



Presenter: Nate Rogers

Session & Time: Poster_I / 11:00 to 12:00pm

Room: Guzman Lecture Hall

Discipline: Nursing

Faculty Mentor: Andrea Boyle

Digital Portfolio URL:

Title: Stronger Together: The Role of Outdoor Group Based Resistance Training in Rebuilding Strength, Cognition, and Community in LTC Residents

Abstract:

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Background: Older adults in LTCFs often face social isolation and declining musculoskeletal function, both of which diminish health and independence. Standard interventions typically focus on medication management, sedentary activities, or basic mobility exercises, often overlooking

the benefits of structured resistance training. While resistance training has been proven effective, its use in outdoor, group-based settings for aging populations remains largely unexplored. Exercising outdoors can reduce stress, enhance mood, and provide psychological benefits through exposure to natural environments. Additionally, group-based exercise encourages social interaction and accountability, which has been shown to boost adherence. Understanding how outdoor, group-based resistance training impacts musculoskeletal function, social engagement, and exercise adherence could help develop a more effective approach for supporting older adults in LTCFs. **Research Question:** Is group-based outdoor resistance training more effective than individual indoor training for enhancing musculoskeletal function, social interaction, and exercise adherence in long-term care residents? **Proposed Study:** This quasi-experimental study involves two groups of LTCF residents over 12 weeks. Participants will be recruited from LTCF's capable of supporting either an outdoor or indoor exercise program. Informed consent will be obtained from all participants. The study involves two distinct groups: one engaging in outdoor, group-based resistance training and the other performing indoor, individual resistance training. Both outdoor and indoor groups will complete identical exercises using a combination of bodyweight movements, dumbbells, and resistance bands. Strength training coaches will monitor sessions to ensure safety and consistency. Data collection will evaluate changes in musculoskeletal function, social engagement, and exercise adherence using quantitative statistical analysis. **Clinical Significance:** Findings from this study could help shape future policy changes promoting holistic exercise programs in LTCFs. Improved musculoskeletal function, social engagement, and exercise adherence may encourage LTCFs to adopt outdoor, group-based resistance training as a standard approach.

Keywords: *aging population, resistance training, long-term care, social engagement, outdoor exercise, adherence, musculoskeletal health, group-based intervention*