

Biking Buddies: Promoting Well-Being for Assisted Living Residents and Staff Through Adaptive Biking

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Introduction

Residents and staff of long-term care facilities face a variety of health challenges that can negatively impact their well-being. Residents often experience declining health and autonomy, social isolation, and lack of meaningful engagement^{3,9,12}. For staff, worker shortages and increased care needs of residents can lead to stress and burnout^{11,15}. Consequently, there is a need for interventions and strategies that can benefit both populations.

Recreational therapy interventions that address multiple domains of well-being are well suited for this task. Adaptive biking programs in particular have documented positive health outcomes for older adults, and findings from a recent feasibility study support staff involvement during their work hours^{13,14}. Research has shown wheelchair biking to be an effective recreational therapy intervention not only for addressing depression^{2,7} but also for positively impacting happiness, engagement, and quality of life in older adults^{4,5,8,10}.

As facilities look for ways to maximize the health and wellbeing of both residents and staff, a program that can simultaneously benefit both would hold tremendous value. Thus, the purpose of this research was to determine the impact of an adaptive biking program on the well-being of assisted living residents and staff.



Methodology

Participants

- Residents aged 65 years and older who desire to participate and can answer assessment questions
- Staff aged 18-65 identified as either a nursing or management employee

Intervention Structure

- Staff and residents paired into a biking dyad
- A weekly 20-30 minute bike-ride for 8 consecutive weeks.
- Weekly themes and discussion prompts provided using the Flourishing Through Leisure model¹

Assessments

- PERMA Profiler (for residents)
- Workplace PERMA Profiler (for staff)
- Flourishing Through Leisure Questionnaire (developed by research team)
- Post-ride assessment addressing each PERMA area of well-being
- Qualitative Data: open-ended questions asked after each session and post-program.

Data Analysis

- The Flourishing Through Leisure Questionnaire and PERMA scores were analyzed using paired samples t-test for both staff and residents.
- Post-ride assessments were measured using a numeric rating scale and analyzed with measures of central tendency
- Thematic analysis was used on all qualitative data to identify common themes and experiences.

Results

Staff Participants

- Males (n = 2) and females (n = 8)
- Ages ranging from 22 – 63 years (M = 43.40, SD = 17.18)
- Nursing department (n = 5) and the management team (n = 6)
- Employed at the facility for 1-5 years (M = 3.2, SD = 1.49).

Resident Participants

- Male (n = 1) and females (n = 11)
- Ages ranging from 75 – 96 years (M = 86.92, SD = 6.50).
- Resided on assisted living (n = 7) or memory care (n = 5) unit
- Baseline MoCA scores ranged from 6 – 25 (M = 13.08, SD = 6.92).

Well-Being (PERMA) and Post Ride Scores

No significant differences were recorded between pre- and post- program scores. Post-ride responses for residents (n = 92) ranged from 8.57 (SD = 1.72) for accomplishment to 9.17 (SD = 1.74) for negative emotions. Staff responses (n = 76) ranged from 9.50 (SD = .92) for health to 9.80 (SD = 1.07) for negative emotions.

Flourishing Through Leisure

Overall scores for residents were 55.71 (SD = 7.63) at the study's onset and increased to 56.04 (SD = 8.69) post-program. However, the change was not statistically significant.

Qualitative Feedback

See Table 1 for common themes and experiences identified by residents and staff.

Table 1: Participant Qualitative Themes

Theme	Post Ride Comments		Post Program Comments		Total
	R	S	R	S	
Relationships	28	44	4	9	85
Nature/Outdoors	41	23	8	6	78
Fun	34	-	6	-	40
Physical Benefits (Exercise and Relaxation)	14	14	4	4	36
Accomplishment/Autonomy	16	-	5	-	21
Benefits to Buddy	-	-	-	5	5
Other Benefits	-	-	-	4	4

Implications for RT

Results from this study, while not statistically significant, indicate high levels of well-being among participants. Qualitative feedback identifies important factors of this program and areas for future study, including the benefits of relationships between residents and staff, the importance of resident autonomy, and positive experiences within multiple health domains.

An important aspect of this research is that it highlights future opportunities for recreational therapy professionals to design and implement well-being programs that simultaneously benefit residents and staff. This could lead to greater recognition of the value of recreational therapy at the agency.

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