

Tele-Motivational Interviewing for Cancer Survivors: Feasibility, Preliminary Efficacy, and Lessons Learned

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ABSTRACT

Objective: Determine the feasibility, acceptability, and efficacy of tele-Motivational Interviewing (MI) for overweight cancer survivors.

Design: Six-month nonrandomized phase 2 clinical trial.

Setting: Urban garden and remote platforms.

Participants: Overweight and obese cancer survivors post active treatment.

Intervention: Remote tele-MI from a trained registered dietitian nutritionist (RDN).

Main Outcome Measures: Feasibility, acceptability, and preliminary efficacy.

Analysis: Groups were stratified as users and nonusers based on tele-MI use. Qualitative survey data and remote MI interaction logs were analyzed for trends. Two-sample *t* tests were performed to assess pre-post intervention changes in physical activity and dietary behaviors, quality of life, self-efficacy, and clinical biomarkers.

Results: A total of 29 participants completed the intervention. There were 17 tele-MI users (59%) and 12 nonusers (41%). Users were primarily female (88%), breast cancer survivors (59%), college educated (82%), with a mean age of 58 years. Users set 50% more goals, lost more weight (4.8 vs 2.6 kg), significantly improved quality of life ($P = .03$), and trended more positively in clinical biomarkers (eg, cholesterol, blood pressure) than did nonusers.

Conclusions and Implications: Findings from this study indicate that tele-MI is a feasible and acceptable intervention for overweight cancer survivors after active therapy. Larger randomized trials are needed to establish efficacy and generalizability to a variety of demographic populations.

Key Words: motivational interviewing, telehealth, cancer survivor, lifestyle, technology (*J Nutr Educ Behav.* 2018;50:19-32.)

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INTRODUCTION

The number of cancer survivors in the United States is expected to increase from 15 to 19 million by 2024.¹ In response, a paradigm shift is necessary in providing cancer care that alters the focus from acute treatment to chronic disease management.² This transformation calls for continued care for the cancer survivor, including individualized survivorship support and tailored follow-up well beyond active cancer treatment.³ Because the majority of cancer survivors are also overweight or obese, the myriad of health challenges in this vulnerable population are compounded and increase the risk of all-cause mortality.⁴

Evidence-based recommendations for the care of cancer survivors include

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adoption of a primarily plant-based diet and regular physical activity. These guidelines also encourage survivors to achieve and maintain a normal body weight. This is of particular importance considering a recent International Agency for Research on Cancer Report,⁵ which links 13 cancers (eg, pancreatic, colorectal) to excess body fatness. Accordingly, several organizations, including the World Cancer Research Fund/American Institute for Cancer Research, American Cancer Society, and American Heart Association, consistently support adherence to a primarily plant-based dietary pattern and the use of trained interventionists such as registered dietitian nutritionists (RDNs) to improve behaviors and health outcomes.⁶⁻⁸ However, current evidence suggests that these recommendations are not consistently followed or consistently recommended.⁹

Targeted behavioral interventions for overweight and obese individuals often emphasize self-regulation, behavior modification, and goal setting.¹⁰ Albert Bandura's Social Cognitive Theory (SCT) outlines the importance of self-regulation with consideration of 3 major components: (1) self-monitoring, (2) judgment of one's own actions compared with personal standards, and (3) choosing behaviors based on anticipated internal reactions.¹¹

Motivational interviewing (MI) is a clinical counseling approach used by trained interventionists that builds on SCT constructs. Initially developed to address addictive behaviors such as substance abuse, MI uses reflective listening, open-ended questions, and affirmations while emphasizing client autonomy to enhance an individual's internal motivation to change behaviors.¹² The main tenet of MI is to address an individual's ambivalence regarding behavior change.¹³ Related to cancer survivors specifically, MI has been used to encourage positive lifestyle behaviors, particularly via promoting improvements in dietary and physical activity patterns in survivors.¹⁴ Other efficacious MI-based interventions have addressed perceptions of fatigue, pain, postsurgical complications, and stress.¹⁵⁻¹⁹

The US Department of Health and Human Services defines telehealth as the use of technology to deliver health care, health information, or health education at a distance.²⁰ Remote tele-

health platforms have been successfully applied in a variety of health services to promote behavior change, provide emotional support, and serve as a source of motivation and reinforcement for clients.^{21,22} Literature documents the benefits of remote coaching interventions in the improvement of physical activity, quality of life (QOL), dietary patterns, and clinical biomarkers such as cholesterol.^{23,24} Indeed, use of interactive technologies, including remote coaching, computer-based programs, and devices, are increasing in popularity in weight loss interventions, yet continue to yield mixed results. Although they have proven more cost effective per kilogram of body weight lost than traditional weight loss interventions, inconsistencies in delivery remain.²³⁻²⁹

Telephonic interventions, including those supplemented by additional aspects of electronic connectivity such as text messaging and Web site access, have shown to be efficacious, feasible, and acceptable.^{28,30,31} Compared with controls or enhanced controls (ie, passive education), interactive computer-based behavioral interventions emphasizing 2-way communication resulted in greater weight loss and weight maintenance in the overweight and obese population. Yet despite this success, compared with face-to-face interventions, these produced relatively modest improvements.³² Therefore, although technology-based interventions, including telehealth, are becoming widely available and have proven efficacious, cost-effective, and acceptable in the treatment and management of various conditions, these novel methods of delivery may be best received when paired with traditional counseling.^{26,30}

Over 90% of cancer survivors fail to meet evidence-based dietary and physical activity guidelines; therefore, it is critical for clinicians to develop and test novel telehealth interventions targeting high-risk cancer survivors to improve lifestyle behaviors and health outcomes.³³ High-risk survivors include those who have undergone aggressive oncology treatments that increase the risk of secondary malignancies or comorbidities (eg, cardiovascular disease) or possess clinical health indices that increase the risk of a cancer recurrence or a second cancer (eg, morbid obesity).^{8,33,34} Telehealth interventions using MI from a trained interventionist (RDN)

may affect behavior change in overweight and obese cancer survivors. The purpose of this study was to determine the feasibility, acceptability, and efficacy of targeted tele-MI, provided by a trained RDN, for overweight and obese cancer survivors harvesting at an urban garden.

METHODS

Participants and Recruitment

Adult cancer survivors were recruited from local oncology clinics and community cancer centers to participate in this phase 2 trial. Participants were screened for eligibility by trained study personnel, and all eligible participants were invited to attend a baseline clinic visit. The study inclusion criteria included adult (aged ≥ 18 years) cancer survivors who had completed active therapy within the previous 36 months; the ability to read, write, and speak English; access to telephone, e-mail, or texts; and body mass index (BMI) ≥ 25 kg/m².

Study exclusion criteria included cancer survivors who were cognitively unable to consent or who had physical or mental limitations that would prevent full participation in the program; survivors taking medications for which increasing produce consumption was contraindicated (ie, warfarin); those consuming nonprescription substances (ie, herbals, botanicals, or alternative products); and survivors with active metabolic or digestive illnesses or malabsorptive disorders (Crohn's disease, irritable bowel syndrome), renal insufficiency, hepatic insufficiency, cachexia, or short bowel syndrome.

Informed consent was obtained from all participants included in the study at baseline clinic visits. All procedures were performed in accordance with the ethical standards of The Ohio State University's institutional review board and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Study Design

JamesCare for Life, a component of The Ohio State University Comprehensive Cancer Center, provides programming and services to cancer patients and survivors. One survivorship program is centered on a 2.5-acre

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