

# Feasibility Pilot Study of a Virtual Intervention for Survivors With Decreased Perceived Cognitive Function After Cancer Treatment

Jamie S. Myers, PhD, RN, AOCNS®, FAAN, Celina H. Shirazipour, PhD,  
Jeffrey C. Wertheimer, PhD, ABPP-CN, and Arash Asher, MD

**OBJECTIVES:** Many cancer survivors report issues with cognitive function following diagnosis and treatment. The purpose of this single-arm pilot study was to test the feasibility and acceptability of virtual delivery of a cognitive rehabilitation intervention for participants in virtual groups.

**SAMPLE & SETTING:** 37 adult cancer survivors reporting impaired cognitive function following primary treatment were enrolled from Cedars-Sinai Medical Center and affiliates, the University of Kansas Cancer Center, and the Masonic Cancer Alliance.

**METHODS & VARIABLES:** Two cohorts attended six weekly virtual sessions and completed pre- and postintervention patient-reported outcome questionnaires designed to measure perceived cognitive function, loneliness, and determinants of behavior change for exercise, sleep, and mindfulness.

**RESULTS:** Postintervention scores for perceived cognitive function, determinants of behavior change, and loneliness ratings significantly improved.

**IMPLICATIONS FOR NURSING:** Evidence continues to build in support of cognitive rehabilitation interventions for cancer survivors. Nurses play an important role in terms of patient identification, participation, and facilitation.

**KEYWORDS** cognitive rehabilitation; cognitive function; health behavior change; loneliness

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About 75% of cancer survivors report significant decreases in cognitive function (CF) during and following treatment for non-central nervous system (CNS) malignancies (Janelins et al., 2014). These cognitive effects may persist for years in a subset of survivors (about 35%) and have a significant negative impact on many aspects of quality of life, including home, work, and social functioning (Koppelmans et al., 2014; Myers, 2012; Von Ah et al., 2013). Research indicates that some behavioral lifestyle factors may potentiate cancer-related cognitive impairment, such as level of physical activity, disturbed sleep, and loneliness (Hartman et al., 2015; Jaremka et al., 2014; Myers et al., 2020). Hartman et al. (2015) were the first to explore the relationship between physical activity, sleep disturbance, and CF in cancer survivors. Using a computerized battery of neurocognitive tests and linear regression, Hartman et al. (2015) demonstrated significant relationships between physical activity and cognitive performance in the domains of executive function, attention, and visuospatial ability. Jaremka et al. (2014) reported the results of three studies conducted with breast cancer survivors and individuals without cancer indicating that loneliness was associated with both self-report of cognitive issues and worse performance on neurocognitive tests. The current authors' previous pilot work (Myers et al., 2020) further demonstrated a correlation between loneliness and cancer survivors' increased reports of changes in CF. Postintervention improvements in loneliness correlated with improvement in self-report of CF. Mindfulness practices also have shown promise in enhancing CF in the general population and in cancer survivors. Proposed mechanisms for