ABSTRACT

BALANCE ACTIVITIES AND STRENGTHENING TO IMPROVE CONDITION [BASIC]: TRAINING FOR ELDERS WITH HEART FAILURE

Purpose: The purpose of this pilot study is to evaluate the effect of a multi-component balance and resistance training [RT] intervention on physical function, balance, and falls in older [≥ 65 y/o] community dwelling heart failure [HF] patients. The study aims: 1] Pilot test multi-component balance activities and RT intervention on primary outcomes. 2] Explore perceptions related to outcomes and the intervention through focus groups. 3] Generate pilot data on adherence. 4] Generate pilot data on feasibility of conducting the BASIC Training intervention.
Background/Significance: Falls are the leading cause of injury-related deaths in this age group. Fall risks are even greater for those with HF due to decreased exercise capacity, loss of skeletal muscle and medication side effects. Though RT is effective for improving skeletal muscle, it has only a modest effect on improving balance, which is comprised of peripheral sensory input central integration, and motor output. It will require a multi-component intervention focusing on balance retraining and strengthening the muscles supporting static/dynamic balance and functional mobility.
Methods: *Design* - Randomized, two-group with wait list control, repeated measures experimental design. *Sample/ Setting* - 40-50 participants recruited from a medical center heart failure clinic; supervised group sessions conducted in the center's health and wellness center. *Procedures* - Participants will be randomized to the intervention group or the wait list control group. Focus groups pre/post intervention. The intervention will be administered in 1x per week supervised group sessions and 2x a week home sessions. *Instruments* - 30 Second Sit-to-Stand, Modified Clinical Test of Sensory Interaction on Balance, Activity Specific Balance Confidence Scale, Timed Up and Go, Dynamic Gait Index.
Analysis Plan: Aim 1- independent t-test to compare change scores from baseline to the end of the first 12 week period for the intervention group with the wait list control group. A second analysis will combine data from the delayed intervention period for the wait list control group with that from the first 12 week period for the intervention group to test change. Supplemental analysis, involving only data from intervention group, will test whether change is sustained at 24 weeks. Aim 2 - thematic analysis conducted with focus group data. Aim 3 - adherence assessed by group session attendance and home activities completed. Aim 4 – assess and report logistics of conducting the study.
Nursing Relevance/Implications: This pilot study will initiate the process of developing a targeted intervention to induce changes in elderly HF patients to prevent future falls; thus reducing costs, physical and emotional burdens related to falls; and effect a major difference in the quality of life for this population.