

**Title:**

Caregiver Presence and Self-Management Ability Predict Perceived Self-Management Adherence in Patients With COPD

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**Session Title:**

Family Caregivers: Presence, Perspectives, Challenges, and Health

**Keywords:**

adherence, caregivers and self-management

**References:**

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**Abstract Summary:**

Data presented originates from our pilot work regarding the use of a self-guided, eHealth, self-management intervention in patients with COPD. The purpose of this abstract is to examine the relationship between caregiver presence and patients' perceived adherence to self-management regimens. Implications for future targeted and tailored interventions will be discussed.

### **Content Outline:**

#### **Content Outline**

1. Introduction
2. Prevalence of COPD
3. Self-management requirements for people with COPD
4. Role of caregivers in self-management and medication adherence in COPD.
5. Purpose of this analysis.
  1. Body
  2. This data stems from completed works.
    1. Intervention description
    2. Population description
    3. Measures
      1. Self-Management Ability Scale
      2. Medical Outcome Study Specific Adherence Scale
      3. Caregiver Presence; Patient Interviews
    4. Self-management ability predicts perceived self-management adherence
      1.  $b = .52$  [0.09, 1.03],  $p = .03$ .
      2. This is an expected finding.
    5. Caregiver presence is inversely related to perceived self-management adherence.
      1.  $b = -14.75$  [-21.59, -6.68],  $p < .01$
      2. This is not consistent with current evidence in the literature
        1. However, most evidence pertains to medications
      3. This is an understudied concept
        1. Most measures of adherence do not encompass multifaceted behavioral regimens (diet, exercise, mental well-being, breathing control, medications, environment modification and exacerbation planning).
  - III. Conclusion
    1. Given that the measure of adherence was "perceived self-management adherence", patients could theoretically conceptualize that their personal/self-initiated adherence was low due to their caregiver managing or completing some tasks for them. This is seen in diabetes self-management.
    2. There is a need for future research on factors that influence perceived self-management adherence in patients with COPD.
    3. A better understanding of how caregivers could promote perceived self-management and improved outcomes for patients with COPD is needed.

#### **Topic Selection:**

Family Caregivers: Presence, Perspectives, Challenges, and Health (25439)

#### **Abstract Text:**

**Background:** Chronic obstructive pulmonary disease (COPD) is an irreversible and progressive disease characterized by persistent respiratory symptoms and decreased lung function.<sup>1</sup> The estimated prevalence of COPD ranges from 13.5% to 15% of the United States population (43.3 million to 48.1 million).<sup>2,3</sup> Up to 33.7 ( $\approx$  80%) million people living with COPD can reduce disease burden and prevent adverse health outcomes by optimizing self-management behaviors.<sup>4-7</sup> Previous self-management interventions yielded improved health related quality of life, decreased risk for mortality and decreased dyspnea burden.<sup>8</sup> Yet, non-adherence to the behaviors examined in those studies are estimated to be as high as 60%.<sup>9</sup> Caregivers are instrumental to ensuring medication compliance in people with COPD, however the role that caregivers play in general self-management behavior adherence is less understood.

**Purpose:** To examine if caregiver presence is predictive of perceived self-management adherence in patients with stable COPD. Understanding the effects of caregiver presence on perceived self-management adherence is critical to developing effective treatment strategies for patients with COPD.

**Methods:** Patients with COPD (N = 20) completed measures of perceived self-management ability (Self-management ability scale, short version) and perceived self-management (adapted Medical Outcome Study Specific Adherence Scale). Data were prospectively collected from December 2017 to February 2018. A multiple regression examined the relationship between caregiver presence and perceived self-management adherence, with and without controlling age, gender, perceived self-management ability, and presence of a caregiver (official or unofficial). Bootstrapping was conducted to generate robust bias corrected accelerated 95% confidence intervals for each predictor. Assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met prior to bootstrapping.

**Results:** Self-management ability and presence of a caregiver were significant predictors of perceived self-management adherence. Higher level of self-management ability predicted higher self-management adherence scores,  $b = .52$  [0.09, 1.03],  $p = .03$ . There was an inverse relationship between presence of a caregiver and adherence scores,  $b = -14.75$  [-21.59, -6.68],  $p < .01$ ; presence of a caregiver resulted in lower self-management adherence scores. Age and gender were non-significant control variables for this analysis. Given the bootstrapping procedure, these results are likely an accurate estimate of the true population.

**Conclusion:** It is essential for patients with COPD to be adherent to complex medical and behavioral regimens to maintain optimal health. Surprisingly, in this small sample, we found caregiver presence was associated with decreased perceived self-management adherence in the patients with COPD. Decreased perceived self-management adherence scores may indicate a shift in the management or completion of tasks by the caregiver. Presence of a caregiver could also reflect an increased acuity level of the patient with COPD, who is lacking in ability to independently self-manage adherence to treatment regimens. Additional study of factors affecting perceived self-management adherence in patients with COPD and caregiver roles that result in optimal patient outcomes is needed.