The Effect of a Lifestyle Intervention on Weight Loss for University Employees

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BACKGROUND AND SIGNIFICANCE

- 69.6% of Americans are overweight or obese
- United States ranks 19th in percentage of population who are obese
- Obesity is a contributing factor for several preventable, chronic diseases—Diabetes type 2, cardiovascular disease, cancer
- Obesity is linked to sedentary lifestyle and eating over-sized portions of high-fat, high-added sugar foods
- Weight gain from age 18-55 is associated with increased risk of chronic disease
- Central obesity is a stronger risk factor in Diabetes type 2
- Obesity is associated with poor mental outcomes and lower productivity in the workplace
- Cost of obesity—$147 billion in United States

PROJECT PURPOSE

To implement a lifestyle weight loss intervention for university employees with the goal of a 5-7% body weight loss and a decrease in body fat mass, specifically trunk fat mass

PROJECT DESCRIPTION

- Social Cognitive Theory as theoretical framework
- Evidence generating cohort pilot project
- Mid-sized public university in Central Arkansas
- Congruent with the university’s strategic plan of increasing the overall health of employees and lowering university health care costs

RESULTS

- Twenty five of twenty eight completed the project (89.3%)
  - Female 76% Caucasian 80%
  - Mean weight loss -4.64 pounds
  - Mean weight loss > 5% body weight
  - 60% saw decrease in both total body fat and trunk fat mass
  - 68% had decrease in waist circumference
  - Pair t-test showed significant difference in all outcome measures
  - Average class attendance = 8.56 days (range 4-11 days)
  - Spearman’s rho indicated moderate negative correlation between days attended and pounds lost (r = -.405, p = .045)
  - No correlation between days attended and other outcome measures

CONCLUSIONS

- Findings are consistent with previous studies supporting lifestyle interventions for weight loss
- Weight loss and fat loss objectives were met by participants (72% and 60% respectively)
- Weekly class attendance was high (8.56 days)
- Attrition was low (n = 3, 11%)
- Participants expressed increased knowledge of weight loss strategies and satisfaction with the project.

Recommendations:

- Continue program on larger scale and for longer period of time to realize greater results.
- Increase diversity in participants
- Add peer support component

METHODS

Recruitment August 2017 via email to university employees enrolled in the health plan
- Informed consent
- Blood pressure, height, waist circumference
- InBody Scan (weight and body fat composition)

Weekly meetings conducted for 11 consecutive weeks
- Convenient location on campus for 45 minutes at noon
- Email reminder 2 days before each class
- Weight management and healthy lifestyle behavior instruction given
- Door prizes as incentives for attendance

Data collection at 6 and 12 weeks
- Blood pressure and waist circumference
- InBody scan

Post intervention survey
- Evaluation of program
- Open-ended questions and Likert scale

METHODS

Recruitment August 2017 via email to university employees enrolled in the health plan
- Screening questions based on inclusion and exclusion criteria
- Thirty participants selected, 28 began program

Data collection began on August 30, 2017
- InBody Scan (weight and body fat composition)

RESULTS

<table>
<thead>
<tr>
<th>Outcome</th>
<th>M (SD)</th>
<th>Range</th>
<th>95% CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pounds lost (lbs)</td>
<td>-4.64 (4.16)</td>
<td>(-8.02 - 1.88)</td>
<td>0.29 - 0.78</td>
<td>.001</td>
</tr>
<tr>
<td>Total Body Fat mass (lbs)</td>
<td>-3.67 (4.39)</td>
<td>(-8.63 - 1.29)</td>
<td>1.85 - 5.48</td>
<td>.000</td>
</tr>
<tr>
<td>Trunk fat mass (lbs)</td>
<td>-1.05 (1.75)</td>
<td>(-3.30 - 1.20)</td>
<td>0.32 - 1.77</td>
<td>.006</td>
</tr>
<tr>
<td>Percent body fat (%)</td>
<td>-0.64 (1.30)</td>
<td>(-2.78 - 2.13)</td>
<td>0.50 - 2.08</td>
<td>.021</td>
</tr>
<tr>
<td>Waist Circ (cm)</td>
<td>-2.76 (4.08)</td>
<td>(-11.00 - 4.00)</td>
<td>1.07 - 4.44</td>
<td>.002</td>
</tr>
</tbody>
</table>

Note: n = 25

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For a complete list of references or additional information Email: lgillis@uca.edu