Application of Growth Mixture Modeling to Examine Body Image and Body Composition in Relation to Latent Depressive Symptom Trajectories During Adolescence

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Introduction and Methods

Objective: To examine whether baseline weight status and body image satisfaction are related to depressive symptom trajectories in adolescents.

Participants:
- 753 10th and 11th grade students from public high schools in the U.S. Mid-Atlantic region.
- 53% female; baseline age: M = 16.1, SD = 0.7
- 65% Caucasian, 20% African American, 12% Hispanic, 2% Asian, 1% Other

Procedure: Self-report questionnaires were administered during school in the spring of 2007 (T1), 2008 (T2), and 2009 (T3).

Measures:
- Body composition: height and weight were used to calculate body mass index standard scores adjusted for age and sex (BMI-z) at T1.
- Body image satisfaction: physical appearance subscale of the Harter Self-Perception Profile for Adolescents at T1 (α = .87).
- Depressive symptoms: total score of the Center for Epidemiological Studies Depression Scale for Children (CES-DC) at T1-T3 (α’s = .90-.91).

Results

Figure 1. Latent Depressive Symptom Trajectory Classes From Best-Fitting, 4-Class Unconditional Growth Mixture Model.

Figure 2. Association of Baseline BMI-z and Body Image Satisfaction with Membership in Latent Depressive Symptom Trajectory Classes.

Table 1. BMI-z and Body Image Relation to Within-Class Growth Factors.

Conclusions

BMI-z and body image satisfaction may have differential associations with high-risk depressive symptom trajectory subgroups.

Interventions focused on body image may prevent depressive symptom increases or promote symptom decreases, while weight focused interventions may decrease risk for having a chronic course of severe depression.