

Weight Gain Status and Changes in Mindfulness, Intuitive Eating, and Food Presence Appetite Urges in Ethnically-Diverse First-Year College Women

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Abstract

The current preliminary investigation is guided by a developmental perspective on college health promotion/disease prevention. A primary aim is to identify adaptive self-regulatory processes that could diminish the occurrence of unhealthy body composition changes in the early transition to college life for ethnically-diverse women. Initial findings suggest further evaluating reductions in intuitive eating as a potential mediator of first-year weight gain. would be a promising avenue to pursue in future scientific research.

Background and Objectives

Public health scientists have designated the first year of college to be a critical period of heightened risk for unhealthy body composition changes among emerging adults.¹

Existing research has primarily focused on evaluating the contribution of disordered eating patterns to enhancing first-year weight gain with inconclusive results.²

. A proclivity for a higher external locus of control governing appetite urges (e.g., the presence and availability of palatable food) has been linked to symptoms of bulimia, dieting concerns, and boredom-susceptibility among college student dieters.³

. Mindfulness is increasingly being incorporated into promoting the adaptive regulation of weight, eating, and appetite.⁴

. Contemporary research is advancing the benefits of an intuitive eating style as an alternative to engaging in externally- and emotionally-driven dysregulated eating patterns.⁵

Greater attention is needed in clarifying whether individual differences in internally-guided, adaptive self-regulatory processes versus vulnerability to the influence of external appetite triggers are associated with weight gain status among first-year college women.

The present study sought to evaluate whether BMI gain status moderated changes in mindfulness, intuitive eating, and food presence appetite urges between the beginning of the first and second semesters in an ethnically-diverse sample of first-year women attending a large urban state-funded predominantly White institution (PWI) located in the southeastern United States.

Methods

Participants

Participants at baseline (beginning of the fall 2008 semester) included a sample of first-time first-year female undergraduate students (mean age = 18, SD = .21) who identified as either African American (AA: N = 54) or as European American (EA: N = 80). Eighty-eight percent of students reported living on campus. Students were recruited to participate in a longitudinal investigation of factors that influence health and adjustment to college life for first-year women. Eighty-three participants (39 AA and 44 EA) returned to complete the second data collection session at the beginning of the spring 2009 semester. Students received either research credit in a participating Psychology course or a \$20 Visa debit card as an incentive at each time point.

Procedures and Measures

In addition to completing a demographic questionnaire and having their height and weight taken to calculate body mass index (BMI), participants were also administered the following self-report questionnaires at both the early fall and early spring time points:

- . Intuitive Eating Scale (IES)⁵
- . Cognitive and Affective Mindfulness Scale-Revised (CAMS-R)⁶
- Situational Appetite Measure Food Presence Subscale (SAM-U)³

Statistical Analyses

Pearson's bivariate correlations were computed to evaluate linear associations among the study variables. A multivariate repeated measures ANOVA model was executed to evaluate the presence of BMI Gain Status (2) x Time (2) interaction effects for mindfulness, intuitive eating, and food presence appetite urges among completers. All analyses were performed using the SPSS version 16.0 statistical software package.

Results

.64% of the 83 completers experienced an increase in BMI between T1 and T2 .6.0% of participants were categorized as underweight, 60.2% as normal weight, 25.3% as overweight and 8.4% as obese.

.11.1% of the sample gained at least 5% or more of initial body weight.
.15.4% of participants gained at least 5 pounds or more; 2.5% gained the "Freshman 15" of 15 pounds or more.

Mindfulness and intuitive eating were positively correlated at both T1 and T2. Mindfulness at T2 was also negatively associated with BMI at T2. Intuitive eating was negatively correlated with food presence appetite urges at T1 and T2 as well as with BMI at T1 and T2. Table 1 shows correlations among all study variables.

There was a significant interaction effect of Time x BMI Gain Status on both Mindfulness F(1, 77) = 4.49, p = .04, and Intuitive Eating F(1, 77) = 5.02, p = .03. Posthoc effects further indicated that the BMI Gainers possessed marginally higher mindfulness scores at baseline (p = .06). BMI Gainers also evidenced a significant decline in intuitive eating scores over time (p < .01; see Figure 1) and lower intuitive eating values at T2 relative to the BMI Non-Gainers (p = .02).

