PREDICTION OF ADJUSTMENT FROM MATERNAL REPORTS AND OBSERVED BEHAVIOR

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Assessment of Temperament

- Multidisciplinary field results in inconsistencies in assessment methods
- Lacking gold standards for assessment across disciplines
- No established measure of validity

Frick, 2004; Kagan & Fox, 2006

Assessment of Temperament

Questionnaires

- Strengths
  - Cheaper, faster, easier
  - Capture consistent behavioral patterns across many contexts
- Weaknesses
  - Potential for bias
  - Down-stream from biological processes

Observed Behavior

- Strengths
  - Highly standardized and more objective
- Weaknesses
  - May require more resources
  - Snapshot of behavior
  - Also downstream

Gartstein, Bridgett, & Low, 2012; Goldsmith & Gagne, 2012; Rothbart & Gartstein, 2008

Correspondence Across Measures

- Observational and parent-report measures do not show substantial or acceptable agreement.
- Cross-method covariance is often non-significant or low to moderate in size (r = .10-.40).
- Lack of agreement may indicate:
  - Flaws in one or both methods (e.g., low reliability).
  - Fundamental differences in constructs captured.

Gagne et al., 2011; Goldsmith et al., 1991; Hayden et al., 2005; Saudino, 2009

The Current Study

① **Relations between mother-reported and observed temperament**
   - Construct Validity

② **Mother-reported and observed temperament predicting children's adjustment**
   - Criterion Validity

③ **Factors that may impact these relations**
   - Family income, maternal education & depression

Participants

- Longitudinal study
  - 306 preschoolers & female primary care givers
  - 50% female children, 64% European American
  - Flat distribution across income levels
- Recruited from preschools, co-ops, daycares
- 4 assessments conducted in the lab
  - Once every 9 months
  - Age at Time 1: 36-39 mo.

Measures: Reactivity

- Maternal Report:
  - Children's Behavior Questionnaire
    - Fear & Frustration Subscales
- Observed Behavior:
  - Fear Eliciting Task
    - Scary Object (Jumping Spider)
  - Frustration Eliciting Task
    - Blocked Goal (Locked Box)

Measures: Regulation

- Maternal Report:
  - Children's Behavior Questionnaire
    - Attention Focusing & Inhibitory Control Subscales
- Observed Behavior:
  - Attention Regulation
    - Auditory Attention (NEPSY II)
    - Dimensional Change Card Sort
  - Inhibitory Control
    - Inhibition (NEPSY II)
    - Day/Night
    - Bear-Dragon
    - Head-Toes-Knees-Shoulders

Measures: Adjustment

- Maternal Report:
  - Internalizing
    - Child Behavior Checklist Subscales:
    - Anxiety & Depression
  - Externalizing
    - Child Behavior Checklist Subscales:
    - Aggression & Delinquency
  - Social Competence
    - Social Skills Rating System:
    - Cooperation, Assertiveness, Responsibility, Self-Control
- Teacher Report:
    - Social Skills Rating System

Results

- Construct Validity
- Criterion Validity
- Conditional Factors

Construct Validity: Fear Reactivity

		Mother Reported			Observed		
		Fear	Frustration	Effortful Control	Fear	Frustration	Effortful Control
Mother Reported	Fear	.5-.6**	.2-.3**	NS/-.1*	.1*	NS	NS

Construct Validity: Frustration Reactivity

	Mother Reported			Observed		
	Fear	Frustration	Effortful Control	Fear	Frustration	Effortful Control
Mother Reported Frustration	.3**	.6**	-.2-.3*	NS/.2*	NS/.1*	-.1*

Construct Validity: Effortful Control

		Mother Reported			Observed		
		Fear	Frustration	Effortful Control	Fear	Frustration	Effortful Control
Mother Reported	Effortful Control	NS/-.1*	-.3-.4**	.7*	NS/.2*	NS/-.1*	.2-.3*

Conclusions: Construct Validity

- **Emotions are harder to capture than regulation:**
  - Strong evidence for overlapping constructs captured by mother-reported and observed effortful control.
    - Effortful control is more tangible construct, more elaborately measured in this study.
- **Moms less likely to distinguish fear and frustration:**
  - Moderate correlations between mother-reported fear & frustration suggest they view children as generally reactive.
  - Moms' perceptions of fear shows some specificity with observed behavior.
  - Mom's perceptions of frustration appear to muddle both fear and frustration.

