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TITLE: Heritable, Environmental, and Timing Effects on the Intergenerational Transmission of Anxiety and Depressive Symptoms in Early Adolescence

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ABSTRACT:

Parental anxiety and depressive symptoms are associated with similar problems in children and adolescents; understanding the mechanisms of this transmission could help with prevention of anxiety and depressive symptoms. The present study examined heritable, prenatal and postnatal environmental influences on early adolescent anxiety and depressive symptoms, with a focus on whether different timing of exposure to parent symptoms confers different levels of risk. Participants included 561 families from the Early Growth and Development Study, a prospective parent-offspring adoption design. Heritable risk was indexed by birth mother and father lifetime internalizing problems, prenatal risk was measured by birth mother internalizing problems during pregnancy. Adoptive parent anxiety and depressive symptoms were assessed from child ages 9

months to 11 years and were modeled by the trait-state-occasion model to separate time-invariant and time-varying components. Adolescent anxiety and depressive symptoms were assessed at 11 years; child anxiety and depressive symptoms at age 4.5 were included as controls. Results suggested that maternal anxiety and depressive symptoms at 9 months indirectly influenced adolescent symptoms through early childhood symptoms. Maternal anxiety and depressive symptoms at 11 years was associated with adolescent symptoms concurrently. The time-invariant component of maternal symptoms had no influence on offspring symptoms. Neither heritable nor prenatal risk was associated with offspring symptoms. Paternal anxiety and depressive symptoms were not associated with offspring symptoms. Results support a sensitive period model for exposure to maternal anxiety and depressive symptoms and provide implications for prevention to focus on within-person changes of maternal symptoms during these sensitive periods.

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