Exploring Weight Maintenance and Perceived Stress in College Students

The Young Adults Eating and Active for Health Project at UNH

Margaret Donovan & Jesse Morrell
Nutrition Program, Department of Molecular, Cellular, and Biomedical Sciences
University of New Hampshire, Durham NH

Introduction

Obesity and weight gain are associated with numerous health problems including cardiovascular disease, type 2 diabetes, hypertension and some types of cancers. Because weight gain in late adolescence is highly predictive of overweight and obesity in adulthood, a greater focus on the weight-gaining trends of college students may have substantial health implications on the larger population. Although the typical U.S. adult gains approximately 2 pounds per year, 4-8 pounds of weight is gained during the first year of college. This collegiate weight gain impacts millions, as more than half of Americans aged 18-24 are currently enrolled in post-secondary institutions.

In 2009 Young Adults Eating and Active for Health (Y.E.A.H.) was initiated at 15 U.S. colleges to better understand weight gain prevention strategies. Y.E.A.H. employs a tailored, web-based intervention to prevent weight gain by targeting eating behaviors, physical activity, fruit and vegetable intake and stress management among college students. Few studies have examined the psychological or environmental contributors of weight gain. With more than sixty percent of college students nationwide reporting high stress levels associated with alcohol use, anxiety, depressive symptoms and problem eating behaviors, it is imperative to determine whether perceived stress associated with the college environment contributes to weight gain experienced by undergraduates.

Research Objectives

Evaluate the effectiveness of the Y.E.A.H. web-based intervention to decrease perceived stress and increase emotional support.

Methods

Recruitment

- One hundred sixty three male and female UNH students (18-24 years) were recruited in January 2011 and randomly assigned to the control or intervention groups (UNH IRB 84949).

Intervention

- Y.E.A.H. is a 10-week web-based educational intervention (yeahproject.com) for college students targeting three priority behaviors: fruit and vegetable intake and stress.
- Intervention was tailored to participant’s readiness to change and allowed for goal setting and monitoring.
- Intervention participants received weekly emails based on their stage of change.

Physical Examinations

- Participants’ weight and height were recorded in duplicate.
- Data collected at baseline (Jan/Feb 2011), 3 months (April/May 2011), and 15 months (April/May 2012).

Online Surveys

- Cohen’s Perceived Stress Scale is a 14-item survey that measures how unpredictable, uncontrollable, and overloaded respondents find their lives.
  - Scores were obtained by summing the 5-point Likert responses to all 14 items.
  - Cohen’s Score of Perceived Stress.
- Two questions from the Behavioral Risk Factor Surveillance System were employed to evaluate life satisfaction and emotional support.

Baseline Demographics

<table>
<thead>
<tr>
<th></th>
<th>Control n=82</th>
<th>Intervention n=81</th>
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<tbody>
<tr>
<td>% Male/Female</td>
<td>23.2 /76.8</td>
<td>22.2 /77.8</td>
</tr>
<tr>
<td>Body Mass Index (kg/m²)</td>
<td>23.8±4.2</td>
<td>23.9±3.8</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>67.7±13.4</td>
<td>66.7±12.0</td>
</tr>
<tr>
<td>Waist (cm)</td>
<td>78.2±9.3</td>
<td>78.7±9.0</td>
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Results

Quality of Life

- Dissatisfied 14%
- Content 26%
- Pleased 60%

Body Mass Index

- Control: 23.87
- Intervention: 23.83
- 3-Months: 23.71

Perceived Stress

- Control: 23.52
- Intervention: 23.51
- 3-Months: 23.42

Future Plans

Although the intervention did not lead to significant change in BMI or perceived stress after 3-months on the UNH campus, future studies will work to evaluate these trends in the other 15-universities involved, and also include the 15-month follow up data.

Findings suggest that there is a correlation between weight maintenance and quality of life, but a larger population with a greater range of baseline quality of life should be further analyzed.

Special Thanks

- Kendra Kittleman, South Dakota State University
- New Hampshire Agriculture Experiment Station (NH00534-R)

References

7. Is there a correlation between weight maintenance and quality of life designations of the University of New Hampshire students?

Contact Information

michaelsstec@gmail.com
jesse.morrell@unh.edu

Special Thanks

- Kendra Kittleman, South Dakota State University
- New Hampshire Agriculture Experiment Station (NH00534-R)

References