

Findings and Lessons Learned

Feasibility and Preliminary Effectiveness of a Web-Based Physical Activity Intervention for Working Mothers

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Background

- **Working mothers identified as a segment of the population that exhibit high levels of inactivity¹**
- **Barriers to physical activity (PA) in working mothers include¹:**
 - **Lack of time**
 - **Guilt**
 - **Lack of social support**
- **Interventions needed to help working moms overcome barriers by fostering self-worth, promoting self-care, teaching self-regulatory strategies for PA**

Background

- **Fit Minded**
 - **Evidence & theory-based book club intervention**
 - **Meaningful benefits of PA related to well-being**
 - **Set realistic, attainable goals**
 - **Improve self-worth and physical activity**

Background

- **Originally developed for face-to-face**
 - **Evolved based on evidence and satisfaction surveys**
 - **Online component: self-monitoring, workbook, discussion and support**
 - **Feasible delivered through a tablet**
 - **felt less support and attended fewer meetings than face to face²**

Background

Although web-based interventions have shown improvements in PA - lack of engagement is significant challenge³

Purpose

To examine the feasibility and effectiveness of using podcasts and discussion delivered via a self-directed, web-based intervention, **Fit Minded Working Mothers**, to promote physical activity, self-worth and increase engagement among working mothers

Methods

- **Eligibility assessed online**
- **Inclusion**
 - **Working at least 30 hours/wk**
 - **Child under 12 years living at home**
 - **Engage in less than 150 min/wk PA**
- **Recruitment through schools, childcare centers, bloggers, mom groups using social media or website**

Methods

- **Fit Minded Working Mothers (n=69)**
- **Randomized, 8-week intervention**



Standard Group

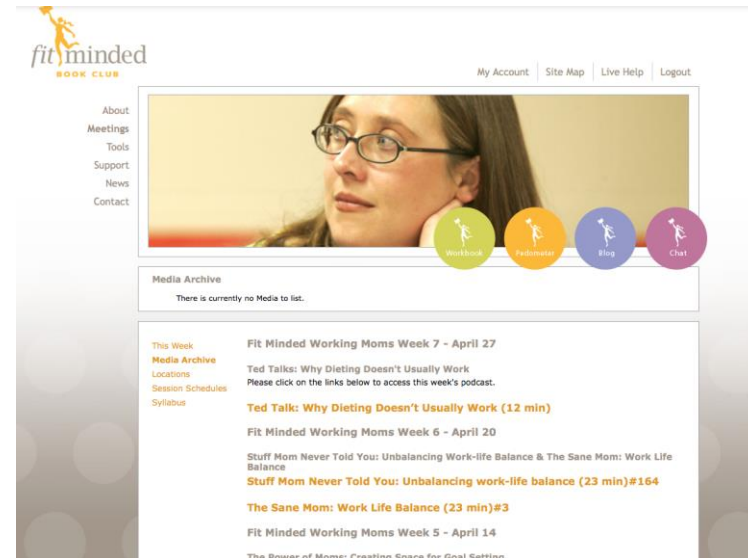
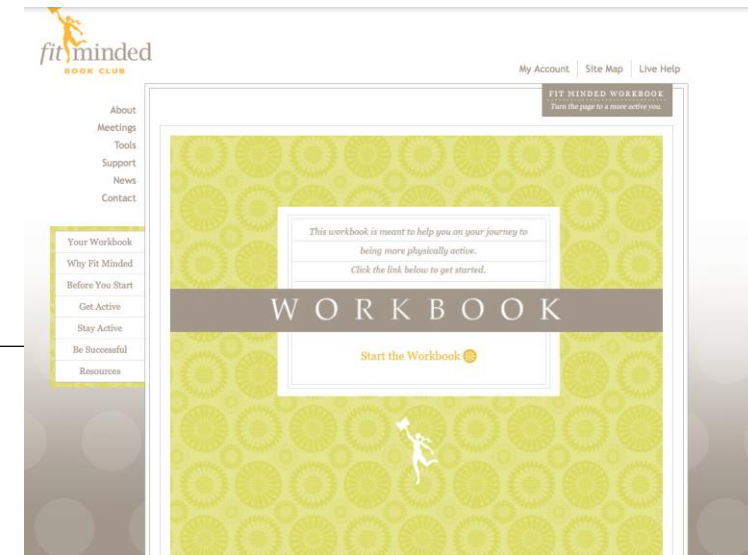
- 8 weeks
- Online
- Guided by self-determination theory and social cognitive theory
- Participants instructed to complete 3 tasks each week:
 1. listen to podcast (autonomy)
 2. complete assignment in workbook (competence)
 3. communicate on discussion board (relatedness)

