

# Interventions for Managing a Symptom Cluster of Pain, Fatigue, and Sleep Disturbances During Cancer Survivorship: A Systematic Review

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**PROBLEM IDENTIFICATION:** More than 40% of cancer survivors experience a symptom cluster of pain, fatigue, and sleep disturbances, which can greatly reduce quality of life.

**LITERATURE SEARCH:** A literature search was performed using CINAHL®, Google Scholar™, PubMed®, PsycINFO®, and Web of Science. Articles included randomized controlled trials of interventions aimed at managing a symptom cluster of pain, fatigue, and sleep disturbances.

**DATA EVALUATION:** 11 studies were assessed for quality, risk of bias, cancer type, sample size, intervention type, duration, and setting. For an intervention to be considered effective, the reduction of symptom severity or distress had to be statistically significant.

**SYNTHESIS:** Data from the 11 studies were summarized. Four interventions were found to be effective in managing the symptom cluster, but evidence on long-term effectiveness was insufficient.

**IMPLICATIONS FOR NURSING:** Oncology nurses can assess the patterns and characteristics of simultaneous symptoms experienced by cancer survivors and administer interventions to relieve symptom burden and improve quality of life.

**KEYWORDS** symptom cluster; sleep disturbances; fatigue; pain; survivorship; quality of life; intervention

**ONF, 47(4), E107-E119.**

**DOI** 10.1188/20.ONF.E107-E119

Early detection and advancements in cancer treatment have steadily increased survival rates among individuals with cancer. There are about 15.5 million cancer survivors worldwide, with approximately 1.7 million individuals entering cancer survivorship annually on average (National Cancer Institute, 2019; Siegel et al., 2019). In addition, cancer survivorship is projected to increase by 35% in the next decade (National Cancer Institute, 2019). Cancer survivorship encompasses the time from diagnosis through end of life and can include curative and maintenance treatments, secondary cancers, and remission (de Oliveira et al., 2018; Drury et al., 2017; Hebdon et al., 2015; Mullan, 1985).

During survivorship, cancer survivors may undergo curative or long-term maintenance therapies, develop secondary cancers, or enter remission, all of which have implications on physical, psychosocial, and financial issues related to well-being and quality of life (de Oliveira et al., 2018; Drury et al., 2017; Le Boutillier et al., 2019). In addition, cancer survivors often experience symptoms that can further affect functional status and quality of life (Deshields et al., 2014; Miaskowski et al., 2017; Mosher & DuHamel, 2012; Xiao, 2010; Xu et al., 2018). Previous studies have shown that cancer survivors often experience as many as 8–13 symptoms during survivorship (Barsevick, 2016; Deshields et al., 2014; Fan et al., 2007; Mosher & DuHamel, 2012). Symptoms can occur independently, but more frequently cancer survivors experience symptom clusters of two or more symptoms that coexist and may or may not have a common etiology, which can produce different outcomes than those expressed by a single symptom (Albusoul et al., 2017; Barsevick et al., 2006; Beck et