Self-Competence and Depressive Symptoms in Middle-to-Late Adolescence: Disentangling the Temporal Relationship Using Cross-Lagged Models

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ABSTRACT
This study examined the temporal relationship between self-competence (academic, social, athletic, physical appearance, and close friend) and depressive symptoms in a large, diverse, community sample of 636 adolescents. Surveys were administered to all 10th and 11th grade students at participating high schools at baseline and one year later. Girls reported higher levels of self-competence in close friendships and more depressive symptoms, whereas boys reported higher levels of self-competence in athletics and physical appearance. However, there were no gender differences in the associations between self-competence and depressive symptoms. Results from autoregressive, cross-lagged path analyses found that depressive symptoms predicted self-competence more consistently than self-competence predicted depressive symptoms during middle to late adolescence. Implications for prevention are discussed.

SAMPLE AND PROCEDURE
- The sample included 636 10th and 11th grade students from the Mid-Atlantic region (DE, MD, and PA) of the United States
- 54% girls; 59% White
- Mean age = 16.10, SD = .71
- Surveys were administered to participants in school by trained research staff in the spring of 2007 (Time 1) and 2008 (Time 2)
- The survey took approximately 40 minutes to complete
- Participants were given a movie pass as compensation for their time

MEASURES

Self-Competence
The Self-Perception Profile for Adolescents (SPPA; Harter, 1988, 2012; as = .75-.88) was used to assess self-competence. The SPPA includes the following scales: Academic competence, social competence, athletic competence, physical appearance, and close friendship. A representative item (from the athletic competence scale) is “Some teenagers do very well at all kinds of sports but other teenagers don’t feel that they are very good when it comes to sports.” The response scale ranges from 1 = low perceived competence to 4 = high perceived competence.

RESULTS
Depressive Symptoms
The Center for Epidemiological Studies Depression Scale for Children (CES-DC; Weissman et al., 1980; α = .91) assessed depressive symptoms at Time 1. A representative item is, during the past week… “I felt sad.” The response scale for the CES-DC ranges from 1 = not at all to 4 = a lot. The 20 CES-DC items were summed to reflect a total depressive symptoms score.

Descriptive Statistics
- Boys reported higher baseline BMI z-scores than did girls (p<.003).
- Girls reported higher depressive symptoms (p<.001) and self-competence in close friendships (p<.001) in comparison to boys.
- Boys reported higher athletic competence (p<.001) and perceived physical appearance (p<.001) in comparison to girls.

Cross Lagged Path Model
- The autoregressive cross-lagged path model examined the temporal associations between self-competence domains (academic, athletic, close friendship, physical appearance, social) and depressive symptoms, adjusting for baseline gender, age, race/ethnicity, parental education status, and time-varying BMI z-scores. The model provided an acceptable fit to the data, χ² (15) = 18.46, p = .24; RMSEA = .02, 90% CI = .00 – .04; CFI = 1.00, TLI = .99, SRMR = .01.
- As shown in Figure 1, higher self-competence in close friendships at Time 1 predicted lower depressive symptoms at Time 2.
- In cross-lagged paths estimating the opposite temporal associations, higher depressive symptoms at Time 1 predicted lower athletic competence, physical appearance competence, and social competence at Time 2 (see Figure 1).
- Nested model comparisons indicated that there were no gender differences in any of the associations.

CONCLUSIONS
Depressive symptoms predicted self-competence more consistently than the reverse. These results suggest that high levels of depressive symptoms during adolescence may place an adolescent at risk for decreases in self-competence. An important next step will be for research to examine potential underlying mechanisms that may be involved in this relationship (e.g., negative cognitions, maladaptive coping, withdrawal from peers). Such mechanisms could be targeted and incorporated into prevention programs focused on adolescent depression.

Supported by NIAAA K01AA015059
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