Enhanced Group

- 8 weeks
- Online
- Guided by self-determination theory and social cognitive theory
- Participants instructed to complete 3 tasks each week:
 1. listen to podcast (autonomy)
 2. complete assignment in workbook (competence)
 3. communicate on discussion board (relatedness)
- **Smaller groups of 4-5 and asked to complete additional weekly tasks:**
 1. **Group cohesion (e.g., create team names, group goals)**
 2. **Discussion questions about specific aspects of the podcasts**

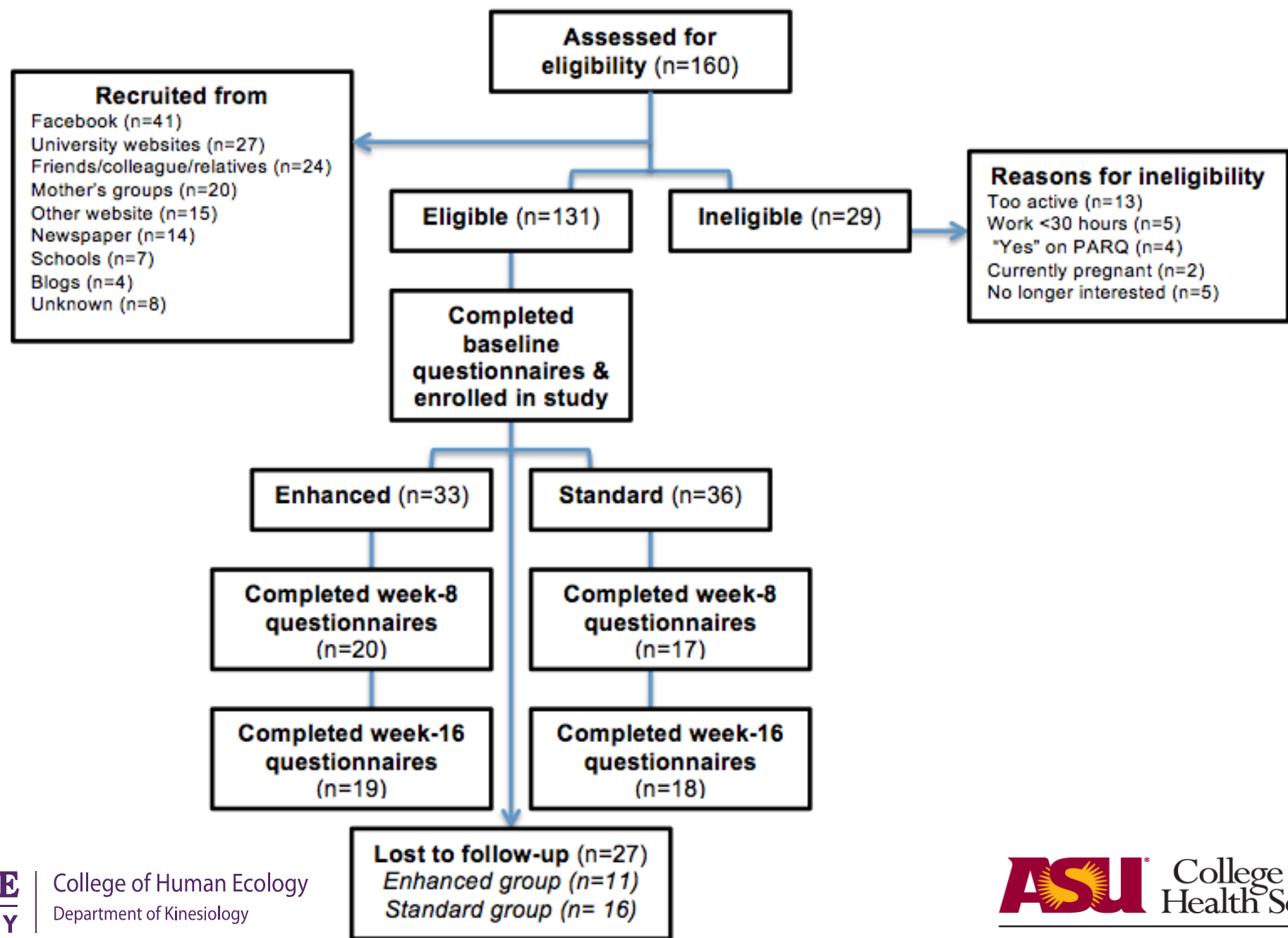
Methods

- Podcasts
 - 20-30 minutes
 - Self-renewal
 - Stress reduction
 - Work-life balance
 - Mindfulness
- Workbook
 - 10-15 minutes
 - Self-regulatory skills
 - Setting short and long-term goals
 - Plans to overcome barriers
 - Asking for support
 - Pedometer log



