AN ABSTRACT OF THE THESIS OF

MATTHEW R. JAMNIK, for the Master of Arts degree in PSYCHOLOGY, presented on March 19, 2018, at Southern Illinois University Carbondale.

TITLE: INVESTIGATING THE ETIOLOGY OF PRESCHOOLERS’ PROBLEM BEHAVIORS: A TWIN STUDY

MAJOR PROFESSOR: Dr. Lisabeth DiLalla

This study investigated the etiology of preschoolers’ somatic symptoms and internalizing problems, using a twin sample. A specific focus was placed on the genetic (i.e., DRD4 and 5-HTTLPR) and environmental (i.e., SES, household chaos, family conflict, and maternal emotional stability) factors that were hypothesized to be associated with these problems. This project also explored the possible gene-environmental interactions (GxE) that may exist among these contributors. It was hypothesized that children who are at greatest risk due to their genotype, environment, or a combination of the two would display elevated somatic symptoms and internalizing problems, compared to children who were less at-risk due to these factors. Data from 252 families included in the Southern Illinois Twins/Triplets and Siblings Study (SITSS) at age 5 were examined. Results indicated a significant DRD4 x household chaos interaction predicting preschoolers’ somatic symptoms, demonstrating that children with the DRD4-7r genotype exhibited less somaticizing in highly chaotic homes. Additionally, 5-year-old internalizing problems were significantly predicted by the cumulative environmental risk factor created (i.e., top 15% of scores for each environmental variable in the current sample) and marginally by the additive genotypic risk factor (i.e., a summation of the DRD4 and 5-HTTLPR “risk” scores). These results provide additional insight into the factors that may place children at greater risk for somatic symptoms and internalizing problems.