

# Project AAMP: A Peer-Assisted Social Cognitive Physical Activity Intervention for Older Adults

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It's time to re-examine the beliefs  
which shape our lives.



Well, here I am again. Of course it seems like I *should* cross the road, but is that what I really *want* to do? I wonder if there is a more *enjoyable* option...

# The Promotion Challenge

- Health benefits
  - Physical
  - Psychological well-being
  - Quality-of-life
  - Functional independence

**Minutes of Moderate and/or Vigorous Physical Activity** (measured by accelerometer), NHANES 2003-2004\*

Age Group (yrs)	Men	Women
20-29	39.7	23.6
30-39	42.8	21.3
40-49	34.7	19.9
50-59	26.4	15.4
<b>60-69</b>	<b>16.7</b>	<b>12.4</b>
<b>70+</b>	<b>8.7</b>	<b>5.4</b>

\* Troiano et al., 2008

# Peer-assisted health interventions

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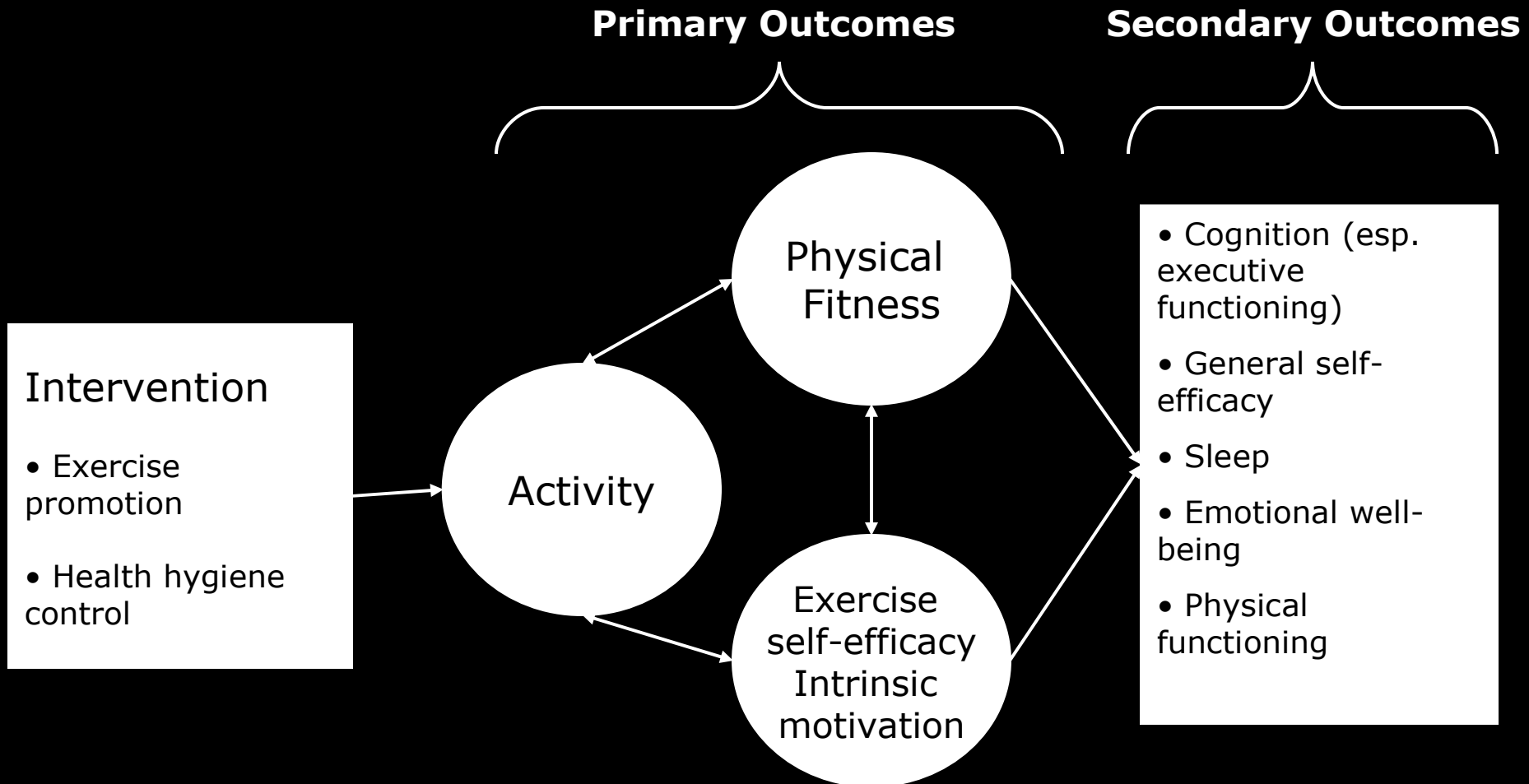
- Cancer care
- Nutrition education
- Vaccinations
- Mammography screening
- Colorectal screening

