

**Resident father-child involvement:
Associations with young children's
peer-based behavior in the NICHD-
SECC and ECLS-B studies**

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Fathers

- Fathers spend a higher proportion of their time interacting with young children engaged in play (Parke & Buriel, 2006) than do mothers.
- Moreover, the quality of play between fathers and young children differs from that between mothers and young children (Lindsey, Mize, & Pettit, 1997).
- Play interaction with fathers is often more emotionally arousing than is play with mothers, and so interaction with fathers may provide children opportunities to practice and develop self-regulation skills (Lindsey & Mize, 2001; MacDonald & Parke, 1984).
- Children's self-regulation skills may be important predictors of children's aggressive behavior with same-age peers (Meece & Luster, 2007; Meece, Mize, Bates, Dodge, & Pettit, 2007).



**Father-child interaction, impulsivity,
social behavior:**

Three hypotheses:

1. Are unrelated / independent
2. Mediation model
3. Moderation model



ECLS-B

- The ECLS-B followed a nationally representative sample of children from birth to kindergarten entry. At the 4-year follow-up, data were collected from residential fathers of 7,070 children (3,456 girls; 48.3% white, non-Hispanic).



Measures

- Fathers' reports were used to compute *Father Positive Caregiving* (e.g., read books, plays games, play chase; 5 items, $\alpha = .67$),
- Fathers' reports on four items (# of times spanked child, endorsement of spanking, yelling, hitting back) indexed *Father Harsh control*.
- Mothers rated *Impulsivity* during home interviews (5 items, $\alpha = .71$).
- Preschool teachers provided measures of children's *Peer competence* (e.g. accepted by other children, makes friends easily; 6 items, $\alpha = .81$) and a single-item rating of *Aggression*.



**Associations among variables, ECLS
Sample, girls**

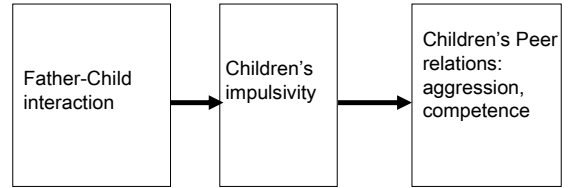
	Father Positive Care	Father Harsh Control	Impulsivity
Impulsivity	-.05**	.07**	1.0
Aggression	.03	.05**	.19**
Peer Competence	.04	-.03	-.16**



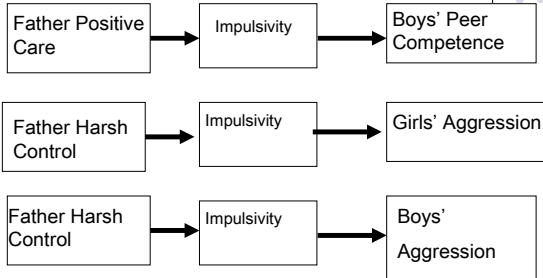
Associations among variables, ECLS Sample, boys

	Father Positive Care	Father Harsh Control	Impulsivity
Impulsivity	-.08**	.07**	1.0
Aggression	.03	.07**	.22**
Peer Competence	.07**	-.02	-.16**

Mediational Model



ECLS: Potential Mediational Paths



ECLS: Potential Mediational Paths

	ΔR^2	β	p
Impulsivity	.02	-.15	<.01
Fathers' Positive Care	.003	-.07	.01

The Z' statistic to test the significance of the indirect effect of father positive care on boys' peer competence via impulsivity was -3.64 ($p < .01$).

ECLS: Potential Mediational Paths

	ΔR^2	β	p
Impulsivity	.03	.17	<.01
Father Harsh Control	.001	-.04	.10

The Z' statistic to test the significance of the indirect effect of father harsh control on aggression via impulsivity was -2.53 ($p < .05$).

ECLS: Potential Mediational Paths

	ΔR^2	β	p
Impulsivity	.04	.21	<.01
Father Harsh Control	.003	-.06	<.01

The Z' statistic to test the significance of the indirect effect of father harsh control on aggression via impulsivity was -2.42 ($p < .05$).

