A bias among aggressive children towards attributing hostile intentions to others (Crick & Dodge, 1994) has been well documented among second- though eighth-grade children, although findings have been somewhat mixed among preschool samples (de Castro et al., 2002). Children lacking self-regulation may be more prone to aggressive behavior following hostile attributions than other children. The current study examines the hypothesis that temperamental characteristics - specifically, inhibitory control and impulsivity - moderate the association between 4-year-olds' hostile attributions and aggressive behavior, through secondary analysis of NICHD Study of Early Child Care data.

The NICHD-SECC included 1,364 families recruited in 10 US locations shortly after the child's birth. Data used in the current investigation, collected at the 54-month follow-up, were available for 720 children (374 girls; 84.7% European-American, 9.3% African-American; 5.6% Hispanic).

Hostile Attributions was the number of negative attributions children made in response to four ambiguous peer provocation situations. Impulsivity was the proportion of incorrect responses obtained through a children's Stroop Test. Inhibitory control was assessed through maternal ratings on 10-items from the inhibitory control scale of the Children's Behavior Questionnaire. Aggression was assessed via caregiver report on Achenbach's Teacher Report Form 2-5y.

Two regression equations predicting aggression were computed. In the first, inhibitory control, hostile attributions and the multiplicative interaction term were entered (Table 1). The main effects of both inhibitory control and hostile attributions, as well as the interaction term, were significant. The slope of the

relationship between hostile attributions and aggression varied from 1.02 (t = 3.70, $p < .05$) for low (-1 SD) inhibitory control to 0.52 (t = 2.76, $p < .05$) for mean inhibitory control to 0.03 (t =-0.12, ns) for high (+1 SD) inhibitory control (Figure 1). In analyses conducted separately for boys and girls, both hostile attributions and inhibitory control main effects, but not the interaction term, were significant for girls, whereas the inhibitory control main effect and the interaction term, but not the hostile attributions main effect, was significant for boys.

The second regression equation predicted aggression from impulsivity, hostile attributions and the multiplicative interaction term. The impulsivity and hostile attribution main effects, as well as the interaction term, were significant (Table 1). The slope of the relationship between hostile attributions and aggression varied from -0.28 (t = 0.97, ns) for low (-1 SD) impulsivity to 0.46 (t = 2.28, $p < .05$) for mean impulsivity to 1.20 (t = 4.13, $p < .05$) for high (+1 SD) impulsivity (Figure 1). When examined separately, the hostile attributions main effect and the interaction term, but not the impulsivity main effect, were significant for girls, whereas for boys the impulsivity main effect and the interaction term, but not the hostile attributions main effect, were significant.

These findings suggest temperamental characteristics moderate associations between young children's hostile attributions and aggression; specifically, the association between hostile attributions and aggression is significant for children less skilled at regulation, but is not significant for children more skilled at regulation. Implications for theory and research will be discussed.

Table 1

Predicting aggressive behavior from hostile attributions, temperamental characteristics and the interaction between hostile attributions and temperamental characteristics

Variables entered	R^2	β^a	p
Hostile attributions		.10	< .01
Inhibitory Control		-.26	< .01
Interaction term	.10**	-.10	< .01
Girls			
Hostile attributions		.13	.01
Inhibitory Control		-.21	< .01
Interaction term	.06**	-.06	.27
Boys			
Hostile attributions		.05	.29
Inhibitory Control		-.34	< .01
Interaction term	.15**	-.13	.01
Hostile attributions		.09	.03
Impulsivity		.11	.01
Interaction term	.05**	.15	< .01
Girls			
Hostile attributions		.15	< .01
Impulsivity		.07	.22
Interaction term	.05**	.15	< .01
Boys			
Hostile attributions		.02	.74
Impulsivity		.15	.02
Interaction term	.05**	.14	.03

Note: [a] Standardized betas are reported, ** = p < .01

Figure 1

Association between hostile attributions and aggression at high, medium, and low values of temperament variables