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

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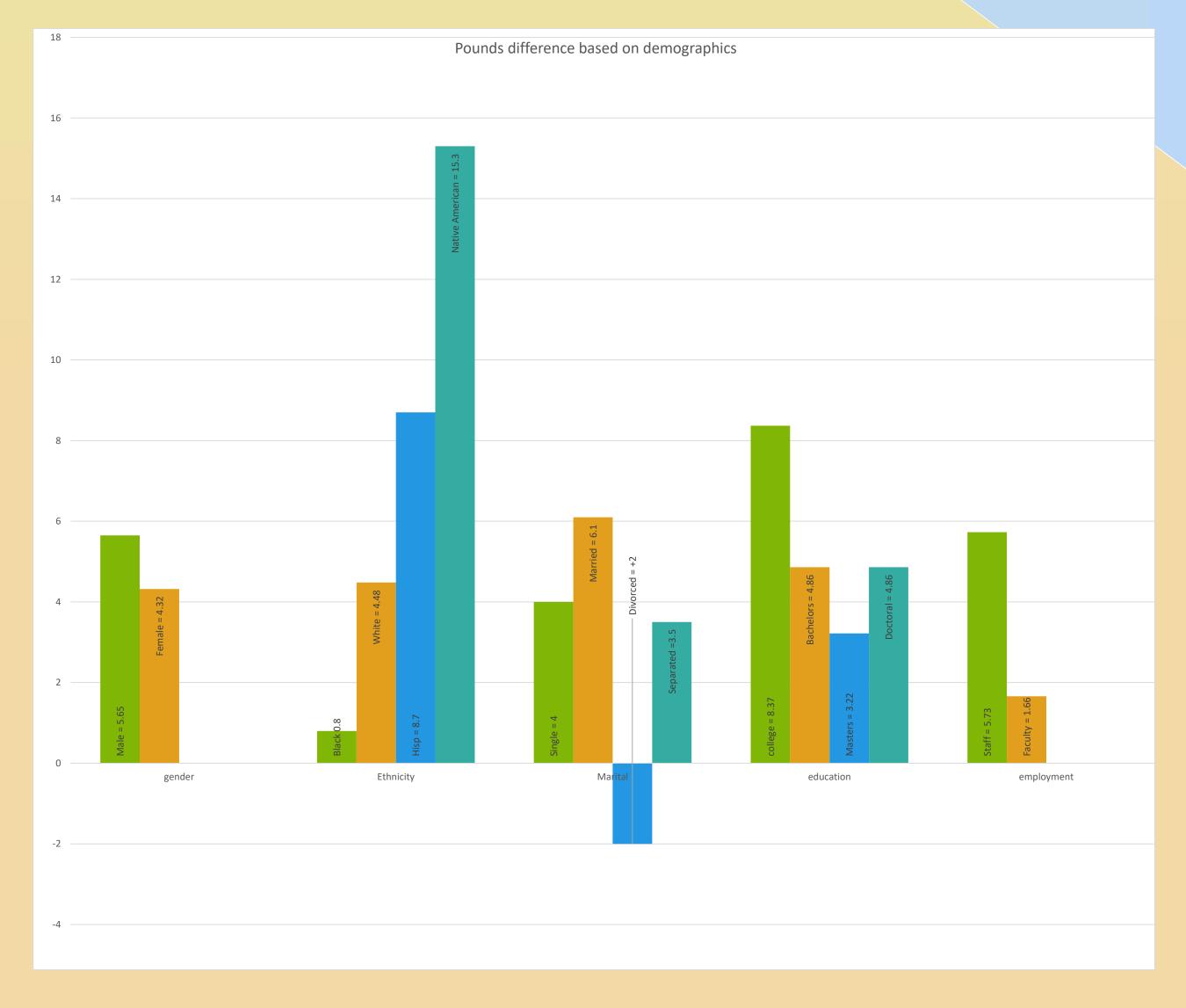
Data collection at 6 and 12 weeks
- Blood pressure and waist circumference
- InBody scan

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

Pounds difference based on demographics

RESULTS

- Twenty five of twenty eight completed the project (89.3%)
  - Female 76%   Caucasian 80%
  - Staff 76%   Mean age 48.5 years
- Mean weight loss -4.64 pounds
  - 16% (n=4) lost > 5% body weight
- 60% saw decrease in both total body fat and trunk fat mass
- 68% had decrease in waist circumference
- Paired *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

The Effects of the Intervention on Outcome Measures

Outcome	M (SD)	Range	95% CI	P
Pounds lost (lbs)	-4.64 (6.16)	(-16.3 – 4.80)	2.09 – 7.18	.001
Total Body Fat mass (lbs)	-3.67 (4.39)	(-3.30 – 12.4	1.85 – 5.48	.000
Trunk fat mass (lbs)	-1.05 (1.75)	(-5.70 – 1.30)	.32 – 1.77	.006
Percent body fat (%)	-.64 (1.30)	(-2.70 – 2.00)	.10 – 1.18	.021
Waist Circ (cm)	-2.76 (4.08)	(-11.00- 4.00)	1.07 – 4.44	.002

Note: n = 25

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

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