

CAUSES OF COMORBIDITY AMONG INTERNALIZING DISORDERS
OF CHILDHOOD AND ADOLESCENCE:
THE ROLES OF NEUROTICISM, GENES AND ENVIRONMENT

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ABSTRACT

Sources of variance and covariance among mother-reported separation anxiety disorder (SAD) and self-reported depression (DEP) and generalized anxiety disorder (GAD) were studied in a population-based sample of 4,320 female twins. The relationship of self-reported neuroticism to each of the three internalizing disorders was also examined. Correlations among the four phenotypes were computed and logistic regression was used to predict SAD, DEP and GAD from neuroticism. Structural equation modeling (SEM) was conducted to parse the causes of variation in neuroticism, SAD, DEP and GAD into additive genetic (A), shared environmental (C) and nonshared environmental (E) effects. SEM was also conducted to parse sources of covariation among the four phenotypes into A, C, and E effects.

All four phenotypes were positively and significantly associated with one other. Genetic and nonshared environmental factors were important in the etiology of all four phenotypes, whereas shared environmental influences were only significant for SAD. Covariation among the phenotypes was due primarily to additive genetic and nonshared environmental effects. These results suggest a common underlying genetic liability may explain comorbidity among internalizing disorders and their association with neuroticism.