



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 ($\alpha = .87$).
- ❖ **Depressive symptoms:** total score of the Center for Epidemiological Studies Depression Scale for Children (CES-DC) at T1-T3 (α 's = .90-.91).

Acknowledgements

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Results

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

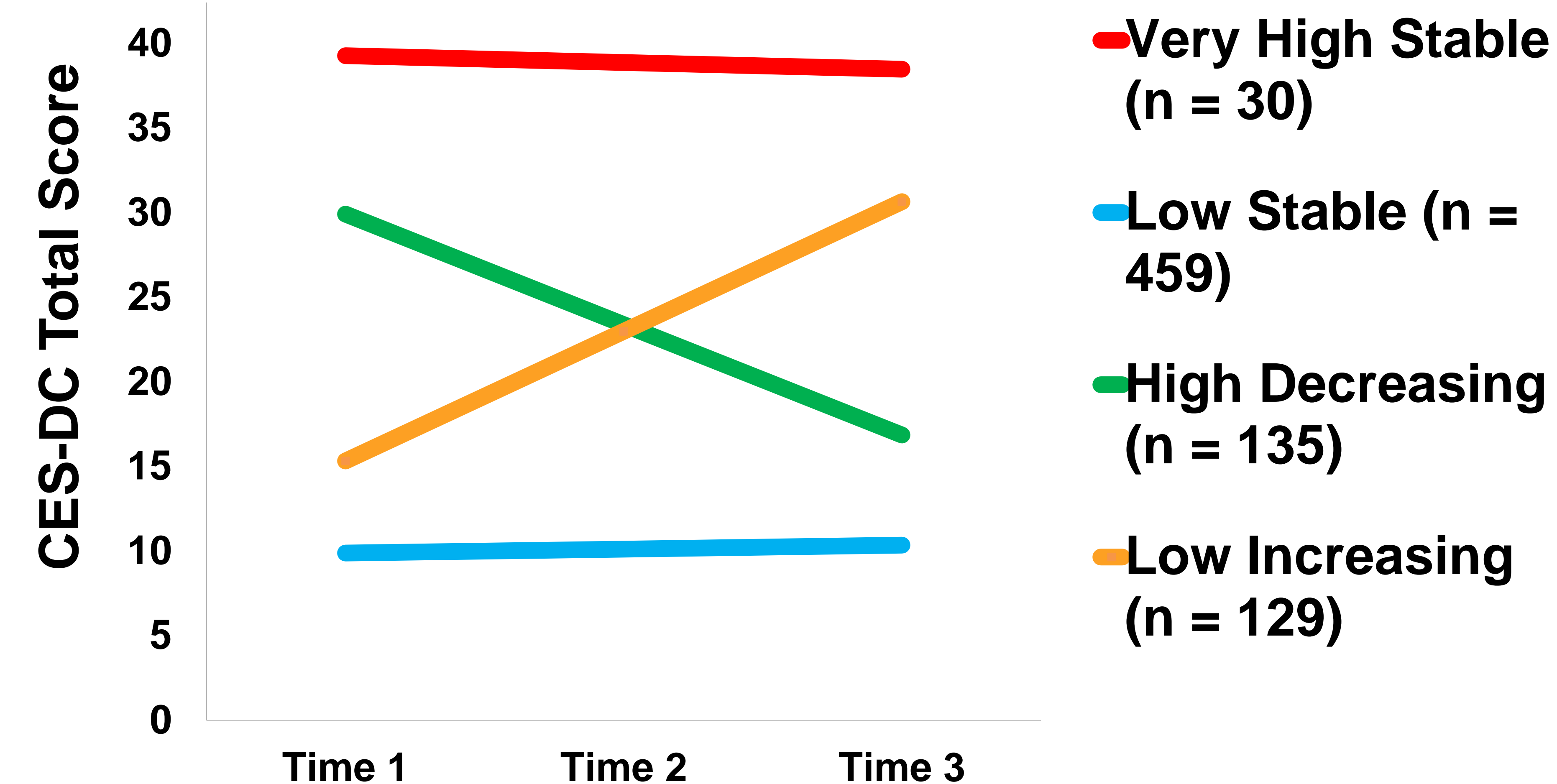
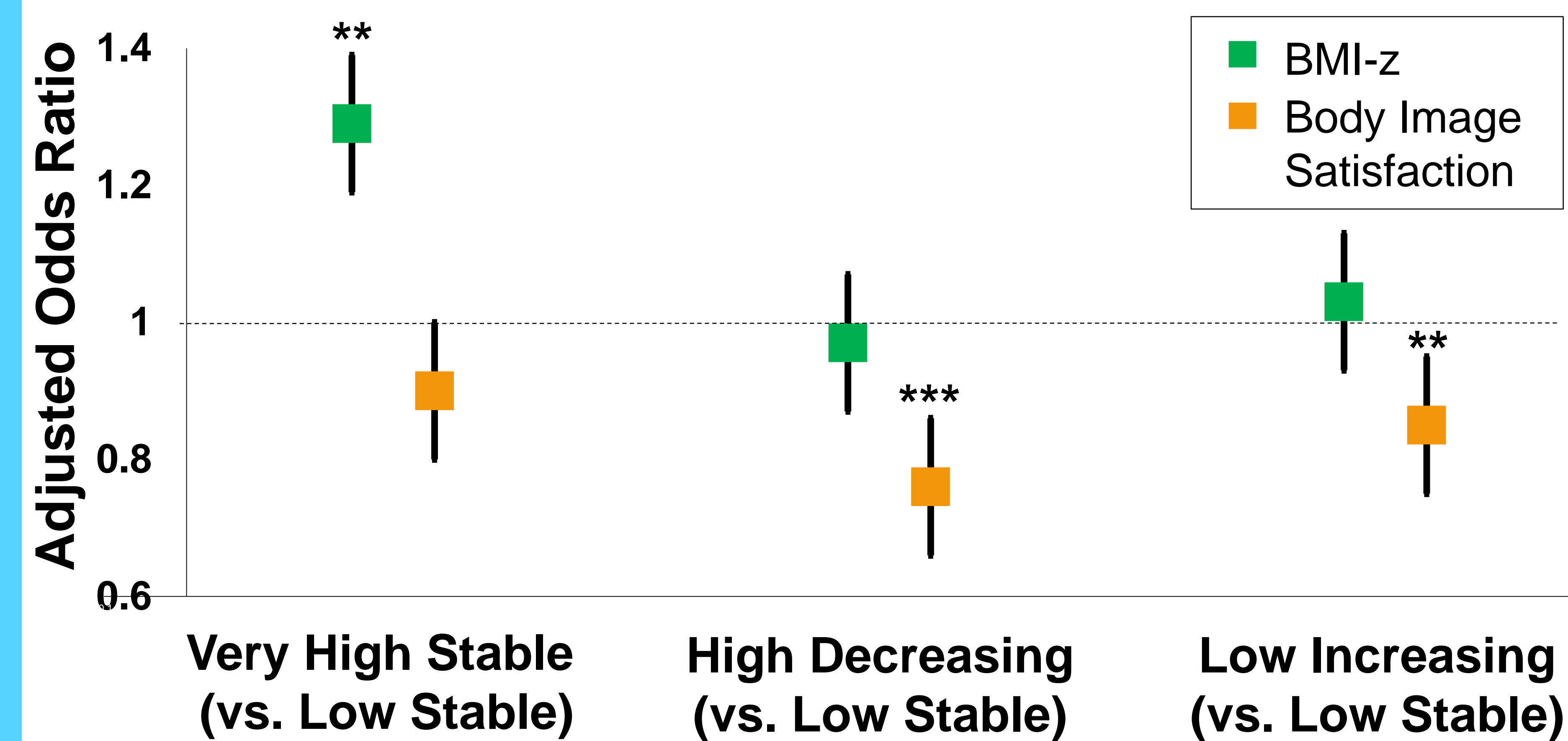


Figure 2. Association of Baseline BMI-z and Body Image Satisfaction with Membership in Latent Depressive Symptom Trajectory Classes.



Results

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

	Intercept Factor	Linear Slope Factor
Very High Stable		
BMI-z	0.6 ± 1.5	0.6 ± 0.9
Body Image	-0.8 ± 0.3 **	0.6 ± 0.4
High Decreasing		
BMI-z	0.5 ± 0.2 **	0.1 ± 0.3
Body Image	-2.5 ± 0.4 ***	1.9 ± 0.4 ***
Low Increasing		
BMI-z	0.1 ± 0.2	-0.1 ± 0.2
Body Image	-0.1 ± 0.4	-1.2 ± 0.3 **
Low Stable		
BMI-z	0.2 ± 0.1	-0.1 ± 0.1
Body Image	-0.4 ± 0.1 **	0.1 ± 0.1

Notes: all conditional models adjusted for age, gender, race/ethnicity, and parent education level. * $p < .05$; ** $p < .01$; *** $p < .001$

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.