Summary

- Some support for mediational model, particularly father harsh control predicting aggression

Moderating Hypothesis

- Positive father interaction might buffer young children from link between impulsivity and aggression.
- More negative father interaction might exacerbate link between impulsivity and aggression.
- Two interaction terms were significant:
 - For girls, father harsh control X impulsivity
 - For boys, father positive care X impulsivity

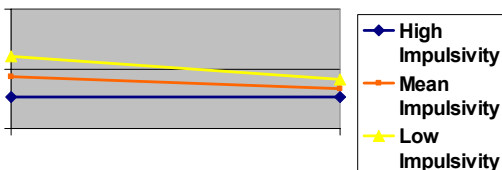
Regression predicting Peer Competence from Impulsivity, Father Harsh Control, and Interaction Term for girls.

Variables Entered	R ²	β	p
Impulsivity		-.18	<.01*
Father Harsh Control		-.04	.11
Impulsivity X FHC	.04*	.06	.01*

Significance of the slope between Father Harsh Control and Peer Competence at three levels of impulsivity for girls, ECLS

Impulsivity	slope	se	t
Low	-.002	.00046	-3.64*
Mean	-.001	.00032	-3.10*
High	-.00003	.00047	-.72

Association between Harsh Father Control and Peer Competence at Low, Mean, and High Levels of Impulsivity for Girls: ECLS



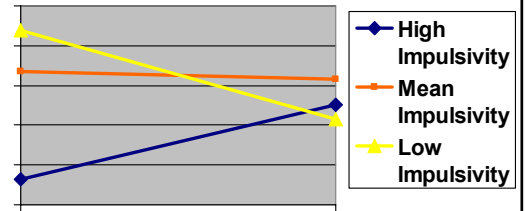
Regression predicting Aggression from Father Positive Care and Impulsivity for boys, ECLS

Variables Entered	R ²	β	p
Impulsivity		.20	<.01*
Father Positive Care		.02	.48
Impulsivity X FPC	.04*	.05	.02*

Significance of the slope between Father Positive Care and Aggression at three levels of impulsivity for boys, ECLS

Impulsivity	slope	se	t
Low	-.233	.106	-2.20*
Mean	.024	.032	0.76
High	.281	.105	2.66*

Association between Father Positive Care and Aggression at High, Mean, and Low levels of Impulsivity for Boys: ECLS



Summarize

- Some support for moderating hypothesis, particularly predicting aggression.
- Unexpected positive slope for high impulsive boys between father positive care and aggression.

NICHD-SECC

- 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 721 children who were observed interacting with their fathers during a structured laboratory session (350 girls; 90.0% European-American, 4.7% African-American; 3.5% Hispanic).

Measures

- The *positive caregiving* composite included ratings of father behavior ($\alpha = .88$, interrater $\kappa = .81$) during a videotaped laboratory session.
- Father *Harsh Control* was assessed through self-reports on the Raising Children Checklist (six items, $\alpha = .69$).
- *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.
- Caregivers reported *Aggression* was via Achenbach's Teacher Report Form 2-5y and
- *Peer competence* via the California Preschool Social Competency Scale (6 items, $\alpha = .54$).

Associations among variables, NICHD Sample, girls

	Father Positive Care	Father Harsh Control	Impulsivity	Inhibitory Control
Impulsivity	-.14**	-.05	1.0	-.01
Inhibitory control	.14**	-.11*	-.01	1.0
Aggression	-.18**	-.01	.07	-.24**
Peer Competence	.11	.01	.03	-.11

Associations among variables, NICHD Sample, boys

	Father Positive Care	Father Harsh Control	Impulsivity	Inhibitory Control
Impulsivity	-.19**	.10*	1.0	-.04
Inhibitory control	.16**	-.06	-.04	1.0
Aggression	.13*	-.08	.15*	-.24**
Peer Competence	.10	.02	.04	.10

Study 2: Potential Mediational Path



	ΔR^2	β	p
Inhibitory Control	.05	-.21	<.01
Father Positive Care	.02	-.14	.03

The Z' statistic to test the significance of the indirect effect of father positive care on aggression via inhibitory control was -1.99 ($p < .05$).

