



# Disentangling the Temporal Relationship Between Body Image Dissatisfaction and Anxiety Symptoms in Adolescents

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## BACKGROUND

- ❖ Adolescence is a high-risk period for the worsening of body image dissatisfaction and anxiety disorder symptoms.
- ❖ Cognitive behavioral models of eating disorders suggest that anxiety can be both a cause and consequence of body image dissatisfaction.
- ❖ Cross-sectional studies consistently indicate that body image dissatisfaction co-occurs with elevated anxiety disorder symptoms in clinical and non-clinical samples of adolescents.
- ❖ The relationship between body image dissatisfaction and anxiety scarcely has been examined in prospective studies.
- ❖ Elucidating the temporal precedence of body image dissatisfaction and facets of anxiety disorder symptoms has the potential to advance theory and intervention approaches.

## OBJECTIVE

To examine the bidirectional, temporal associations between body image dissatisfaction and facets of anxiety disorder symptoms in adolescents.

## METHODS

### Participants:

- ❖ 9<sup>th</sup> – 12<sup>th</sup> grade high school students from seven public high schools in the Mid-Atlantic region of the United States.
- ❖ N = 1,038
- ❖ 53% female; Baseline Age: M = 16.1, SD = 0.8
- ❖ 51% Non-Hispanic White; 25% Black or African American; 15% Hispanic or Latino; 3% Asian; 6% other race/ethnicity

### Procedure:

- ❖ Adolescents were recruited to participate in the study across three years, in the spring of 2007, 2008, and 2009.
- ❖ Paper-based self-report questionnaires were administered during school by trained research personnel at baseline (T1) and a one-year follow-up (T2).

