

TWINS' INTERACTIONS WITH PARENTS AND PEERS STUDY (TIPPS)

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THANK YOU!

Thank you to the wonderful families who participated in the TIPPS! The data that you generously shared with us have been the basis of a dissertation, five conference presentations, and an undergraduate conference presentation. Our work would not be possible without you!



COMPLETED DISSERTATION

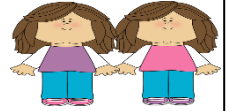
Influences of Temperament, Parents and Friends on Prosocial Behaviors and Conduct Problems in Middle Childhood: A Behavioral Genetic Analysis

Riley L. Marshall, Ph.D.

The goal of this investigation was to examine the role of children's temperaments (biologically-based tendencies toward affect and self-regulation) and children's perceptions of their parents and their friends on their prosocial behaviors and conduct problems. This study demonstrated that prosocial behaviors and conduct problems were heritable, or genetically influenced. Children's temperament traits were related to both prosocial behaviors (e.g., helping, sharing, comforting) and conduct problems (e.g., aggression, delinquency). Additionally, children's reports of their parents' acceptance and control and their reports of their best friends' prosocial behaviors and conduct problems were related to their own prosocial behaviors and conduct problems. The relationship between friends' conduct problems and children's reports of their own conduct problems was only present for children with a genetic likelihood for higher effortful control (i.e., self-regulation). Thus, although negative peers may be related to negative behaviors for all children, the relationship may be stronger for children with a genetic likelihood for higher effortful control. These results contribute to a large literature that suggests that children respond differently to social environments based on genetic factors.

CONFERENCE PRESENTATIONS

GRADUATE STUDENT PRESENTATIONS



Presented to the International Society for Twin Studies, Virtual, June 2023

Influences of Self and Co-Twin Social Behaviors on Perceptions of Love and Conflict in Middle Childhood Twins

Riley L. Marshall and Lisabeth Fisher DiLalla

This study examined the impact of twins' perceptions of themselves and their co-twins on their perceptions of love and conflict toward their co-twins. Children who perceived more prosocial behavior (e.g., helping and sharing) and fewer conduct problems (e.g., aggression and delinquency) in their co-twins reported more love for their co-twins. Additionally, children who felt that they had similar levels of prosocial behavior to their co-twins felt more love. Finally, children who had more conduct problems reported more conflict with their co-twins. These results suggest that children's perceptions of co-twins' behaviors are related to love for the co-twin and that children's perceptions of their own behaviors are related to their perceptions of conflict within the relationship.

Presented to the Behavioral Genetics Association, Murcia, Spain, June 2023

Interactions between Best Friends' Behaviors and Genetic Risk for Negative Affectivity Predicting Childhood Prosocial Behaviors and Conduct Problems

Riley L. Marshall and Lisabeth Fisher DiLalla

This study investigated interactions between best friend social behaviors and genetic likelihood for negative affectivity predicting child social behaviors. Children at genetic risk for negative affectivity exhibited fewer prosocial behaviors (e.g., helping and sharing) and more conduct problems (e.g., aggression and delinquency), regardless of their best friends' behaviors. In contrast, in children with low genetic risk, best friend prosocial behaviors and conduct problems were related to child prosocial behaviors and conduct problems, respectively. These results suggest that it is critical to consider both genetic and social risk factors for social behaviors. It is also important to consider ways that friends may evoke both positive and negative behaviors in each other as well as the ways that they may learn these behaviors through observing each other.

Presented to Midwestern Psychological Association, Chicago, Illinois, April 2024

Children's Perceptions of Parenting Predict Prosocial Behaviors and Conduct Problems

Riley L. Marshall and Lisabeth Fisher DiLalla

This study investigated relationships between children's perceptions of parenting and their social behaviors. Children who perceived more maternal acceptance reported more prosocial behaviors, and children who perceived more maternal control reported more conduct problems. However, children's reports of their mothers' behaviors were not related to maternal reports of behaviors. This may reflect a reporter bias in which children have similarly positive or negative views of themselves and their mothers. However, children may evoke certain parenting behaviors or behave in ways consistent with both the genes they receive and the parenting they receive, both of which would constitute gene-environment correlations. Therefore, it is important to examine genetic and environmental mechanisms of associations between perceived parenting and child behaviors.