Moderating hypothesis

- In the interactions between father-child interaction variables and impulsivity predicting aggression two were significant:
- For boys, father harsh control X impulsivity
- For boys, father positive care X inhibitory control

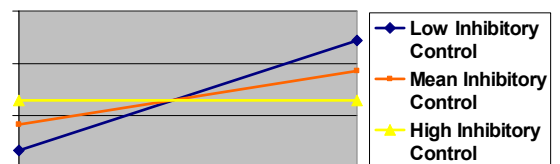
Regression predicting Aggression from Father Positive Care, Inhibitory Control, and Interaction Term, NICHD, boys

Variables Entered	R^2	β	p
Inhibitory Control		-.25	<.01*
Father Positive Care		.15	.02*
Inhibitory Control X FPC	.09*	-.14	.02*

Significance of the slope between father positive care and aggression at three levels of inhibitory control for boys, NICHD sample

Inhibitory Control Level	slope	se	t
Low	.312	.09	3.17*
Mean	.156	.07	2.2*
High	-.00006	.09	-.0002

Association between Father Positive Care and Aggression at Low, Mean, and High Levels of Inhibitory Control for Boys



Regression predicting Aggression from Father Positive Care, Impulsivity, and Interaction Term, NICHD, boys

Variables Entered	R ²	β	p
Impulsivity	.18	.01*	
Father Positive Care	.13	.07	
Impulsivity X FPC	.08*	.18	.01*

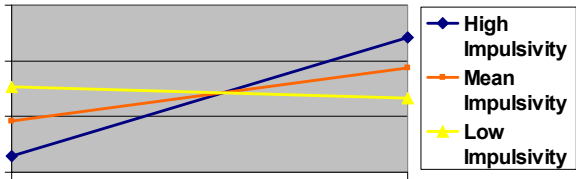


Significance of the slope between father positive care and aggression at three levels of inhibitory control for boys, NICHD sample

Inhibitory Control Level	slope	se	t
Low	-.03	.11	-.27
Mean	.15	.07	1.87
High	.32	.09	3.51*



Association between Father Positive Care and Aggression at Low, Mean, and High Levels of Impulsivity for Boys



Summarize

- For boys, significant interactions predicting teacher-rated aggression from father positive care.
- Unexpected direction of father positive care predicting higher levels of aggression for more impulsive boys; consistent with direction from ECLS study.



Why those unexpected interactions?

- A fluke?



Regression predicting boys' Observed Physical Aggression from Father Positive Care, Inhibitory Control, and Interaction Term, NICHD

Variables Entered	R ²	β	p
Inhibitory Control		-.21	<.01*
Father Positive Care		.01	.90
Inhibitory Control X FPC	.05*	-.13	.04*

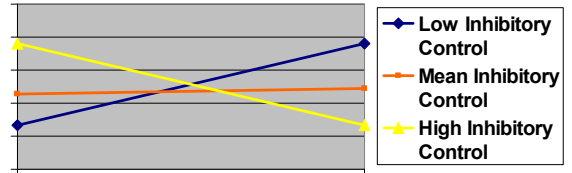


Significance of the slope between father positive care and observed physical aggression at three levels of inhibitory control for boys, NICHD sample



Inhibitory Control Level	slope	se	t
Low	.015	.009	1.68
Mean	.001	.073	.01
High	-.014	.011	-1.24

Association between Father Positive Care and Observed Physical Aggression at Low, Mean, and High Levels of Inhibitory Control for Boys



Other possible explanations



- A child effect? Could more impulsive boys elicit something differently in interactions with Dads?
- Do Dads behave differently with more impulsive boys?
- An additive effect? More impulse + more rough and tumble with Dad?
- A “snapshot” of a developmental effect?