

Exercise Motivation and Fitness through Dog Walking among Older Adults

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Figure 1. Human-Companion walking participant walking with a staff member

INTRODUCTION

- A significant proportion of the elderly in the state of Missouri suffer obesity & overweight-attributable illnesses.
- Being overweight in the elderly population has been known to cause a decline in physical function & is a cause of chronic illnesses.
- Non-purposeful physical activity results in low adherence rates.
- Dog walking was found to increase a person's sustained physical activity (Morgan, 2001).

HYPOTHESIS & RESEARCH QUESTION

Older adults who walked daily with a dog would be more likely to:

- Engage in physical activity outside of the program, have an increase in walking speed and an improvement in mood & social support.

Is adherence better in the Shelter Dog Companion (SDC) - walking group than in the Human Companion (HC) - walking group?

DESIGN, METHOD & PARTICIPANTS

- Three-group, repeated measures design
 - 12-week period walking program (5 days per week)
 - Adults over the age of 65
 - Health care provider gave assent
- Three retirement facilities served as recruitment sites for:
 - SDC-walking companion group
 - HC-walking group
 - No-treatment control group
- SDC-walking group came to the shelter to walk (matched with dog for walking ability)
- HC-walking group walked around their facility
- No treatment control group maintained usual activity

INSTRUMENTS

- Demographic Questionnaire
- Physical function (6 minute walk), height, weight, dog ownership history, beliefs about dog ownership, physical activity pattern for each decade of life, physical activity during the previous week, exercise stage of change, mood & social support.
- *The Profile of Mood States*, a 65-item adjective list assessed tension, depression, anger, vigor, fatigue & confusion during the past week.
- *Social Provisions Scale (SPS)*, a 24-item tool measuring: attachment, perceived closeness, social integration, reassurance of worth, guidance and reliable alliance.
- *Stage of Change for Physical Activity*, a list of 8 statements, each defining a more advanced stage of change in the participants' physical activity status.
- In post-tests, treatment groups described advantages & disadvantages of the walking program, what motivated them to participate, & whether or not they were likely to continue their physical activity outside the program.



Figure 2. Human Companion-walking participants



Figure 3. Measuring the distance of a Human-Companion walking participant for the 6-minute walk after six weeks

DATA ANALYSIS

- Repeated-measures Multiple Analysis of Variance (MANOVA) using a 0.05 level of determining significance of findings.
- Open ended data will be tabulated using thematic analysis via themes that emerge from the participants' written assessment of the walking program.

SAMPLE DESCRIPTION & FINDINGS

Variable	SDC-Walking Group	HC-Walking Group	Control
Age (years)	Range = 74 - 87 Mean = 82 n = 12	Range = 67 - 97 Mean = 86 n = 25	Range = 78 - 92 Mean = 86 n = 18
Gender	3 Males 9 Females	6 Males 19 Females	5 Males 13 Females
Race	10 Caucasians 1 African American 1 Native American	25 Caucasians	15 Caucasians 3 Native Americans
Marital Status	2 Married 9 Widowed 1 Divorced	10 Married 14 Widowed 1 Never Married	6 Married 11 Widowed 1 Never Married
Education	1 No High School 1 High School Graduate 3 Some College 2 Bachelor's Degree 5 Graduate Work	2 No High School 3 High School Graduate 7 Some College 6 Bachelor's Degree 7 Graduate Work	7 High School Graduate 7 Some College 3 Bachelor's Degree 1 Graduate Work
Number of Children	1 One child 10 One-Four children 1 Five + children	4 No children 20 One-Four children 1 Six children	2 No children 14 One-Four children 2 Six children
Dog ownership	3 pet owners 9 non-pet owners	2 pet owners 23 non-pet owners	2 pet owners 16 non-pet owners
6 minute walk PRE (yards)	Range = 156 - 638 Mean = 306	Range = 177 - 332 Mean = 260	Range = 145 - 383 Mean = 234
6 minute walk POST (yards)	Range = 218 - 497 Mean = 369	Range = 174 - 427 Mean = 260	Not available



Figure 4. Human Companion-walking participants



Figure 5. Shelter Dog Companion-walking participants



Figure 6. Weekly data collection for the Human Companion-Walking group

CURRENT CONCLUSIONS

- Both walking groups have become competitive with their walking times & distances.
- SDC-walking group have expressed an affinity for & a bond with the shelter dogs that they walk.
- Through observation by the staff, the ability of the SDC-walking group seems to be improving.
- Participants have an improvement in their balance, walking speed and distance.
- The 6 minute walk before & after the experiment shows an increase in walking distance/walking speed from 306 yards to 369 yards for the SDC-walking group when compared with the HC-walking group.

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