GRADUATE STUDENT PRESENTATIONS CONTINUED

Submitted to the Society for Research in Child Development, Minneapolis, Minnesota, May 2025
Child Temperament Moderates the Relationship Between Maternal Psychological Control and Middle Childhood Social Behaviors

Riley L. Marshall and Lisabeth Fisher DiLalla

Although parental psychological control is related to child behaviors, including prosocial behaviors and conduct problems, it is unclear whether temperament influences the relationships between control and social outcomes. We found that psychological control was related to fewer prosocial behaviors in children with a higher genetic likelihood for surgency/extraversion, a temperament dimension characterized by high levels of positive emotions and social approach. In contrast, children with a low genetic likelihood for surgency/extraversion reported more prosocial behaviors when they perceived less psychological control. With respect to conduct problems, children with a high genetic likelihood for surgency/extraversion reported more conduct problems when they perceived more psychological control. These results suggest that, although parenting is important for all children, children with more positively reactive temperaments may particularly benefit from less controlling parenting.

UNDERGRADUATE STUDENT PRESENTATION

Sex and Zygosity Differences in Middle Childhood Friendship Quality

Calli D. Willett and Riley L. Marshall

Advisor: Lisabeth Fisher DiLalla

This study investigated sex and zygosity (i.e., identical/monozygotic or fraternal/dizygotic twin relationship) influences on friendship quality in middle childhood. We found that girls had higher friendship quality than boys in one subsample of twins but not in a second subsample. Thus, the impact of sex on friendship quality is unclear. No zygosity differences were found, meaning that there is not a difference between monozygotic and dizygotic twins in the quality of their friendships. Significant heritability was found, suggesting that genes influence how children perceive their friendship quality.



FACULTY PRESENTATION

Presented to the Behavior Genetics Association, London, June 2024

Examining Links Between Temperament and Emotion Expression in Middle Childhood: A Twin Analysis

Lisabeth Fisher DiLalla and Riley L. Marshall

Learning to recognize and interpret others' emotions is an important childhood developmental task and is essential for successful social interactions. Little is known about children's ability to accurately express emotions (EE), although some evidence suggests a relationship between EE and victimization. This study of twins aged 6-11 years old used untrained coders to rate children's photographed expressions of happy, sad, fearful, or angry facial emotions to create scores for EE biases (being rated as expressing a particular emotion but not trying to) and errors (attempting to express a particular emotion but not being judged to show it). Genetic analyses showed genetic effects for angry and fearful errors and for happy and sad biases. In turn, these EE skills were related to parent-rated temperamental activity and intensity; the twin who was rated higher on intensity and activity was generally more accurate at expressing facial emotions. As EE skills may be important for children's social development, understanding how they relate to temperament may be valuable for individual training and interventions.

TIPPS SUMMARY

TIPPS has contributed to knowledge about contributors to prosocial behaviors and conduct problems and to high-quality relationships in middle childhood, which is an understudied period in the lifespan. It is a critical period because relationships with family members are just as important as they were earlier in the lifespan, but relationships with peers increase in importance during this time. Broadly, this study demonstrated that children's relationships with their family and friends are both critically important to their development and that children's genetically-influenced characteristics (e.g., temperament) influence how they experience their social worlds. Overall, this study highlights the importance of considering the development of social behaviors (e.g., prosocial behaviors and conduct problems) in middle childhood and the importance of considering children's characteristics and their environments when investigating prosocial behaviors and conduct problems.

MAJOR FINDINGS

Prosocial behaviors and conduct problems are heritable (i.e., influenced by genes).

Parenting and friends' characteristics are related to prosocial behaviors and conduct problems.

Children's temperaments are related to prosocial behaviors and conduct problems.

Temperament and social environments interact to predict prosocial behaviors and conduct problems. In other words, children with different temperaments can have different experiences of similar environments, and this influences their prosocial behaviors and conduct problems.



GRANT SUPPORT

Thank you to the following entities who have provided financial support for this project:

Psi Chi, to RLM

Sigma Xi, to RLM

Southern Illinois University School of Medicine, to LFD