# Can peers be used to promote physical activity in older adults?

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- Cost-conscious model of delivery
- Mutual benefit of peers and recipients
- Fits within a social cognitive framework
  - Self-efficacy theory
  - Self-determination theory
- High potential for dissemination

# AAMP Framework



# Hypotheses

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- Project AAMP, a peer-delivered social cognitive physical activity intervention, would result in behavioral, functional, and psychosocial improvements.
  - Physical activity
  - Cardiorespiratory fitness
  - Intrinsic motivation

# Intervention Design

Intervention	Control
<u>FORMAT</u>	
Mod+ Endurance Strength training Autonomous, “choice” emphasized Access to exercise facility	<i>No recommendation given</i> “ “ Access to exercise facility
<u>BEHAVIORAL TARGET</u>	
Encouraged to set and increase exercise-specific goals	<i>None</i>
<u>PEER-DELIVERED WEEKLY MEETINGS</u>	
Group-based Behavioral skills-building	Group-based Educational “health hygiene”

# Recruitment

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## ○ Participants

- Typical community-based recruitment (e.g., flyers, newspaper, older adult registry)
- Retention: 85%, equal dropout by group

## ○ Peer Mentors

- Mentors identified by community leaders
  - Intervention mentors were physically active
- Peers had 3 hours of training
- All sessions taped and feedback given throughout intervention in both groups

# Demographics

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- Participant Characteristics (N=81)
  - 63.4 years of age
  - 16.1 years of education (Bachelor's level)
  - 82.7% female
  - 54% married
  - 91.4% white, non-Hispanic
- Peer Mentor Characteristics (N=7)
  - 67.3 years of age
  - 18.2 years of education (Master's level)
  - 42.9% female
  - 100% married
  - 100% white, non-Hispanic

# Measures

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- Daily
  - Godin Leisure-time Exercise Questionnaire
    - Minutes of Mod+ activity
    - Total Physical Activity
  - Pedometer (Yamax SW200)
- Pre-post (16 weeks)
  - Exercise motivation scale (intrinsic motivation)
  - Submaximal graded exercise test - Balke protocol (blinded)