Results

- Construct Validity
- Criterion Validity
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Criterion Validity: Predicting Adjustment

	Mother-Report Adjustment			Teacher-Report Adjustment		
	Intern.	Extern.	Soc. Com.	Intern.	Extern.	Soc. Com.
Mother-Report Temp.	+ Fear + Frust EC	Fear + Frust - EC	- Fear - Frust + EC	Fear Frust EC	Fear Frust - EC	Fear Frust + EC
Observed Temp.	+ Fear Frust EC	Fear + Frust EC	Fear Frust EC	Fear Frust EC	Fear + Frust EC	Fear - Frust + EC

Conclusions: Criterion Validity

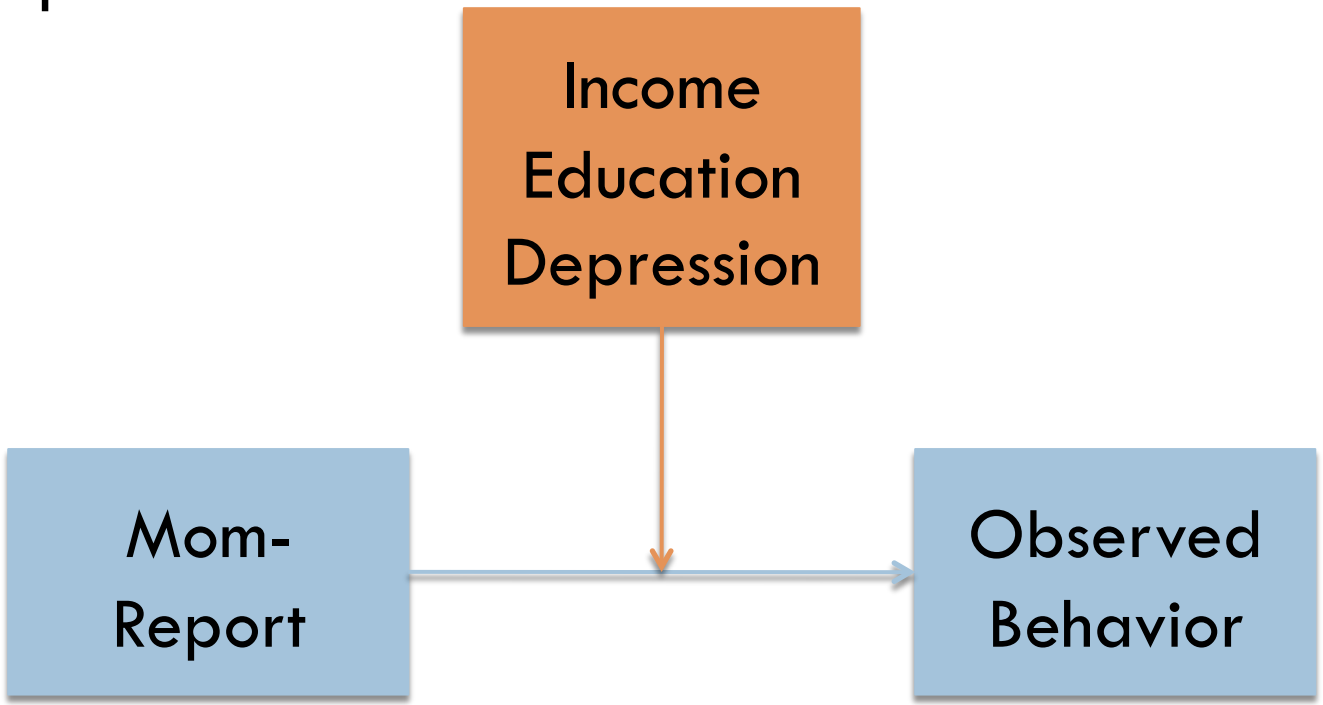
- Varying specificity in relations between temperament and adjustment:
  - Some specificity in mom's report of temperament.
    - Different patterns for internalizing, externalizing, and social competence.
  - Greater specificity in relations of observed temperament to mom's but *not* teacher's report of adjustment.
- Mothers and teachers perceive children's adjustment differently.
  - Different behaviors relevant to parents and teachers.

Results

- Construct Validity
- Criterion Validity
- Conditional Factors

Conditional Factors

- Moderation analyses tested conditional role of factors on relation between mother-reported and observed temperament.

