The Relationship Between Prosocial Behavior and Aggression in 4-year-old Sibling and Peer Interactions

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Abstract

Prosocial behavior and aggression are frequently exhibited in 4-year-old sibling and peer interactions. Our results suggest that siblings partake in a greater amount of prosocial behaviors and aggression than peers. Additionally, prosocial behavior was positively correlated with relational aggression in sibling interactions.

Introduction

Preschoolers' relationships with siblings and with friends each provide opportunities for both positive and negative interactions. There has been extensive research on both prosocial behavior and aggression between preschool peers, but researchers have tended to focus more on the negative aspects of sibling interactions, such as conflict and aggression. As a result, there has been little direct comparison of the relative frequency of prosocial behavior and aggression in preschoolers' interactions with siblings and with friends, or of the connections between the two types of behavior. On the surface, prosocial and aggressive behaviors appear incompatible; high rates of one would be expected to predict low rates of the other. However, it is also possible that they occur independently of each other, influenced by different aspects of relationships and immediate social contexts, or that some aspects of both behaviors depend on the same basic social-cognitive abilities.

As part of a longitudinal study, we conducted an exploratory analysis of prosocial behavior and its connections to aggressive behavior in preschoolers' sibling and friend interactions during semi-structured free-play sessions. Prosocial behavior was defined as any voluntary behavior intended to benefit another party, while aggression was defined as any behavior designed to hurt or bother another party.

Methods

Participants

- A community sample from western New York consisting of 45 4-year-olds, approximately half female and half male, from white, middle class families, were observed interacting with a sibling and a same-sex, same-age friend.
- 25 of the target children were observed with a sibling of the same sex and 20 of the target children were observed with a sibling of the opposite sex.
- Half of the siblings were 15-30 months older than the target child; half were 15-30 months younger.

Procedure

- Each target child was videotaped at home in separate 15-20 minute free-play sessions with the sibling and the friend.
- The videotapes were transcribed and each child was coded separately for prosocial behavior and for aggression. Acts of aggression were classified as relational (damaging or threatening to a relationship) or physical (physical acts or physical threats of force).
- The videotapes were coded for social engagement at 10-second intervals. For the purposes of this poster, social engagement was categorized as engaged (partners communally partaking in an activity or interacting with each other), semi-engaged (one partner observing and/or trying to involve the other), or unengaged (no interaction between the partners).

Analysis

- For this poster, analyses focused on dyadic data.
- Rates of prosocial behavior per engaged minute were analyzed using a 2 (partner) X 2 (age group) X 2 (target child gender) X 2 (sibling gender) repeated measures ANOVA .
- Rates of aggression per engaged minute were analyzed using a 2 (partner) X 2 (age group) X 2 (target child gender) X 2 (sibling gender), repeated measures MANOVA with relational aggression and physical aggression as the dependent variables.
- To examine connections among aspects of prosocial behavior and aggression, bivariate correlations were conducted separately for sibling and friend interactions using rates of prosocial behavior and rates of relational and physical aggression per engaged minute.