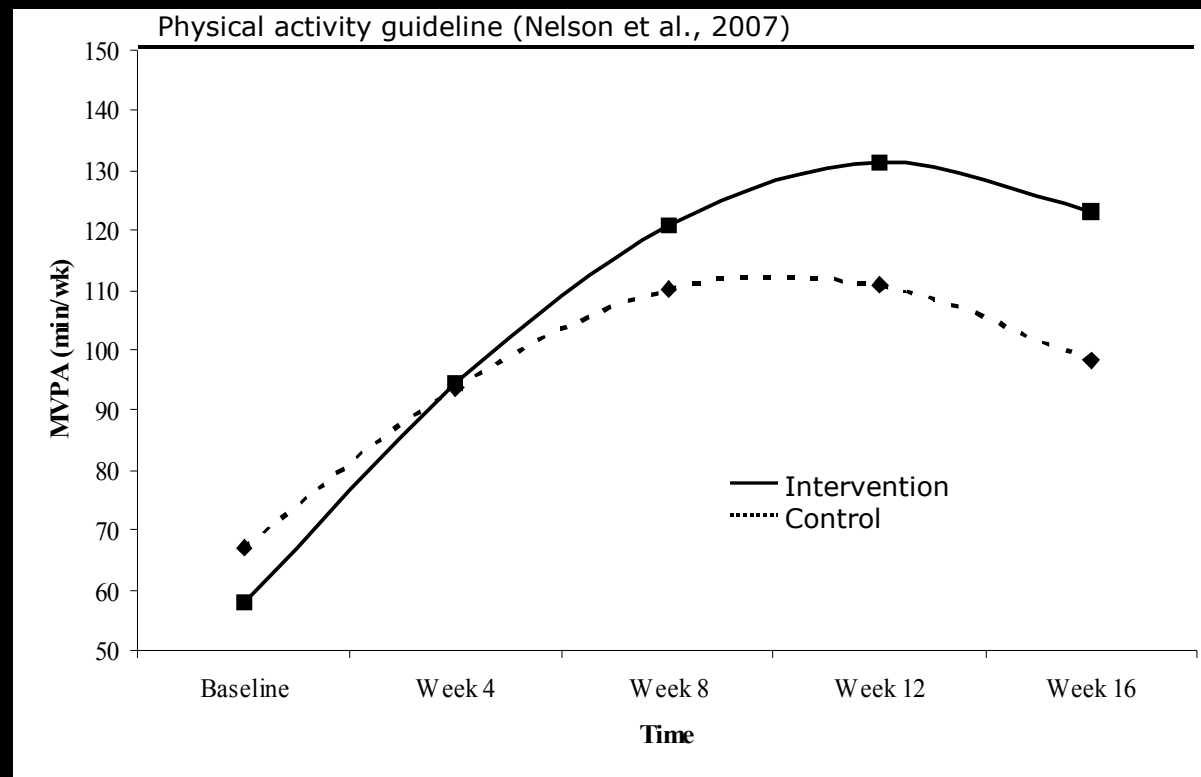
# Data Analyses

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- Mixed models:
  - Leisure-Time Exercise (MVPA and total PA)
  - Pedometer
- Repeated measures analysis of variance:
  - Intrinsic motivation
  - Cardiorespiratory fitness
- Covariates:
  - Group attendance
  - Peer mentor

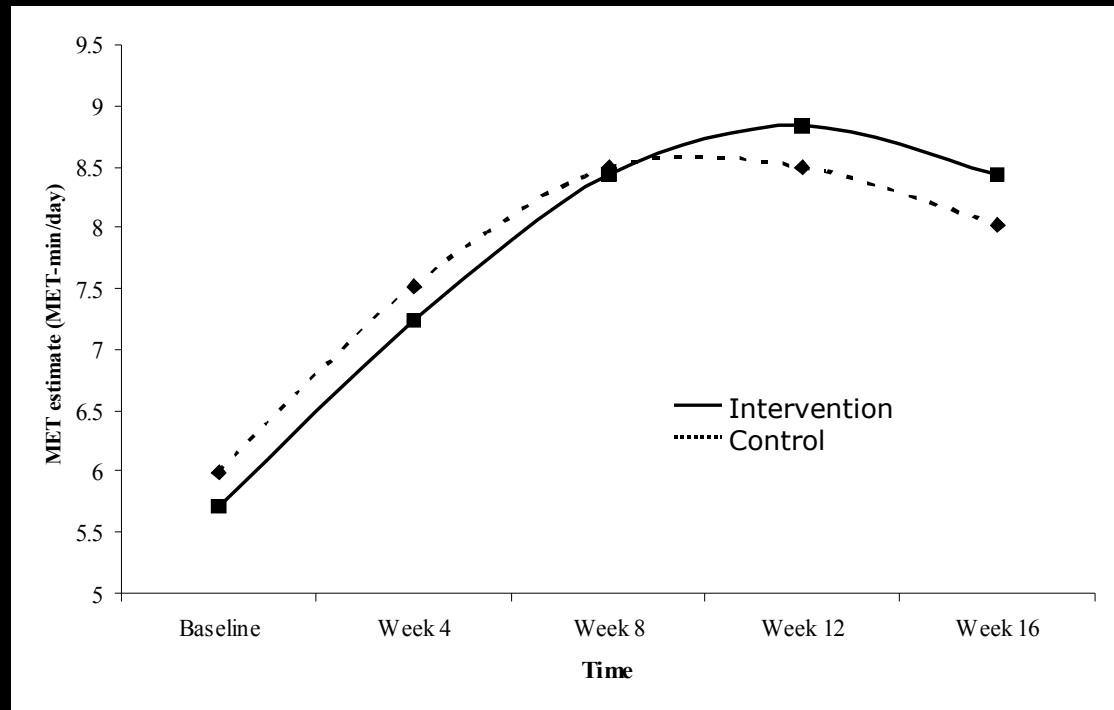
# Results: Moderate-Vigorous PA

- Positive linear time trend ( $p < .001$ )
- Negative quadratic time trend ( $p < .001$ )
- No time x group effect
- Time x attendance: those who attended more group, improved more ( $p < .05$ )
- 116% increase for intervention, 62% increase for control