Methods

- **Outcome measures (baseline, week 8, week 16):**
 - **physical activity**
 - **self-worth**
 - **exercise motivation**
 - **self-efficacy**
 - **program evaluation**



Demographics (N=69)

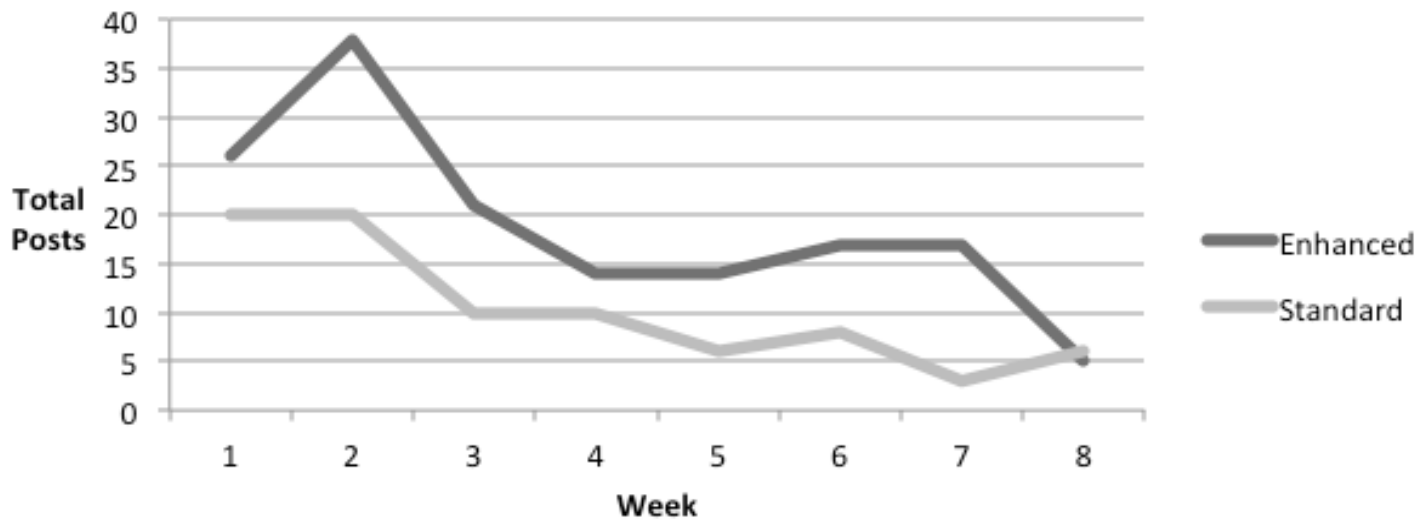
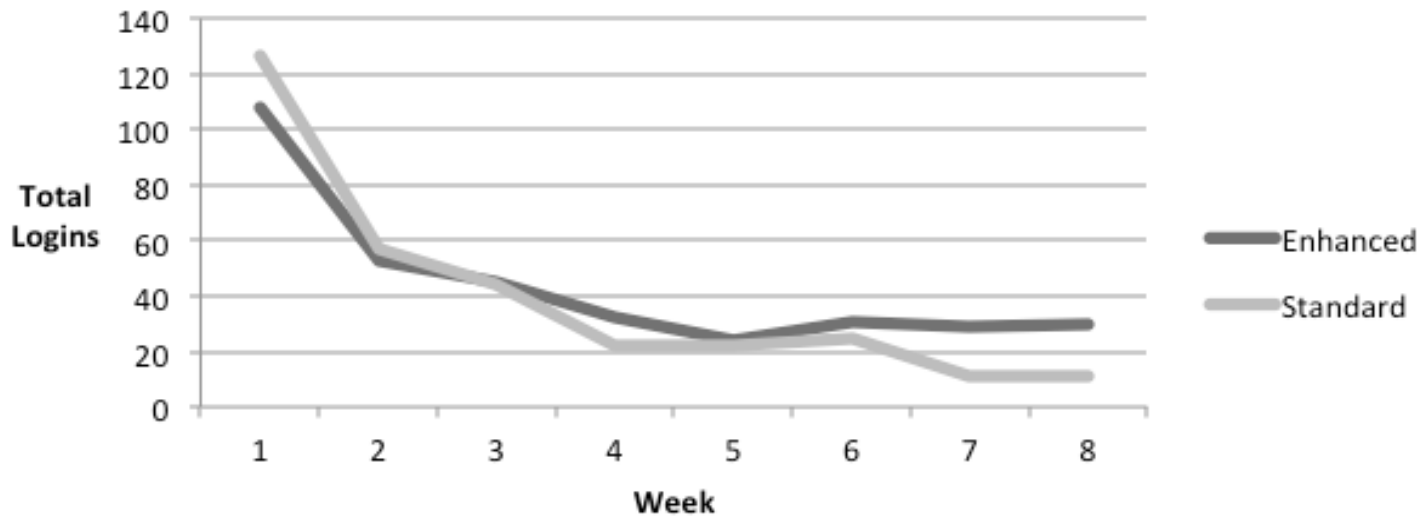
Variable	Mean (SD)/Freq(%)
Age	35.88 (5.14)
Age of youngest child	3.16 (3.09)
# of children	
one child	31 (45%)
two or more children	38 (55%)
Married/partnered	63 (91%)
Employment hours/week	41.44 (6.11)
College graduate	65 (94%)
Annual Household Income	
>\$60,000	58 (84%)
Race	
Caucasian	60 (87%)
Asian American	7 (10%)
African American	2 (3%)