Figure 1. Mean rate of prosocial behavior

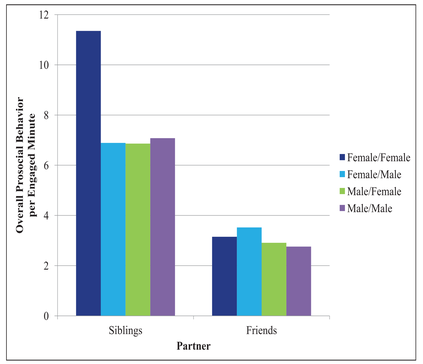

Figure 2. Mean rate of relational aggression

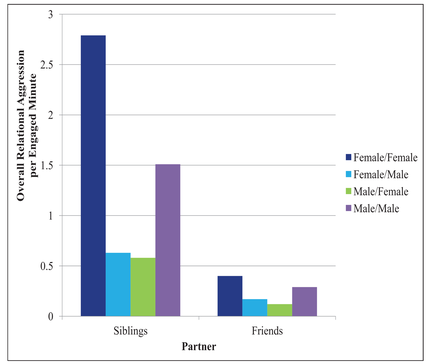

Figure 3. Mean rate of physical aggression

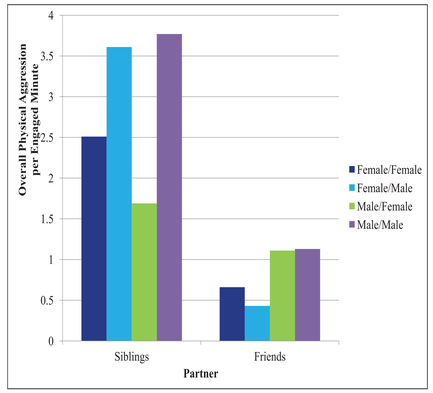

Table 1. Correlation matrix

Subscale	1	2	3	4	5	6
1. SibPS	--	0.50**	-0.03	-0.11	-0.19	-0.13
2. SibRA	0.50**	--	0.26*	-0.13	0.12	-0.02
3. SibPA	-0.03	0.26*	--	-0.12	0.29*	0.34**
4. Fr.PS	-0.11	-0.13	-0.12	--	0.02	-0.02
5. Fr.RA	-0.19	0.12	0.29*	0.02	--	0.41**
6. Fr.PA	-0.13	-0.02	0.34**	-0.02	0.41**	--

**** Correlation is significant at the 0.01 level (2-tailed)**
*** Correlation is significant at the 0.05 level (2-tailed)**

Results

Mean Rates of Overall Prosocial Behavior (Figure 1)

- For overall prosocial behavior, there was a marginal partner effect ($F = 3.34$, $p = 0.08$). Sibling interactions included more prosocial behavior than friend interactions.
- A marginal target child gender effect was also found ($F = 3.27$, $p = .08$). Female target children displayed more prosocial behavior toward both siblings and friends than did male target children.

Mean Rates of Relational and Physical Aggression (Figures 2 & 3)

- For overall relational aggression, there was a significant partner effect ($F = 4.33$, $p = 0.04$). Sibling interactions included more relational aggression than friend interactions.
- For overall physical aggression, there was a highly significant partner effect ($F = 8.73$, $p = 0.005$). In general, physical aggression was more prevalent in sibling interactions than in friend interactions.

Correlations between prosocial and aggression behavior (Table 1)

- A strong positive correlation was found between overall sibling prosocial behavior and overall sibling relational aggression ($r = .50$, $p = .001$).
- There were also a number of positive correlations among various forms of aggression by siblings and friends, as shown in Table 1.

Discussion

Our findings indicate that partner makes a difference in the frequency of both prosocial behavior and aggression. Siblings exhibited greater prosocial behavior, physical aggression, and relational aggression than friends did. Regardless of partner, girls appeared to be more prosocial than boys when interacting with both sibling and peers; surprisingly, we did not find significant gender differences for either form of aggression.

In sibling relationships, but not in friendships, prosocial behavior was positively associated with relational aggression. One commonality between prosocial behavior and relational aggression is their complexity; both require considerable social-cognitive skills to be used effectively. In addition, they both demand knowledge of a partner's personality and behaviors, implying some level of intimacy in the relationship.

Our findings reflect various characteristics of sibling and friend relationships. The nature of sibling relationships fosters an unparalleled level of intimacy and familiarity, as well as a mixture of fairly intense positive and negative feelings. This combination of factors may explain the greater frequency of both prosocial behavior and aggression. In addition, girls may feel closer to their friends than boys do, accounting for their greater rates of prosocial interactions. The comfort and familiarity of a sibling relationship promotes prosocial behavior but siblings also know how to use words and actions to hurt and bother each other.

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