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**Socioeconomic status and risk for child emotional and behavioral problems:  
Exploring gene–environment interaction in the presence of gene–environment  
correlation using extended families in the Norwegian Mother, Father and Child Birth  
Cohort Study**

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**ABSTRACT:** Socioeconomic disadvantage is associated with increased risk for child emotional and behavioral problems. There is some evidence from twin studies that family socioeconomic status (SES) moderates the relative contribution of genetic and environmental influences on child mental health. In the current study, we applied a novel approach using extended family data comprising twin, sibling, and half-sibling pairs of parents and their children from The Norwegian Mother and Child Cohort Study (MoBa) to test for gene-environment interaction in the presence of gene-environment correlation. The Multiple-Children-of-Twins-and-Siblings (MCoTS) design was adapted to investigate whether etiological influences on child emotional and behavioral problems vary as a function of family SES. National administrative register data on maternal and paternal income rank and educational attainment was used to index parent SES. Child emotional and behavioral symptoms were assessed at ages 1.5-5 years. Results indicated greater variance in child emotional and behavioral problems in families with low parental income and education. Etiological influences on child emotional and behavioral problems were significantly moderated by maternal SES. The etiology of child emotional, but not behavioral, problems was found to be significantly moderated by paternal SES. Findings offer additional insights into the role that family SES plays in shaping the etiology of early childhood emotional and behavioral problems.

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