

# “HEMS” Physical Activity Health Education Program for Persons with Multiple Sclerosis

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## Background

- Multiple Sclerosis (MS) is an auto-immune system disease that is estimated to affect 1 in 1000 people in the US.
  - It results in a variety of associated (e.g., fatigue, spasticity) and secondary conditions (e.g., depression).
- Physical activity (PA) is linked to improved performance of activities of daily living, reduced severity of secondary conditions related to MS, and improvements in quality of life.
- There is little translational research and health promotion programs on increasing PA in this population.

## Purpose

- To pilot the effectiveness of Health Education for Persons with Multiple Sclerosis (HEMS) on increasing PA and constructs of the Social Cognitive Theory (SCT).

- Self-efficacy
- Outcome expectations
- Social support
- Goal achievement

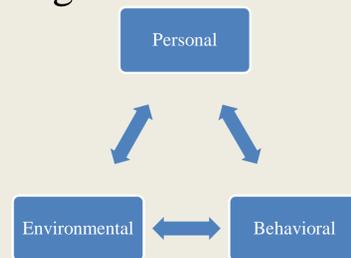


Figure 1 describes the interactions of personal, environmental, and behavioral factors of the SCT.

## Methods

- Recruitment: Existing MS Exercise Program at Oregon State University
- Participants:
  - 21 participants (ages 31- 74)
  - Average years of MS =14 years
  - 63% had Relapsing Remitting MS; 32% Secondary Progressive MS; 5% Primary Progressive MS
- Procedures:
  - Pre-experimental design (single group pre-test/post-test design) consisting of 8 week periods of assessment.
- Analysis: One-way ANOVA utilizing STATA 11.2 Statistical Program

## Methods cont.

Pre-Assessment  
(8 weeks)

Measures: PA logs, pedometers and questionnaires

Intervention  
(8 weeks)

Each week included:

- Review of previous weeks PA behaviors
- Review of previous weeks module topics
- Discussion of current module topic
- Determining goals for following week

Module content included:

- Benefits of PA, overcoming barriers, goal setting, building social support, motivation & rewards, quality of life, & goal evaluation.

Post-Assessment  
(8 weeks)

Measures: PA logs, pedometers and questionnaires

## Results

Table 1: HEMS Outcomes

	Pre-Assessment		Post-Assessment	
	Mean	SD	Mean	SD
Self-efficacy	6.06	3.30	7.98	2.34
Social Support	2.83	1.22	2.11	0.76
Outcome Expectations	4.07	0.71	3.96	0.35
Goal Setting	2.52	1.01	2.83	0.70
Pedometer Steps	4845	3537	3814	2146

- Table 1 displays the results of the intervention.
- None of the outcomes were statistically significant between pre and post assessment, but self-efficacy (p=0.08) was approaching significance.

## Conclusion

- With modifications (e.g., frequency and mode of data assessment), we believe the HEMS program can increase PA and SCT constructs in a larger scale study with more participants.