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TITLE: Preschool Pretend Play and Memory Development: Twins versus Singletons

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ABSTRACT:
Household chaos and family structure are related to cognitive outcomes in preschoolers, but less is known about how they affect play behaviors. We hypothesized that: 1) twins are more cognitively at risk than singletons because of increased likelihood of birth complications, chaotic home environment, and shared (therefore decreased) parental attention; 2) twins have more advanced play skills because of their ‘built-in’ peer; 3) play skills will moderate the relationship between family chaos and children’s cognitive skills.

Twins and singletons from the Southern Illinois Twins/Triplets and Siblings Study¹ were tested at 3 years on a pretense play task and at ages 3 and 4 years on the Stanford-Binet Memory for Sentences subtest. Parents of twins (but not singletons) completed a measure of home chaos at age 3.

Twins scored significantly higher than singletons on play and significantly lower on memory. Additionally, play and memory were both significantly heritable; however, this
did not appear to be the result of shared genes. Multilevel modeling showed a significant interaction between home chaos and play scores predicting change in memory scores; as household chaos increased, twins with poorer pretend play skills showed significantly less improvement in memory over time.

Thus, twins may overcome their ‘risks’ via having a ‘built-in’ peer for play skills; however, if their play skills are poorer, those in chaotic homes are at greatest cognitive risk.


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