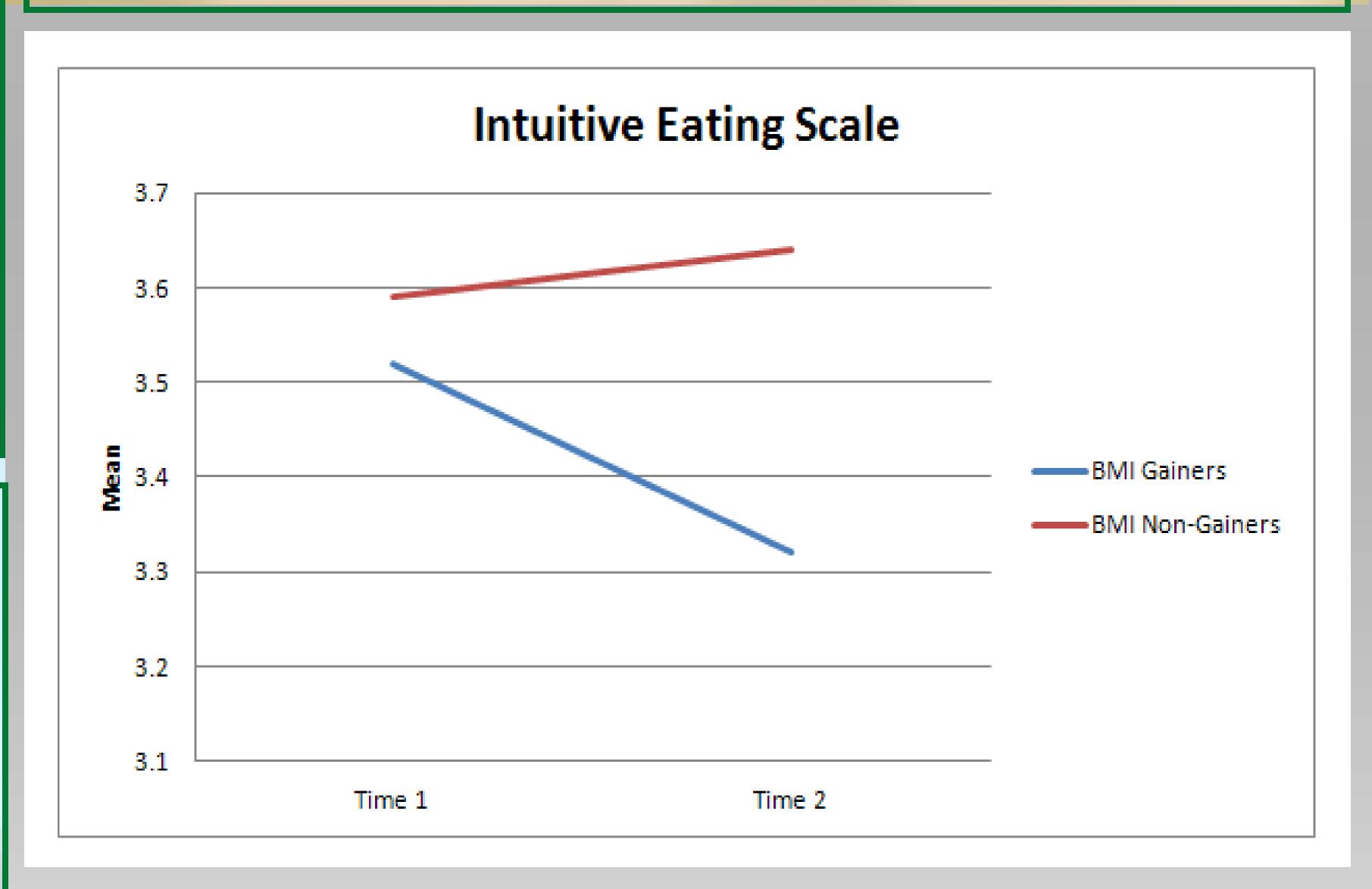


Figure 1. BMI Gain Status x Time interaction effect on IES total score.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------------|-------|-------|-------|-------|-------|------|-----|
| 1.T1 CAMS-R Total | 1 | | | | | | |
| 2. T1 Intuitive Eating | .28** | | | | | | |
| 3. T1 Food Presence | 15 | 34** | | | | | |
| 4. T1 Body Mass Index | 07 | 21* | .01 | | | | |
| 5. T2 CAMS-R Total | .57** | .29** | 17 | 23* | | | |
| 6. T2 Intuitive Eating | .35** | .71** | 28* | 32** | .33** | | |
| 7. T2 Food Presence | 13 | 34** | .71** | .02 | 19 | 33** | |
| 8. T2 Body Mass Index | 13 | 21 | .04 | .98** | 22* | 37** | .01 |
| Note. ** indicates $p < .01$. | | | | | | | |

*indicates *p*<.05.

Table 1. Zero-order correlations among outcome variables by time point. Note. ** indicates p < .01; *indicates p < .05.

Conclusions and Implications

- The general urge to eat when food is available in the environment (in the absence of dietary restraint) may not be a robust vulnerability factor associated with weight gain during the college transition.
- Declines in factors associated with cultivating an internally-guided awareness of one's present moment experience more generally (i.e. mindfulness) and within the specific context of eating (i.e. intuitive eating) may play a role in first-year weight gain.
- Enhancing mindful awareness and intuitive eating skills may counteract the influence of both internal factors (e.g., emotions, food-relevant cognitions) and external factors (e.g., the presence of palatable food) on regulating appetite, food intake, and in turn weight during the college transition period.

Future Directions

Determining whether current dieting status or dietary restraint level among weight gainers would significantly impact appetite urges in the presence of food during the first-year transition.

- Clarifying whether clinically-significant increases in weight (e.g., ≥ 5% of baseline body weight) moderate first-year changes in these variables.
 Illuminating whether declines in intuitive eating mediate weight gain and other body composition changes among first-year college women.
 Assessing race/ethnicity and BMI status at entry as
- Assessing race/ethnicity and BMI status at entry as alternative moderators of changes in these variables between the beginning of the fall and spring semesters of students' first year.

Limitations

The relatively small nonrandom sample represented less than 10% of the population of eligible students.

- The exclusively female sample precludes generalizing findings to first-year male students.
- The appreciable attrition rate (i.e. 38%) reduced the power of the statistical analyses in potentially detecting stronger effects for mindfulness.

Acknowledgements

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