The Correlation between Internal Physiological Signals and Self-Regulation of Food Intake in College Students Living in South Florida

Padideh Lovan1 Ph.D., R.D., L.D.N., Catherine Coccia2 Ph.D., R.D., L.D.N.
1 University of Miami, Sylvester Comprehensive Cancer Center, 2 Florida International University, Dietetics and Nutrition

Background
Lack of self-regulation of food intake is a significant contributing factor in college weight gain; however, the extent to which it is correlated with understanding internal physiological cues is unclear.

Objective
The aim of this study was to determine the correlation between self-regulation and internal bodily signals including interoception and intuitive eating in college students living in South Florida.

Methodology
Self-regulation was examined via Compensation indices (COMPX). Intuitive eating and interoception (awareness and responsiveness) were measured using questionnaires. Participants had 2 visits one week apart in which they were offered a preload drink (differed in calorie content each time (0 vs 210 kcal)), followed by an ad-libitum lunch to measure the effect of the preload on participants’ intake.

1. Participants filled out questionnaires for intuitive eating (IES-2), interoceptive awareness (BAQ) and interoceptive responsiveness (BRS).
2. Approximately 30 minutes before lunch, a preload drink was served (6 ounces of sweet iced tea).
3. Participants were offered a buffet style lunch and intake was measured to calculate COMPX scores.

When controlled for genders, there was a significant correlation between interoception and COMPX (F=5.56, p=.002, R^2=0.247). Unconditional permission to eat was significantly correlated with COMPX (F=5.56, p<.001, R^2=0.282).
When controlled for Body Mass Index (BMI), no significant correlation was found (p>0.05). All intuitive eating facets were significantly associated with interoception except for unconditional permission to eat with both controlled variables.

Conclusion
A higher connection with internal cues may lead to better self-regulation in eating among college students. These findings suggest that weight control programs may be more successful if targeting understanding physiological signals.