

PHYSIOLOGIC, WELL-BEING, AND COPING RESOURCE PREDICTORS  
OF FUNCTIONAL PERFORMANCE IN PEOPLE WITH  
CHRONIC OBSTRUCTIVE PULMONARY DISEASE

MARY PATRICIA WALL, PHD, RN, BC

University of Maryland School of Nursing  
655 West Lombard Street  
Baltimore, MD 21021

COPD

Functional Performance

Aging

**PURPOSE:** COPD is a chronic, complex, and incurable illness affecting 14 million Americans. This study examined predictors of functional performance in community-dwelling people with COPD. The relationships between functional performance and physiologic variables (pulmonary function and concomitant medical comorbidity), well-being variables (depression, anxiety, happiness, and life satisfaction), and coping resource variables (mastery and social support) were examined.

**METHOD:** Participants were recruited at a suburban pulmonary medicine practice. A total of 119 people ( $M_{age} = 68.17 \pm 8.48$ , 53.8% male, 99% Caucasian) completed the study protocol. The Functional Performance Inventory-Short Form (FPI-SF) measured the outcome variable of functional performance. Comorbidity Questionnaire, FEV<sub>1</sub> % pred, Hospital Anxiety and Depression Scale (both subscales), Happiness and Life Satisfaction questions, Mastery Scale, and Personal Resources Questionnaire 85-Part II were examined as predictors. Gender was included as a dummy variable. Demographic and patient-related information was obtained from all participants. Univariate, bivariate and multivariate analyses were conducted.

**FINDINGS:** Functional performance was correlated to all the proposed predictors except comorbidity, happiness, and gender. Correlations among the predictors revealed that comorbidity was related to social support and gender; pulmonary function was related to functional performance and the well-being and coping resource variables were all related, but only anxiety was related to gender. None of the correlations were high enough to suggest multicollinearity. The multiple regression analysis predicting functional performance from the proposed predictors (after controlling for age) identified four significant predictors: age ( $\beta = -.322, t = -4.445, p = .000$ ), pulmonary function ( $\beta = .242, t = 3.392, p = .001$ ), depression ( $\beta = -.707, t = -6.712, p = .000$ ), and gender ( $\beta = -.189, t = -2.548, p = .012$ ). This model explained 46.3% of the variance in functional performance. The tolerance for depression was .411, indicating that 58.9% of the variance in depression was shared with other proposed predictors. Men reported greater comorbidity ( $t = 3.451, df = 97.876, p = .001$ ) and less anxiety ( $t = -2.984, df = 117, p = .003$ ) than did women.

**DISCUSSION:** Depression is of interest because of its prevalence in both the chronic illness and aging populations. In this sample of COPD patients, depression was the strongest single predictor of functional performance. Although functional performance did not differ according to gender, gender was a multivariate predictor of functional performance, suggesting an interaction of gender with depression.