

Infant Frustration and Fearfulness as Contributors to Toddler Externalizing Problems: Unique, Additive, or Interactive Effects?



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Introduction and Hypotheses

- Elevated negative emotionality (NE) during infancy has been associated with internalizing and externalizing behaviors in childhood^{1,2}
- Recent work has also noted the role of fine-grained aspects of NE on the development of behavioral problems:
 - Elevated frustration has been associated with an increased risk of developing externalizing, but not internalizing problems^{3, 4}
 - Elevated fear, on the other hand, has been associated with *decreased* risk of externalizing problems⁵, although this evidence is mixed⁶
- Despite supporting evidence, no studies have considered the possibility that elevated fear may act as a buffer against developing externalizing problems, even in the context of high frustration
- The goal of the present study is to examine the additive and interactive effects of infant frustration and fear on externalizing problems during toddlerhood
- Based on prior research, the following hypotheses were tentatively made:
 - Infant frustration will be positively related to toddler externalizing problems
 - Infant fear will be negatively related to toddler externalizing problems
 - Infant fear will moderate the association between Infant frustration and toddler externalizing problems; that is, high fear will protect toddlers against developing externalizing problems, even in the context of high frustration

Methods

- 120 mother-infant dyads participated (64 female infants; 30.3% of participants identified as an ethnic minority; mother's age ranged from 17 to 43 (M=27.83; SD=6.32); 23.6% of mothers reported living at or below the poverty line)
- At 12 months postpartum, mothers completed The Infant Behavior Questionnaire⁷, a measure of infant temperament that includes scales of frustration and fear
- 18 months postpartum, mothers completed the Child Behavior Checklist-2⁸, which contains an externalizing behavior scale
- Regression, used to test hypotheses, controlled for:
 - Infant sex
 - Family cumulative risk (an index wherein each family receives 1 point for each risk factor they meet criteria for, including being a teenage mother, having an income-to-needs ratio below the poverty line, maternal education less than high school, mother meeting criteria for current or past major depressive episode, and single mother status)
 - Parenting behaviors (maternal negative affect and behavior; maternal intrusiveness and insensitivity; maternal involvement and verbalizations) were coded using The Parent-Child Early Relational Assessment⁹

Results

- Infant frustration, but not fear, was associated with toddler externalizing problems ($b^* = .31$; $p < .05$)
- The frustration by fear interaction was not significant; high infant frustration was associated with increased externalizing problems, regardless of fear levels

Table 1: Hierarchical Multiple Regression Analyses of Infant Temperament and Toddler Externalizing Problems

Dependent	Predictor	b*	R ²
Toddler Externalizing Problems	Step 1		.01
	Infant Sex	.02	
	Step 2		.045
	Infant Sex	-.03	
	Cumulative Risk	-.01	
	Maternal Involvement and Verbalization	.23	
	Maternal Negative Affect and Behavior	.02	
	Maternal Intrusiveness and Insensitivity	.14	
	Step 3		.146
	Infant Sex	-.10	
	Cumulative Risk	-.01	
	Maternal Involvement and Verbalization	.23	
	Maternal Negative Affect and Behavior	.07	
	Maternal Intrusiveness and Insensitivity	.09	
	Infant Frustration	.32*	
	Infant Fear	-.07	
	Step 4		.152
	Infant Sex	-.10	
	Cumulative Risk	-.01	
	Maternal Involvement and Verbalization	.24	
Maternal Negative Affect and Behavior	.06		
Maternal Intrusiveness and Insensitivity	.09		
Infant Frustration	.31*		
Infant Fear	-.08		
Infant Frustration X Fear	.03		

Note: All values are based on regression analyses conducted after multiple imputation was utilized to estimate missing data.

Conclusion

- The current study expands on research examining NE and fine-grained aspects of NE and subsequent child behavioral problems
- Infant frustration, but not infant fear, was associated with heightened toddler externalizing problems, suggesting that although high frustration may increase risk for externalizing problems, fear does not appear to act as a protective factor in the present study
- The nonsignificant interaction suggests that a temperament profile characterized by high fear, despite frustration levels, does not decrease the risk for externalizing problems, findings inconsistent with some other studies⁵
- Future studies should replicate the present study using varied samples, given that another study that noted fear as a buffer against developing externalizing problems was conducted in a high risk sample⁵
- Although findings on fearfulness remain mixed, this study bolsters confidence that frustration is an important factor in the development of externalizing behaviors, and may remain so despite fear levels
- Clinical implications of this study include prevention efforts (e.g., parent management training) for children with elevated frustration and interventions targeting frustration for children demonstrating clinical levels of externalizing-related difficulties and elevated frustration

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