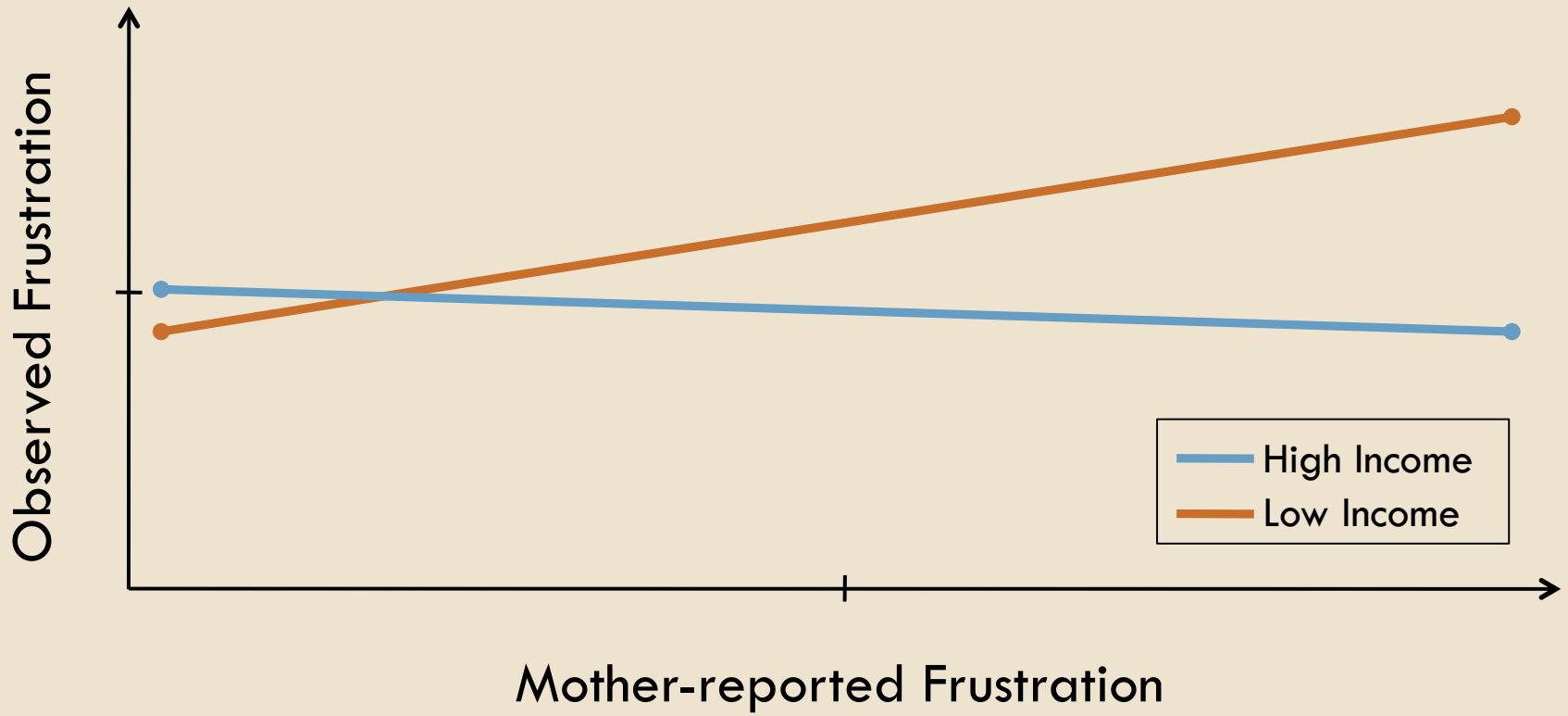


Conditional Factors

Moderation by:	Fear	Frustration	Effortful Control
Family Income	X	✓*	X

* $p \leq .05$

Income Moderates Relation between Mother-report & Observed Frustration

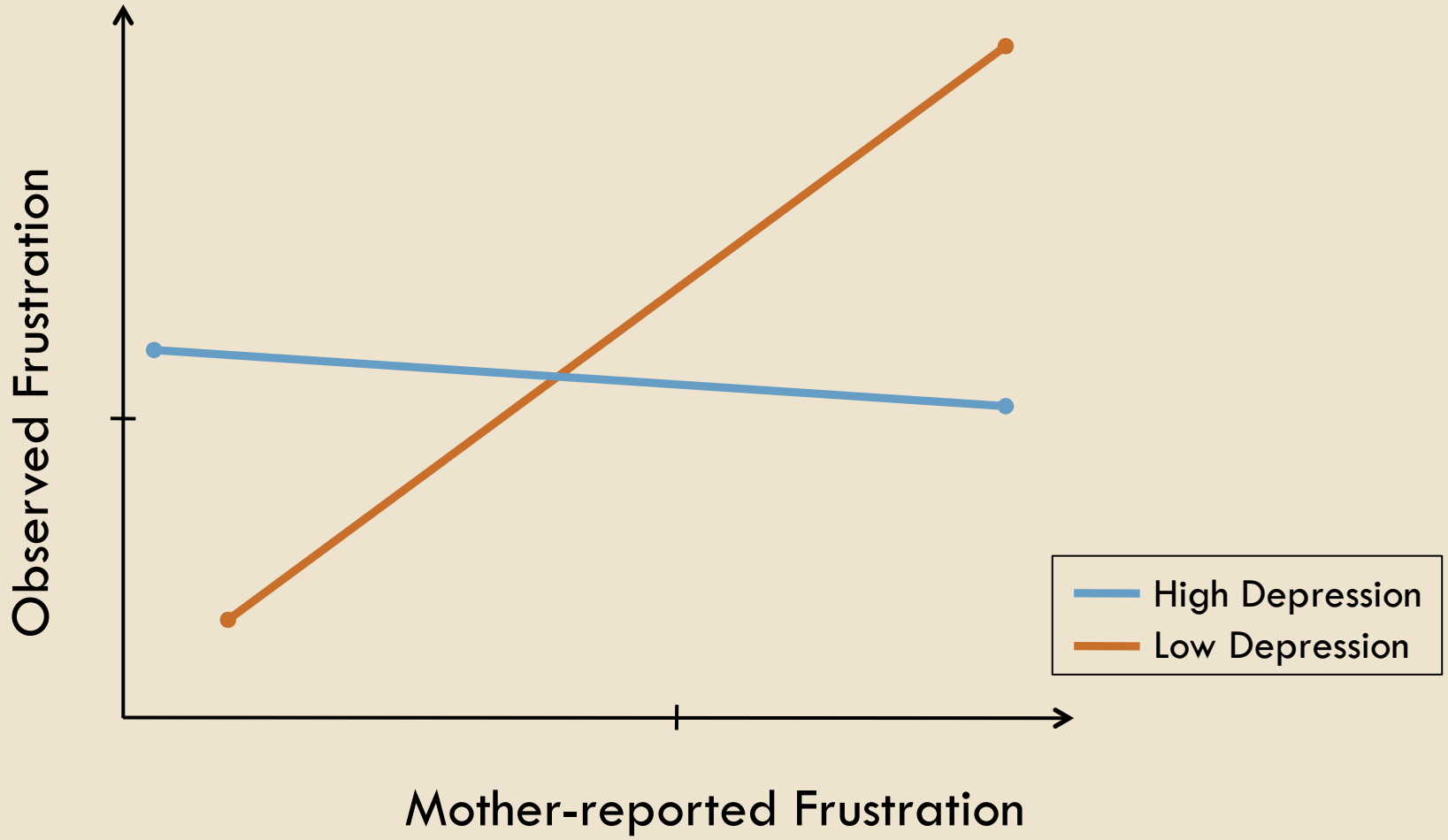


Conditional Factors

Moderation by:	Fear	Frustration	Effortful Control
Maternal Education	X	X	X
Maternal Depression	X	✓ł	X

ł $p \leq .08$

Income Moderates Relation between Mother-report & Observed Frustration



Conclusions

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Conclusions

① Relations between mother-reported and observed temperament:

- Construct Validity

- Strong evidence for consistency across measures of effortful control.
- Reactivity is harder for both moms and labs to capture.
- Mother-report and observed frustration, particularly, may capture different aspects of reactivity.

Conclusions

② Mother-reported and observed temperament predicting children's adjustment

- Criterion Validity

- Shared method variance may bias moms' reports – but not completely.
- Observed measures show more specificity in predicting children's adjustment.
- Temperament relates differently to adjustment depending on if moms vs. teachers are reporting.

Conclusions

③ Factors that may impact these relations

- Family income, maternal education & depression

- Associations between measures of frustration were:
  - Stronger for low-income and weaker for high-income children.
  - Much weaker when mothers were experiencing high depression.

Implications

- Continued research using multi-method assessments of temperament are needed to clarify relations.
  - Identify indices of validity.
- Important to consider factors that may reduce the validity of reports (e.g., income, maternal depression).
- Collecting measures across various modalities, with expectation that relations may be modest at best, may provide a more thorough and valid approach to measuring children's temperament.

Hubbard et al., 2004

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