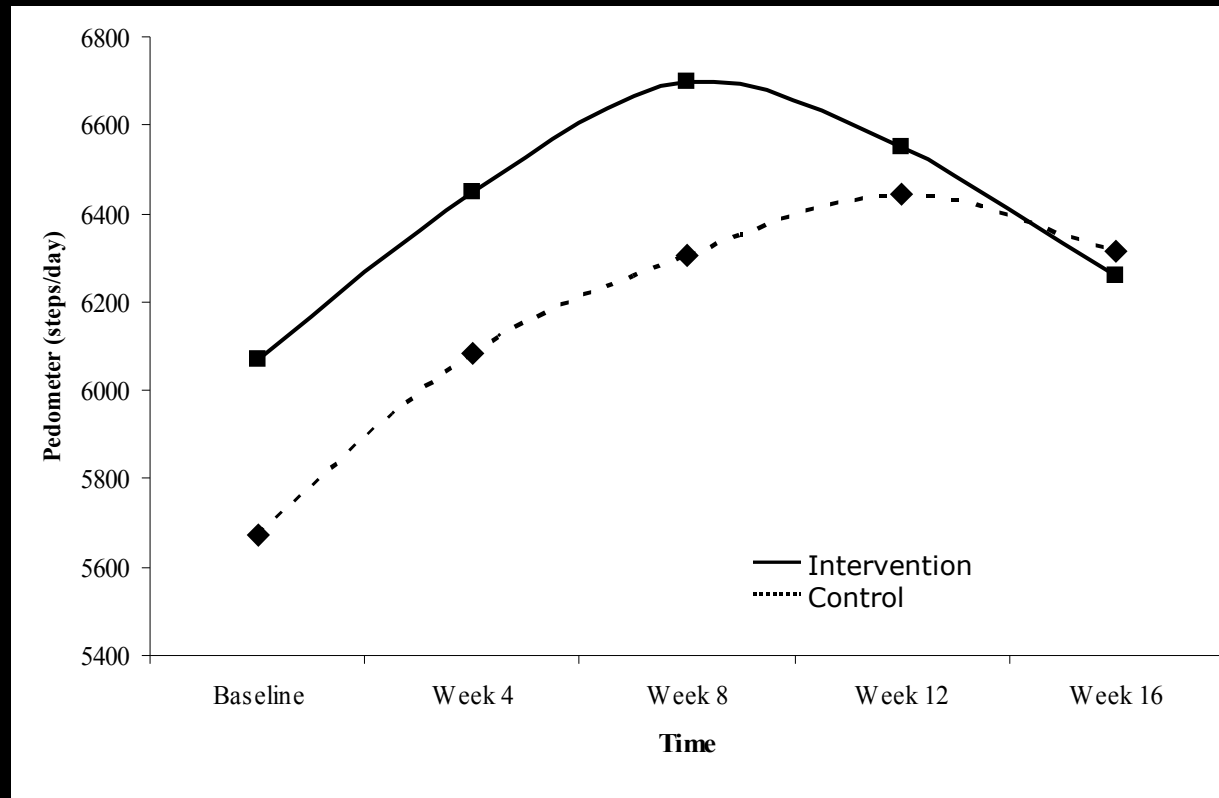
# Results: Total Physical Activity

- Significant linear and quadratic time trends ( $p$ 's < .001)
- No time x group interaction ( $p > .10$ )
- 52% increase for intervention; 38% increase for control



