

# Nature and Nurture are Both to Blame for Depression, Study Says.

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Depression is one of the most common forms of psychopathology. According to diathesis–stress theories of depression, genetic liability interacts with negative life experiences to cause depression. Traditionally, most studies testing these theories have focused on only one component of the diathesis–stress model: either genetics or environment, but not their interaction. However, because of recent advances in genetics and genomics, researchers have begun using a new design that allows them to test the interaction of genetic and environmental liabilities – the G x E design.

Studies suggest that the neurotransmitter dopamine may play a role in the risk for depression. Early negative interpersonal environments (i.e. rejecting parents) have also been implicated. So, University of Notre Dame psychologist, Gerald Haefel, and colleagues investigated whether a gene associated with dopamine interacted with maternal parenting style to predict episodes of depression.

The researchers studied 177 male adolescents from a juvenile detention center in Russia. These participants were ideal candidates for the study because depression rates rise so dramatically during this period in life. The researchers used a structured diagnostic interview to diagnose depression and a questionnaire to assess aspects of maternal parental rearing (i.e. physical punishment, hostility, lack of respect for the child's point of view, and unjustified criticism in front of others).

The results are fascinating. While neither factor alone predicted depression, the boys with especially rejecting mothers, and a specific form of the dopamine transporter gene were at higher risk for major depression and suicidal ideation. This study, which appears in the January issue of *Psychological Science*, a journal of the Association for Psychological Science, is among the first to support the role of a dopamine related gene in the onset of depression.

By the year 2020, depression is projected to be the 2<sup>nd</sup> leading cause of disability worldwide. Identifying factors that contribute to risk and resilience for depression is vital to our society. The results suggest that using psychosocial interventions to increase dopamine activity in the brain, helping patients focus on identifying and pursuing new goals and rewards could prove beneficial to lowering depression rates.