct validity, concurrent validity, internal consistency reliability, plus intervention effects (n=95 Pulmonary Rehabilitation-PR group) were assessed. Because none of the 3 sexual-functioning questions were validated for the short form, PFSS-11 was compared to PFSS-32 instead of PFSS-35.

**Results:**

Factor structure solution explained 65.6% variance with 8-items (ADL/dyspnea/IADL) from PFSS Daily Activity/Social Functioning (DA/SF) and 3-items (anxiety/depression) from PFSS Emotional Functioning (EF) subscale. Construct validity was supported by significant differences (p<0.001) between mean scores of COPD and normative groups on PFSS-32, PFSS-11, and subscales. Concurrent validity of PFSS-11 with PFSS-32 was supported (r=0.93 COPD; r=0.90 normative). Internal consistency was satisfactory (PFSS-11 Cronbach's =0.83 COPD group; 0.74 normative group; 0.93 PFSS). PFSS-11 accounted for 88% (COPD) and 80% (normative) of variance in PFSS-32. After pulmonary rehab (PR), significant changes (p<0.001) in PFSS-11 before/after scores were identified (mean=2.43, 3.15, respectively), consistent with the PFSS 0.55 effect size.

**Discussion:**

The PFSS-11 has solid psychometric properties which make it acceptable for use in research as well as clinical practice. Congruent with the PFSS, the short-form can be used to measure pulmonary functional status outcomes.

**Research Completed:** Yes

**Abstract History:** NA

**Financial Disclosure:**

Have a financial arrangement or affiliation with commercial companies whose products may be mentioned in this material? No

**FDA Disclosure:**

Cleared: Yes

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**Submitted By:**

gnarsavage@hsc.wvu.edu