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The Effect of Occupational Stress on Participant Success in a Worksite Weight Loss Program

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Learning Objective: The participant will be able to identify the role of supervisor support on employee success in a weight loss program.

Background: Occupational stress has been associated with body mass index and waist circumference, but the role of occupational stress on participant outcomes at a worksite wellness weight loss program has not been examined.

Methods: 16 university faculty and staff members (18.8% faculty, 50% staff, 12.5% administration, 18.8% other) participated in a 16-week weight loss program that consisted of 7 educational sessions on nutrition and physical activity. Participants had weight, height, body mass index (BMI), body fat percentage (BF%), blood pressure (BP), total cholesterol (TC), high density lipoprotein (HDL), triglycerides (TG), and blood glucose (BG) measured before and after the program. A validated job stress survey was completed by participants at the beginning of the program, at week 10, and at the conclusion of the program.

Results: Participants lost 4.3 ± 4.8 kg. Significant improvements were noted in TG (33.3 ± 55.8) and BF% (2.4 ± 2.5). Supervisor support was found to be a significant predictor of weight loss, explaining 32.3% of the weight change variance. Co-worker and family support did not play a factor in weight loss during the program.

Conclusion: Worksite weight loss programs may see improved effectiveness by incorporating strategies designed to reduce occupational stress. Special attention should be placed on improving the employee-supervisor relationship to enhance likelihood of weight loss success.

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The Effect of Occupational Stress on Participant Success in a Worksite Weight Loss Program



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ABSTRACT

Background: Occupational stress has been associated with body mass index and waist circumference, but the role of occupational stress on participant outcomes at a worksite wellness weight loss program has not been examined.

Methods: 16 University faculty and staff members (18.8% faculty, 50.0% staff, 12.5% administration, 18.8% other) participated in a 16-week weight loss program that consisted of 7 educational sessions on nutrition and physical activity. Participants had weight, height, body mass index (BMI), body fat percentage (BF%), blood pressure (BP), total cholesterol (TC), high density lipoprotein (HDL), triglycerides (TG), and blood glucose (BG) measured before and after the program. A validated job stress survey was completed by participants at the beginning of the program, at week 10, and at the conclusion of the program.

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INTRODUCTION

Occupational stress can contribute to obesity and increased body mass index (BMI); consumption of energy dense, high fat, high carbohydrate foods; and decreased physical activity.^{1,2}

The role of occupational stress on participant outcomes at a worksite wellness weight loss program has not been examined.

Research Question: Does occupational stress affect weight loss in individuals attempting to lose weight in a worksite wellness weight loss program?

Hypothesis: Higher levels of occupational stress will have a negative impact on weight loss.

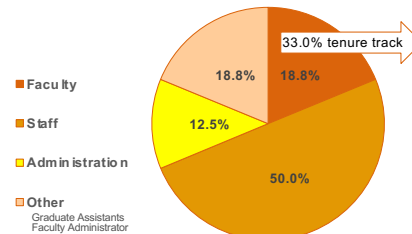


METHODS

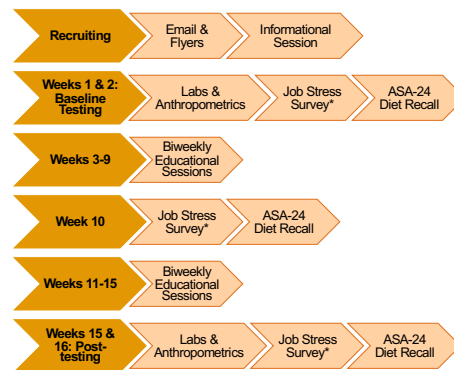
Participant Characteristics

Sex	81.3% female
Race	86.7% white
Occupation Type	50.0% staff

Participant Occupations



Overall Design



*Validated NIOSH Generic Job Stress Questionnaire

METHODS (Cont.)

Educational Sessions

- 1: Portion Control & Individualized Energy Recommendations
- 2: Low-Carb vs. Low-Fat, Which is Best?
- 3: Eating on the Run: Fast Food Pitfalls
- 4: Role of Exercise in Weight Loss Plan
- 5: But the Internet said.... Myths about Weight Loss
- 6: Stress Management and Mindful Eating
- 7: Preventing Weight Loss Plateaus

RESULTS & DISCUSSION

Biochemical & Anthropometric Measures: Pre- & Post-Program

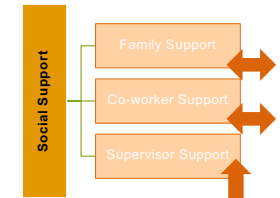
	Pre-Program	Post-Program
Total Cholesterol (mg/dL)	181.1±32.1	190.7±32.7
High-Density Lipoprotein (mg/dL)	47.8±11.8	54.5±15.9
Triglycerides (mg/dL)	142.25±90.3	109.0±70.1
Blood Glucose (mg/dL)	77.69±21.3	90.0±10.4
Systolic Blood Pressure (mmHg)	116.8±11.8	111.7±10.3
Diastolic Blood Pressure (mmHg)	76.9±10.6	73.0±5.4
Weight (kg)	84.7±21.5	80.4±17.5
Body Fat (%)	41.9±6.8	39.5±6.0

Biochemical & Anthropometric Measures: Mean Change

	Mean Change	SD	P-Value
Total Cholesterol (mg/dL)	↑ 9.6	22.0	0.102
High-Density Lipoprotein (mg/dL)	↑ 6.8	7.5	0.003*
Triglycerides (mg/dL)	↓ 33.3	55.8	0.031*
Blood Glucose (mg/dL)	↑ 12.3	20.8	0.032*
Systolic Blood Pressure (mmHg)	↓ 5.1	11.1	0.094
Diastolic Blood Pressure (mmHg)	↓ 3.9	7.6	0.065
Weight (kg)	↓ 4.3	4.7	0.003*
Body Fat (%)	↓ 2.4	2.5	0.002*

RESULTS & DISCUSSION (Cont.)

Predictors of Weight Change



Three forms of social support were evaluated to determine effects on weight loss: family, co-worker, and supervisor support.

- Baseline weight was the best predictor of weight change.
- Supervisor support was the best predictor of baseline weight.
- Supervisor support was significantly better at predicting weight change compared to the mean value of weight change.
- While 32.3% weight change variance was explained by supervisor support, the addition of supervisor support did not significantly improve the ability to predict weight change.
- For every one point improvement in the supervisor support score, participants lost 1.4 kg.

CONCLUSIONS

- This pilot study suggests that the employee-supervisor relationship should be considered in workplace weight loss programs. A larger sample size will help to resolve remaining questions.
- While one session of the program addressed stress management, this advice centered on how to manage overeating while stressed.
- Future participants may benefit from programming that discusses how to deal with difficult people, especially supervisors, in the work place.

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