

NAME OF PRESENTING AUTHOR: Lisabeth F. DiLalla

EMAIL ADDRESS OF PRESENTING AUTHOR: Ldilalla@siu.edu

LOCATION OF PRESENTING AUTHOR: America (North)

TIME ZONE OF PRESENTING AUTHOR: USA Central

TYPE OF SUBMISSION: Oral paper

MEMBER STATUS:

Regular

ELIGIBLE FOR THOMPSON AWARD: No

ELIGIBLE FOR ROWEWARD: No

---

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

FULL AUTHOR LIST:

Lisabeth F. DiLalla<sup>1</sup>

Matthew R. Jamnik<sup>2</sup>

AFFILIATIONS:

<sup>1</sup> Department of Family and Community Medicine, Southern Illinois University School of Medicine, Carbondale, Illinois, USA

<sup>2</sup> Department of Psychology, Southern Illinois University, Carbondale, Illinois USA

KEYWORDS: Pretend play; Preschoolers; Memory; Household chaos; Twins

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 Study<sup>1</sup> 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.

<sup>1</sup> DiLalla, L.F. & Jamnik, M.R. (2020). The Southern Illinois Twins/Triplets and Siblings Study (SITSS): A longitudinal study of early child development. *Twin Research and Human Genetics*.

GRANT SUPPORT: Funding for this study came from an SIU Special Research Project Grant and a grant from the Central Research Committee of the SIU School of Medicine to LFD.

-----  
-----