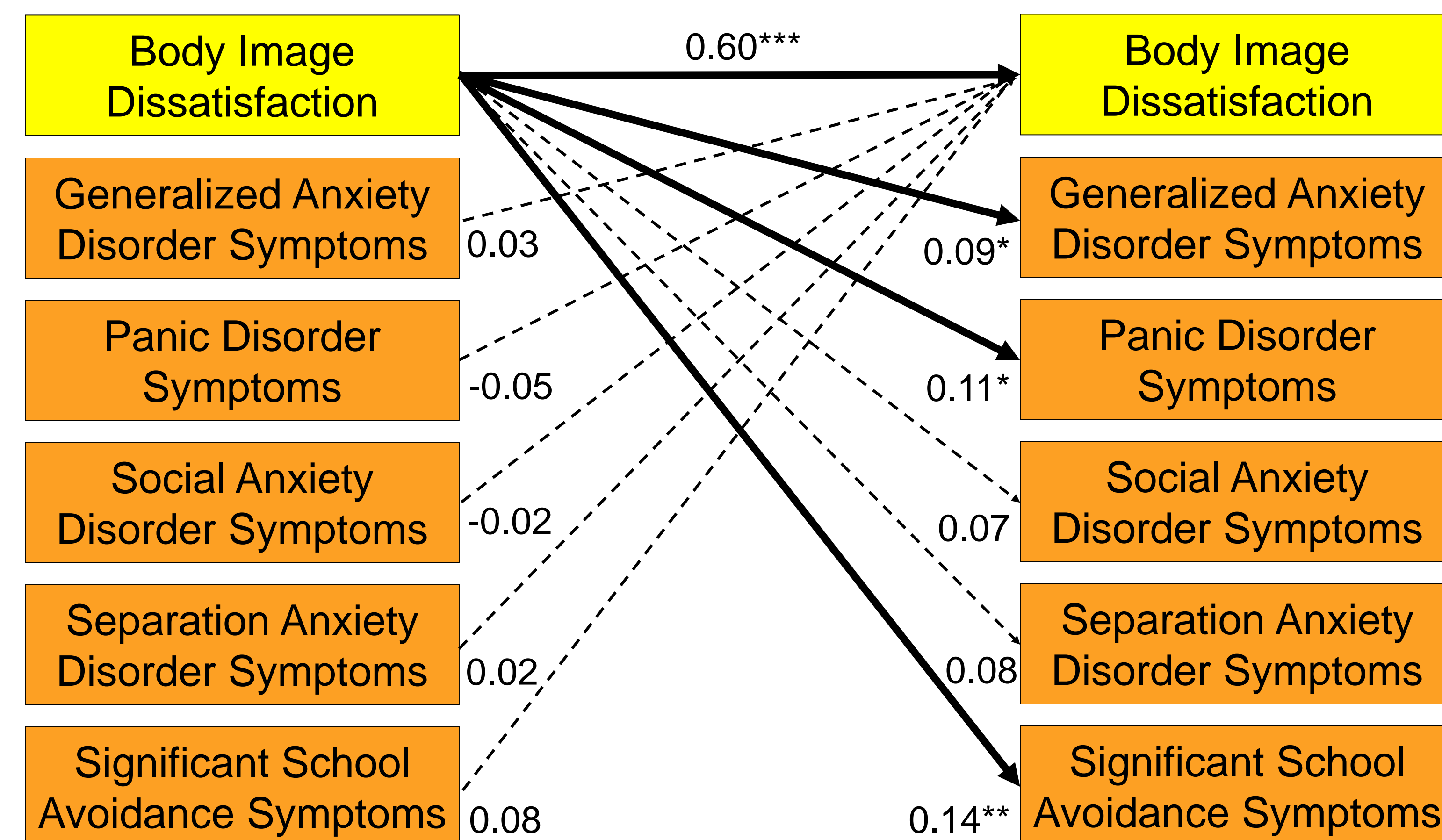
## METHODS

### Measures:

Construct	Measure	Scales
Body Image Dissatisfaction (T1, T2)	Self-Perception Profile for Adolescents (SPPA)	Physical Appearance ( $\alpha = .88$ ) (reverse coded)
Anxiety Symptoms (T1, T2)	Screen for Child Anxiety Related Disorders (SCARED)	Generalized Anxiety Disorder ( $\alpha = .87$ ) Panic Disorder ( $\alpha = .87$ ) Separation Anxiety Disorder ( $\alpha = .73$ ) Social Anxiety Disorder ( $\alpha = .84$ ) Significant School Avoidance ( $\alpha = .70$ )
Weight Status (T1, T2)	Self-reported height (inches) and weight (pounds)	Body mass index standard scores adjusted for age and gender (BMI z-scores)

## RESULTS

Figure 1. Standardized Parameter Estimates from Cross-Lagged Path Model Examining Body Image Dissatisfaction and Anxiety.



Note: Analyses adjusted for gender, age, race/ethnicity, high school grade level, parental education status, and BMI z-scores. Fit indices:  $\chi^2(17) = 17.91, p > .05$ ; CFI = 1.00; TLI = 1.00; RMSEA = 0.01, 90% CI = 0.00 – 0.04; SRMR = 0.01.

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

## RESULTS

Table 1. Standardized Parameter Estimates of Cross-Lagged Paths Among Anxiety Disorder Symptoms.

Cross-Lagged Association	Beta	Cross-Lagged Association	Beta
GAD → PD	0.08	SAD → SEP	-0.05
GAD → SAD	-0.02	SAD → SSA	-0.05
GAD → SEP	0.01	SEP → GAD	0.04
GAD → SSA	0.02	SEP → PD	0.09
PD → GAD	0.08	SEP → SAD	0.06
PD → SAD	0.02	SEP → SSA	0.05
PD → SEP	0.08	SSA → GAD	-0.08
PD → SSA	0.07	SSA → PD	0.01
SAD → GAD	0.06	SSA → SAD	0.01
SAD → PD	-0.04	SSA → SEP	0.02

Note: Analyses adjusted for gender, age, race/ethnicity, high school grade level, parental education status, and BMI z-scores.  $ps > .05$  for all paths.

Abbreviations: GAD = generalized anxiety disorder; PD = panic disorder; SAD = social anxiety disorder; SEP = separation anxiety disorder; SSA = significant school avoidance.

## CONCLUSIONS

- ❖ Findings suggest that body image dissatisfaction may be implicated in worsening symptoms of generalized anxiety disorder, panic disorder, and significant school avoidance.
- ❖ Anxiety symptoms did not predict subsequent body image dissatisfaction, suggesting that etiological theories of disordered eating involving anxiety may require alteration.
- ❖ Future studies should evaluate biopsychosocial mechanisms.

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