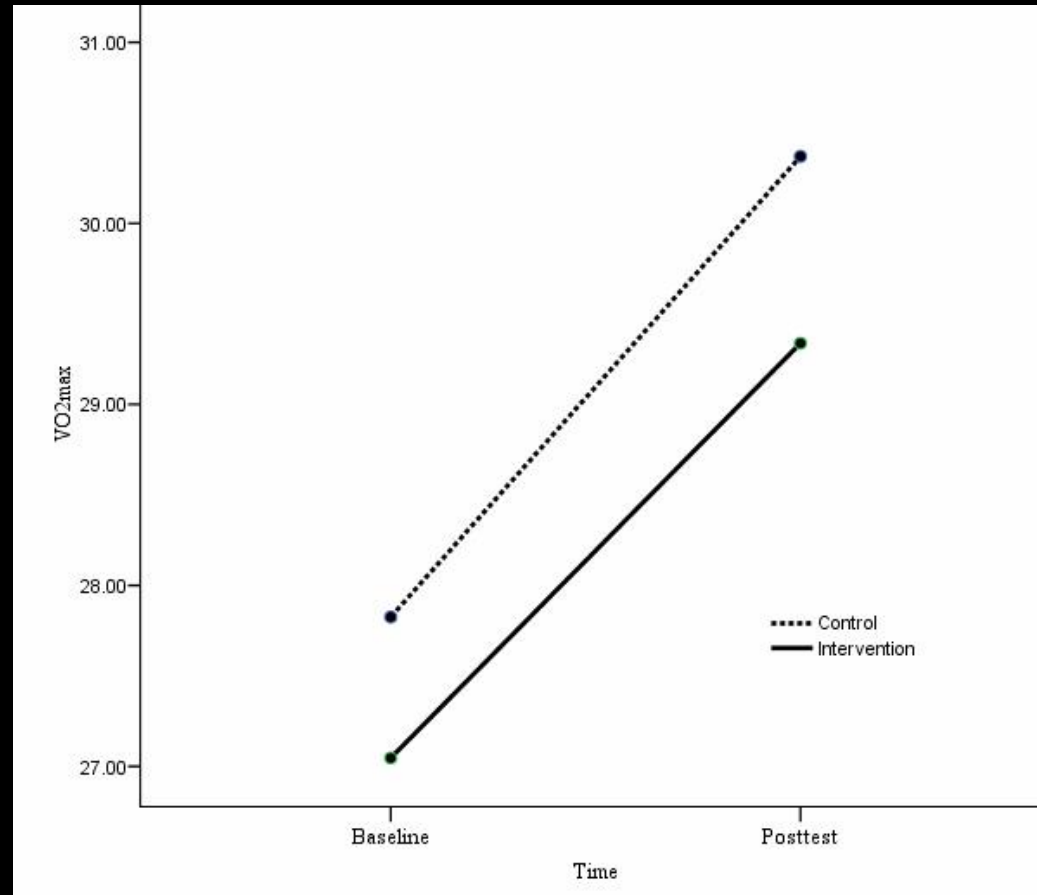
# Results: Pedometer Steps

- Significant linear ( $p < .01$ ) and quadratic time trends ( $p < .001$ )
- 10% increase for intervention group; 12% increase for control group
- Decline in intervention group?