Results

- **PA ($p < 0.001$) and self-worth ($p < 0.001$) increased significantly in both groups**
- **Introjected ($p < 0.001$) and external motivation ($p < 0.04$) decreased significantly in both groups**

Results

- Website usage declined significantly in both groups ($p < 0.001$)
- Discussion board use significantly higher in enhanced group ($p = 0.04$)



Satisfaction

What did you like most about the intervention?

- **Program Content –60.0% (21/35)**

- “I liked the variety of content-- the workbook readings and podcasts were all different in both style and content from week to week.”

- **Podcasts – 54.3% (19/35)**

- “I loved the podcasts and their content, and especially because I could listen to them while I did other things...”

- **Pedometer – 17.1% (6/35)**

- “I liked the pedometer, being able to track and enter data from the pedometer...”

Satisfaction

What did you least like about the intervention?

- **Lack of discussion group participation – 37.8% (14/37)**
 - “I didn't feel as connected to the other women in my group because we didn't all participate in the forums...”
- **Time Commitment – 16.2% (6/37)**
 - “Although it really did not take too much effort, I found the amount of work to end up being a little too much for my busy schedule.”

Satisfaction

What changes/improvements could be made?

- **Greater discussion board participation – 36.1% (13/36)**
 - “I think some kind of incentive to encourage more discussion throughout the week would be helpful.”
 - “Some more interaction from a moderator to help stimulate conversation on the discussion boards.”
 - “More interaction between fit minded staff on the discussion board.”
 - “Bigger discussion groups might help keep more of a conversation going, since not all really participate.”

Discussion

- **First study to incorporate podcasts and group dynamic based strategies to promote engagement in a web-based PA intervention**
- **Web-based interventions may**
 - **Improve PA and self-worth**
 - **Decrease motivation (external, introjected) that have been linked with low physical activity maintenance⁴**

What can we do to strengthen the intervention?

- **Interaction and support from staff**
- **Orientation meeting to outline study (weekly tasks) and help women get to know each other**
- **Content tailored to participants initial self-efficacy/readiness**
 - **those who completed had lower self-efficacy at baseline than those who dropped out**

What can we do to strengthen the intervention?

- **Group dynamics strategies (additional weekly group activities) did not increase website usage as hypothesized**
 - **Modifications to website/discussion board**
 - **Notifications when others post**
 - **Time sensitive – mobile app friendly (i.e., similar to Facebook)**
 - **Formative work for suggestions from working moms specifically**

What are the next steps?

- **Appropriate control group**
- **Determining how to optimize the usability of web-based interventions in working mothers**
 - **Podcasts and content favorable**
 - **Formative research for podcasts**
 - **Incorporate fitness tracker**
 - **Incorporate group video chat**

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References

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