Community-Based Partnership: Weight Maintenance for Rural Midlife Women

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Presenter Disclosure
Teresa Barry Hultquist
The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:
No relationships to disclose

Learning Objectives
- Identify environmental barriers to physical activity for rural women
- Appraise rural women’s weight maintenance experiences and outcomes

Background
- Cardiovascular disease (CVD) is leading cause of death in adult women
- If maintained, weight loss of 5-10% of initial body weight can result in clinically meaningful CVD-related health benefits
- Most who lose weight return to original weight within 5 years

Study Purpose & Design
- Six month pilot study to evaluate the influence of online interventions to maintain initial weight loss by promoting physical activity to improve health management and health status among rural midlife (aged 40 to 64) women
- 52 women who reported losing at least 5% of body weight in last 6 months were randomized to two groups:
  - Standard Advice
  - Intervention

Background
- Rural women more likely to:
  - Be physically inactive and obese
  - Have limited access to safe environments for physical activity
- In Nebraska (2012), 57.6% of adult Nebraska women & 64.2% of women in southeast Nebraska were considered overweight or obese
Community-Based Partnership
- Partnership between Southeast District Health Department and nurse researchers from UNMC College of Nursing

Barriers to Physical Activity
- Southeast Nebraska
  - 2,382 sq. miles
  - 6 fitness centers
  - 1 per every 397 sq. miles
  - Few indoor walking areas
  - Sidewalks only in cities
  - Many gravel roads
- Chicago Metro
  - 234 sq. miles
  - Over 700 fitness centers
  - 1 per every 0.3 sq. miles

Assessments
- Physical assessments at 2 sites:
  - Baseline, 3 months, 6 months
  - Blood pressure
  - Heart rate
  - Weight & height
  - BMI
  - Waist circumference
  - Current Physical activity
  - Walk time (baseline & 6 months)

Standard Advice Group
- Stop Weight Gain in Its Tracks
- Help Seeking
- Online newsletters
- Engagement in Health Behavior
- Tracking Weight

Intervention Group
- Personal (Self) Efficacy
  - Confidence level for physical activity
  - Identifying and reducing barriers
- Help Seeking
  - Watching videos
  - Using discussion boards
- Engagement in Health Behavior
  - Tracking weight, calories in/out, steps
  - Goal setting (action plans)

Action Plans
- Stop Weight Gain in Its Tracks
  - Your next Action Plan is now available!
  - Work on your previous Action Plan:
    - Eating well in general: eat healthy foods; avoid sugary drinks and foods; eat a balanced diet; eat plenty of fruits and vegetables
    - Drinking water: drink plenty of water; avoid sugary drinks; drink at least 8 glasses per day
    - Exercise: aim for at least 30 minutes of moderate exercise most days; aim for at least 75 minutes of vigorous exercise weekly; aim for at least 60 minutes of walking daily; aim for at least 10,000 steps per day
    - Stress management: aim for at least 30 minutes of moderate exercise most days; aim for at least 75 minutes of vigorous exercise weekly; aim for at least 60 minutes of walking daily; aim for at least 10,000 steps per day

- How could you make these Action Plans?
  - Use these tips to make the percentage of days you meet your goal.
  - Percentage of actions completed: 70%
Recruitment and Retention

- Assessed For Eligibility (n=96)
  - Excluded (n=36)
    - Did not meet inclusion criteria (n=24)
    - Declined to participate (n=12)
  - Completed physical assess, not randomized (n=5)
  - Responded after enrollment complete (n=5)

Randomized (n=52)

- Intervention (n=25)
  - Lost to Follow-up (n=11)
    - At 3 months (n=10)
    - At 6 months (n=1)
  - Analyzed (n=14)

- Standard Advice (n=27)
  - Lost to Follow-up (n=4)
    - At 3 months (n=2)
    - At 6 months (n=2)
  - Analyzed (n=23)

Results

- All Subjects (n=52)
  - Average age: 53 (SD = 5.3)
  - No significant differences between groups
  - 90% (n=47) married
  - 90% (n=47) working
  - 94% (n=49) had health insurance
  - 100% (n=52) had at least 12 years of education

Results

- Location:
  - 46% (n=24) lived on ranch/farm or out of town
  - 54% (n=28) lived in a small town
  - 31% (n=15/49) had to travel 20 miles or more for emergency medical care

Results

- For subjects completing study (n=37):
  - 65% (n=24) had lost weight 3 or more times
    - 71% (n=10/14) for intervention group
    - 61% (n=14/23) for standard advice group
  - 93% (n=13/14) of intervention group maintained their weight over the 6 month period
  - 65% (n=15/23) of the standard advice group maintained their weight over the 6 month period

Results

- Significant differences between groups (favoring intervention group)
  - Systolic blood pressure (p=.004, η²=.215)
  - Weight (p=.044, η²=.114)
  - BMI (p=.033, η²=.127)

Using Cohen's small (0.01), medium (0.06) and large (0.14) values of η²
Results

- Moderate effects between groups (favoring intervention group)
  - Diastolic blood pressure ($p = .079, \eta^2 = .088$)
  - Waist circumference ($p = .094, \eta^2 = .081$)

Using Cohen's small (0.01), medium (0.06) and large (0.14) values of $\eta^2$

Conclusions/Recommendations

- **Partnerships** between universities and public health departments:
  - Assist in recruitment and retention
  - Provide opportunities for collaboration
  - Build capacity to address health issues
  - Are sustainable

- **Analyze** intervention burden to determine best fit of interventions for participants

- **Develop** targeted strategies for rural women

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