

Early Life Harshness & Unpredictability: Adaptively Shaping Young Children's Effortful Control

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Introduction

This study investigates the links between early life harshness and unpredictability, and effortful control development in early childhood.

Developmental Research Framed in Life History Theory

Early exposure to harshness & unpredictability:

- serve as cues about the anticipated (adult) environment (Belsky et al., 1991);
- shape developmental trajectories in ways aimed to adaptively match the individual to their environment (Belsky et al., 1991);
- are unique predictors of development (Ellis et al., 2009);
- may have implications for the development of effortful control.

Effortful control:

- the future-oriented aspect of self-regulation (Rothbart & Rueda, 2005);
- associated with increased prosocial behaviors and overall school competence (Diamond, 2006);
- may not be as adaptive as impulsivity in environments requiring the ability to be more present-oriented, competitive, resourceful, and opportunistic (Wenner et al., 2013).

Hypothesis: Early life harshness and unpredictability will uniquely and negatively predict effortful control at age 3.

Methods

Sample Predominantly economically disadvantaged families ($N = 1,745$) from Building Strong Families parental relationship skills intervention study; 62% of mothers and 75% of fathers identified as Black/African American.

Time points: Baseline (T0), 15 months (T1), & 36 months (T2)

Harshness (IV)

Economic harshness: Self-reported family household income, T1 & T2

Harsh parenting:

Observed parental harshness & responsiveness:

Semi-structured play task, T2

Harsh Discipline: 7 items from the Conflict Tactics

Scale: Parent Child Version

Methods (cont.)

Neighborhood harshness ($\alpha = .82$): 8 interviewer-rated items (e.g., condition of housing), T2

Unpredictability (IV)

Financial unpredictability

Inconsistency in employment: Mother & father reports of (in)consistent employment, T1 & T2

Instances of financial hardship: Mother-reported (e.g., instances of utility shutoff), T1 & T2

Father unpredictability

Mother-reported coresidential transitions of father and/or new partner across T0, T1, & T2.

Unpredictable daily routines

Mother reports on the frequency of child's regular daily routines (e.g., goes to bed at a regular time), T2 reverse-scored

Child's Effortful Control (DV) ($\alpha = .86$)

Interviewer-rated including task persistence, attention span, body movement (reverse-coded), and attention to directions, T2

Analyses Multiple imputation using a chained equation method (Enders, 2010) and hierarchical regression analyses

Table 1. Bivariate correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Child's sex														
2. Income:Poverty, T1	.01													
3. Income:Poverty, T2	.01	.16***												
4. Responsive parenting, mother	.06*	.07	.15***											
5. Responsive parenting, father	.02	.06	.12***	.26***										
6. Harsh parenting, mother	-.08**	-.05	-.11	-.49***	-.13**									
7. Harsh parenting, father	-.06	-.04	-.02***	-.16***	-.50***	.18***								
8. Harsh discipline, mother	-.04	.04	.09**	.06*	.02	.02	.01							
9. Harsh discipline, father	-.10***	.05	.10***	.04	.03	.00	.05	.27***						
10. Harsh neighborhood	.10	-.07**	-.15***	-.04***	-.12***	.11	.04***	-.08**	-.04					
11. Unpredictable Employment	.02	.02	-.05*	.01	.02	.03	.02	.02	.05	.11***				
12. Unpredictable Finances	.00	-.03	-.05*	.03	.04	.05	.00	.10***	.06*	.06*	.11***			
13. Father unpredictability	-.06*	-.10***	-.13***	.04	-.05*	.12***	.08***	.00	-.13***	.03	-.05	.03		
14. Unpredictable daily routines	-.02	-.01	-.01	-.07**	.00	.03	.01	.05	.02	.01	-.01	-.02	.01	
12. Effortful control (DV)	.22***	-.01	.03	.25***	.15***	-.19***	-.13***	.00	-.04	-.13***	.01	.02	.05	-.03

Notes. T1 = 15 months, T2 = 36 months, DV = dependent variable. * $p < .05$. ** $p < .01$. *** $p < .001$.

Results

Table 2. Summary of Step 3 Hierarchical Regression

	b	SE	β
Constant	2.45	0.30	
Control ($R^2 = .06^{***}$)			
Child sex	0.19	0.14	0.13
White, Mother ^a	- 0.15*	0.07	- 0.10
White, Father ^a	0.01	0.07	0.00
Other race, Mother ^a	- 0.12	0.10	- 0.03
Other race, Father ^a	- 0.03	0.10	- 0.01
Intervention	0.01	0.03	0.01
Harshness ($\Delta R^2 = .08^{***}$)			
Income:Poverty (T1)	0.00	0.01	0.00
Income:Poverty (T2)	0.02	0.03	0.02
Parental responsiveness, mother	0.14***	0.02	0.16
Parental responsiveness, father	0.07*	0.03	0.07
Harsh parenting, mother	- 0.15**	0.06	- 0.19
Harsh parenting, father	- 0.03	0.07	- 0.04
Harsh discipline, mother	- 0.00	0.01	- 0.01
Harsh discipline, father	- 0.02	0.01	- 0.03
Neighborhood harshness	- 0.04***	0.01	- 0.09
Child sex X harsh parent, mother	0.05	0.04	0.04
Child sex X harsh parent, father	- 0.01	0.04	- 0.02
Unpredictability ($\Delta R^2 = .00$)			
Unpredictable employment	0.01	0.02	0.01
Unpredictable finances	0.01	0.01	0.02
Father unpredictability	0.04*	0.02	0.07
Unpredictable daily routines	- 0.01	0.01	- 0.02
$R^2 = .14$			

Note. Though Step 3 of model is shown here, $\Delta R^2 = 0$, thus statistically significant unpredictability coefficients are not interpreted. a. African American was used as the reference group for race. * $p < .05$. ** $p < .01$. *** $p < .001$. T1 = 15 months, T2 = 36 months.

Conclusions & Implications

Based on results, cues of harshness from parenting and neighborhood characteristics may have a role in shaping lower levels of effortful control, perhaps due to the ecological demands and constraints of a harsh environment which may favor impulsivity.

This study included mother and father self-reports, observed parenting, and interviewer-rated measures. This **multi-method and multi-reporter approach** advances research on child development, which often only includes mother reports.

These results highlight the importance of investigations distinguishing between exposure to **early harshness and unpredictability as influences on specific aspects of development.**

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