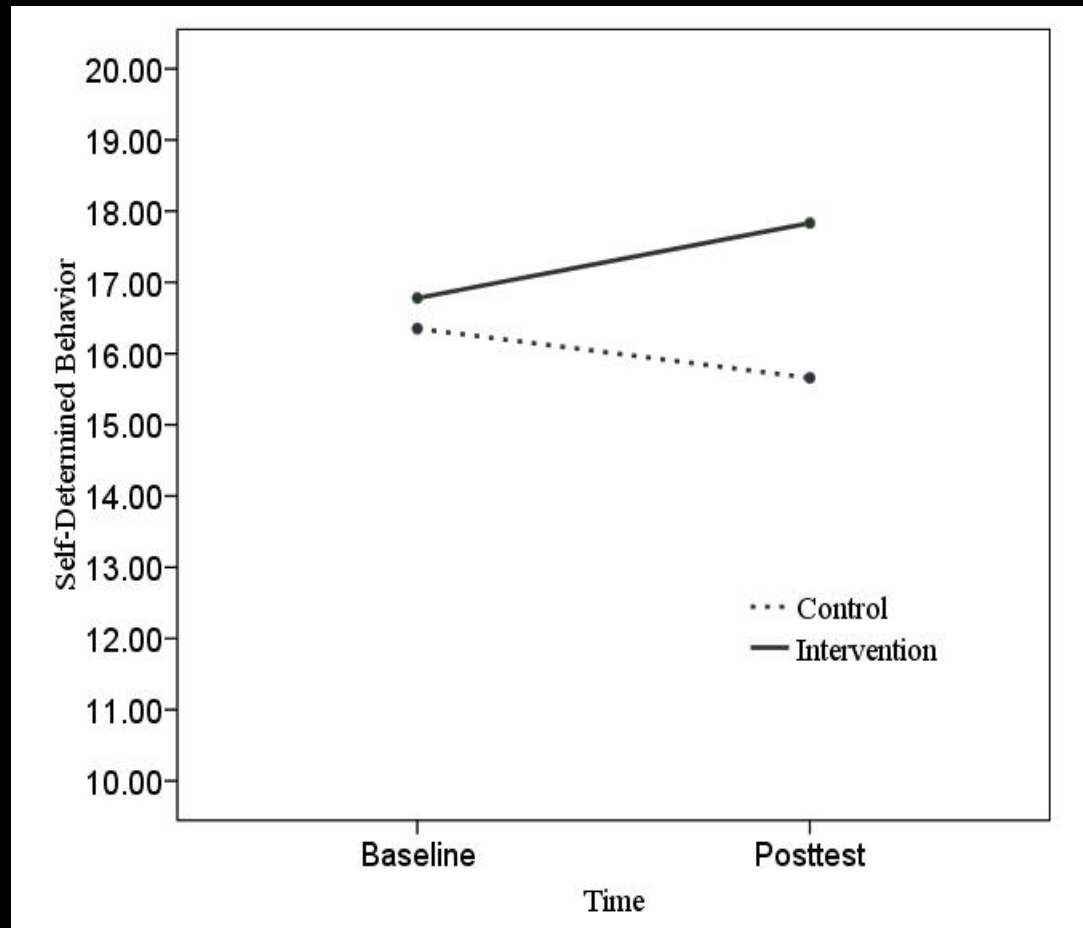
# Results: Cardiorespiratory fitness

- Significant improvements in both groups ( $p = .002$ ;  $\eta^2 = .151$ )
- No time x group interaction observed



# Results: Intrinsic motivation

- No significant difference ( $p = .12$ )
- Potential diverging trends



# Discussion - Overview

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- Short-term findings
  - Both groups increased physical activity
  - Both groups increased cardio-respiratory fitness
  - Intrinsic motivation did not improve

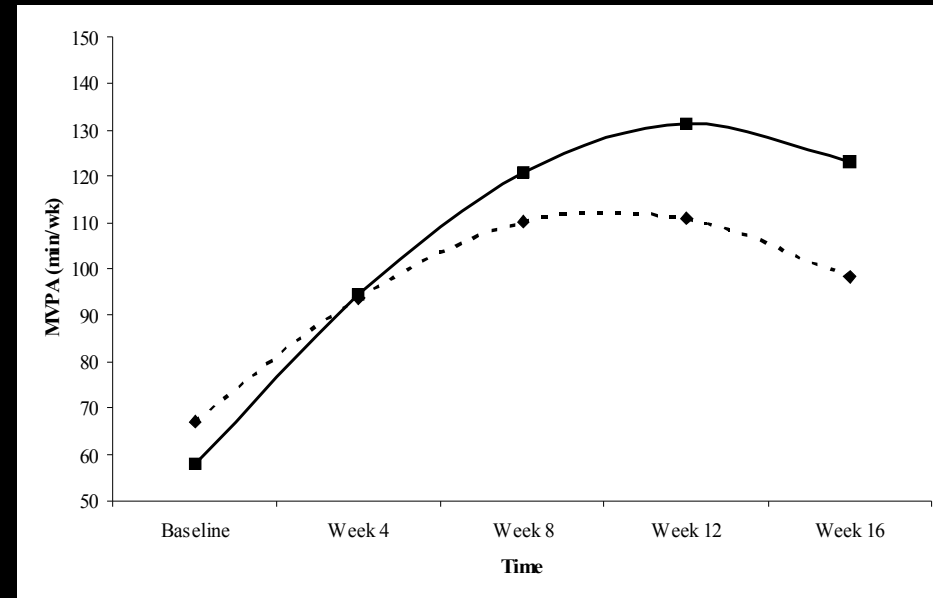
# Discussion – PA Outcomes

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- Significant and curvilinear improvements
  - Lowest levels at baseline
  - Monotonic increase through week 8
  - “Leveling-off” by week 12
  - Modest decline to week 16
- Meaningful improvements

# Discussion – PA Outcomes

- Group differences not observed
- 18-month follow-up
  - Will the control group lose their motivation over time (with no pedometer or health information)?
  - Will the behavioral skills learned by the intervention group help them maintain their behavioral changes?



# Discussion – Intrinsic Motivation

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- Diverging trends
  - Ceiling effect
  - Intrinsic motivation is linked to long-term maintenance
  - 18-months outcomes

# Strengths

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- Novelty of intervention design
- High retention (85%)
- Repeated assessment

# Future directions

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- Less autonomy
- Successful vs. unsuccessful mentors

# THANK YOU!

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## Contact Information

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