

Abstract

It is generally agreed that genetic and environmental factors contribute to the etiology of different childhood and adolescent emotional and behavioral problems. While many twin studies were done in European countries and the States, the current twin study aims to explore the contribution of genetic, common environment and unique environment variance on emotional problems, conduct problems and inattention/hyperactivity in Chinese children and adolescents. Parents in Kunming of 1,237 pairs of same-sex twins, aged 6 to 18 years, completed the Strengths and Difficulties Questionnaire. Univariate and multivariate analysis were carried out based on ACE model. Results suggested full ACE model were the best fit for all three problems. However, low genetic variance was estimated across the three problems. Limitations of the current study were discussed. Further studies would be needed to unravel the inconsistency observed. Regardless of magnitude, different patterns of genetic variance were observed among different problems and gender. Male twins showed higher heritability in inattention/hyperactivity and comorbid more with conduct problems. Female twins showed similarly higher heritability in inattention/ hyperactivity and emotional problems and they tended to comorbid with each other. Results supported that hyperactivity/ inattention was more heritable compared with other childhood and adolescent emotional and

behavioral problems. Multivariate results suggested that for males, there was greater shared genetic proportion between hyperactivity/ inattention and conduct disorder while for females, greater shared genetic proportion was found between hyperactivity/ inattention and emotional symptoms. Results provided some support that due to larger proportion of shared genetic variance, hyperactive/ inattentive girls showing higher comorbidity with internalizing problems and hyperactive/ inattentive boys with more externalizing problems.