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Brief Report

Coping Skills Practice and Symptom Change: A Secondary Analysis of a Pilot Telephone Symptom Management Intervention for Lung Cancer Patients and Their Family Caregivers

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Abstract

Context. Little research has explored coping skills practice in relation to symptom outcomes in psychosocial interventions for cancer patients and their family caregivers.

Objectives. To examine associations of coping skills practice to symptom change in a telephone symptom management (TSM) intervention delivered concurrently to lung cancer patients and their caregivers.

Methods. This study was a secondary analysis of a randomized pilot trial. Data were examined from patient-caregiver dyads ($n = 51$ dyads) that were randomized to the TSM intervention. Guided by social cognitive theory, TSM involved four weekly sessions where dyads were taught coping skills including a mindfulness exercise, guided imagery, pursed lips breathing, cognitive restructuring, problem solving, emotion-focused coping, and assertive communication. Symptoms were assessed, including patients' and caregivers' psychological distress and patients' pain interference, fatigue interference, and distress related to breathlessness. Multiple regression analyses examined associations of coping skills practice during the intervention to symptoms at six weeks after the intervention.

Results. For patients, greater practice of assertive communication was associated with less pain interference ($\beta = -0.45$, $P = 0.02$) and psychological distress ($\beta = -0.36$, $P = 0.047$); for caregivers, greater practice of guided imagery was associated with less psychological distress ($\beta = -0.30$, $P = 0.01$). Unexpectedly, for patients, greater practice of a mindfulness exercise was associated with higher pain ($\beta = 0.47$, $P = 0.07$) and fatigue interference ($\beta = 0.49$, $P = 0.04$); greater practice of problem solving was associated with higher distress related to breathlessness ($\beta = 0.56$, $P = 0.01$) and psychological distress ($\beta = 0.36$, $P = 0.08$).

Conclusion. Findings suggest that the effectiveness of TSM may have been reduced by competing effects of certain coping skills. Future interventions should consider focusing on assertive communication training for patients and guided imagery for caregivers. J Pain Symptom Manage 2018;■:■–■. © *2018 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.*

Key Words

Lung cancer, family caregivers, psychosocial interventions, symptom management, cognitive-behavioral, intervention components

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Introduction

Cancer is often conceptualized as a “dyadic disease” that can profoundly impact the patient and his or her family caregiver.[1,2] Thus, numerous psychosocial interventions have focused on improving outcomes for cancer patient—caregiver dyads.[3,4] Dyadic interventions have shown small-to-moderate effects on prevalent issues, including patients’ and caregivers’ psychological distress (i.e., depressive and anxiety symptoms)[1,4] and patients’ pain,[5,6] fatigue,[7] and distress related to breathlessness.[8] Unfortunately, little is known about the effective components of these complex interventions. Studies exploring intervention components in relation to outcomes have been limited in cancer[9–11] and noncancer medical populations,[12] despite being an important step in developing efficacious interventions.[13,14]

Some studies have explored associations between intervention components (e.g., participant coping skills practice) and outcomes in nondyadic psychosocial interventions for cancer patients.[9–11] First, Andersen et al.[9] analyzed a randomized controlled trial (RCT) testing a group-based intervention for breast cancer survivors. Greater practice of relaxation exercises was associated with less psychological distress and nurse-rated symptoms after intervention. Reduction in symptoms was also predicted by use of assertive communication with medical providers. Similarly, Cohen and Fried[11] randomized breast cancer patients to either group-based cognitive-behavioral therapy or relaxation training. Greater practice of the skills taught in both conditions was related to postintervention reductions in psychological distress, sleep difficulties, and fatigue. Finally, Chan et al.[10] examined an RCT testing a psychoeducation and progressive muscle relaxation program for patients with advanced lung cancer. Greater practice of progressive muscle relaxation was related to reduced breathlessness intensity and fatigue after the intervention. These studies provide preliminary evidence that coping skills practice is related to reductions in certain symptoms. To our knowledge, however, no studies have explored these associations in a dyadic intervention for cancer patients and caregivers.

The objective of the present study was to examine associations between coping skills practice and symptom change in a telephone symptom management (TSM) intervention delivered concurrently to lung cancer patients and their caregivers.[15] TSM focused on patients’ and caregivers’ well-being and the management of patient symptoms through a blend of cognitive-behavioral and emotion-focused strategies. Each session included social cognitive theory—based determinants of behavior change,[16,17] such as enhancing knowledge of symptoms and coping skills, setting coping skills practice goals, assessing barriers to practice, modeling adaptive coping behavior, and enhancing social support.

In a pilot RCT, four sessions of TSM were compared to four sessions of an education/support condition, and no significant between-group differences were found for the main outcomes.[15] However, this global analysis did not allow us to determine if certain coping skills were related to improved outcomes. We thus conducted a secondary analysis of this pilot trial. Based on social cognitive theory[16,17] and previous research,[9–11] we hypothesized that greater practice of coping skills (i.e., noticing sounds and thoughts, guided imagery, pursed lips breathing, cognitive restructuring, problem solving, emotion-focused coping, and assertive communication) during the intervention would be related to fewer symptoms for patients (i.e., pain interference, fatigue interference, distress related to breathlessness, and psychological distress) and caregivers (i.e., psychological distress) at six weeks after the intervention.

Methods

Participants and Setting

Study procedures have been reported previously.[15] Lung cancer patients and their family caregivers were recruited between March 2013 and April 2015 from three medical centers in Indianapolis, IN. Patient inclusion criteria included the following: 1) age ≥18 years, 2) at least three weeks after diagnosis of lung cancer, 3) at least moderate severity for one or more symptoms at recruitment, including anxiety, depressive symptoms, pain, fatigue, or breathlessness, 4) a consenting family caregiver, and 5) adequate English fluency. Patient exclusion criteria included the following: 1) significant psychiatric or cognitive impairment, 2) previously providing feedback on the intervention,[18] 3) current participation in another psychosocial study, or 4) receiving hospice care. Caregiver inclusion criteria included the following: 1) age ≥ 18 years, 2) living with the patient or visiting regularly, and 3) adequate English fluency. Caregiver exclusion criteria included the following: 1) current participation in another psychosocial study, 2) previously providing feedback on the intervention,[18] or 3) significant psychiatric or cognitive impairment.

Fifty-one dyads were randomized to TSM, and 75% completed three or four sessions. There was 31% attrition from allocation to six weeks after the intervention. Half of the attrition (8/51 dyads) was attributed to the patients’ declining health or death, and the other half was attributed to lack of interest. Additional study flow information has been reported previously.[15]