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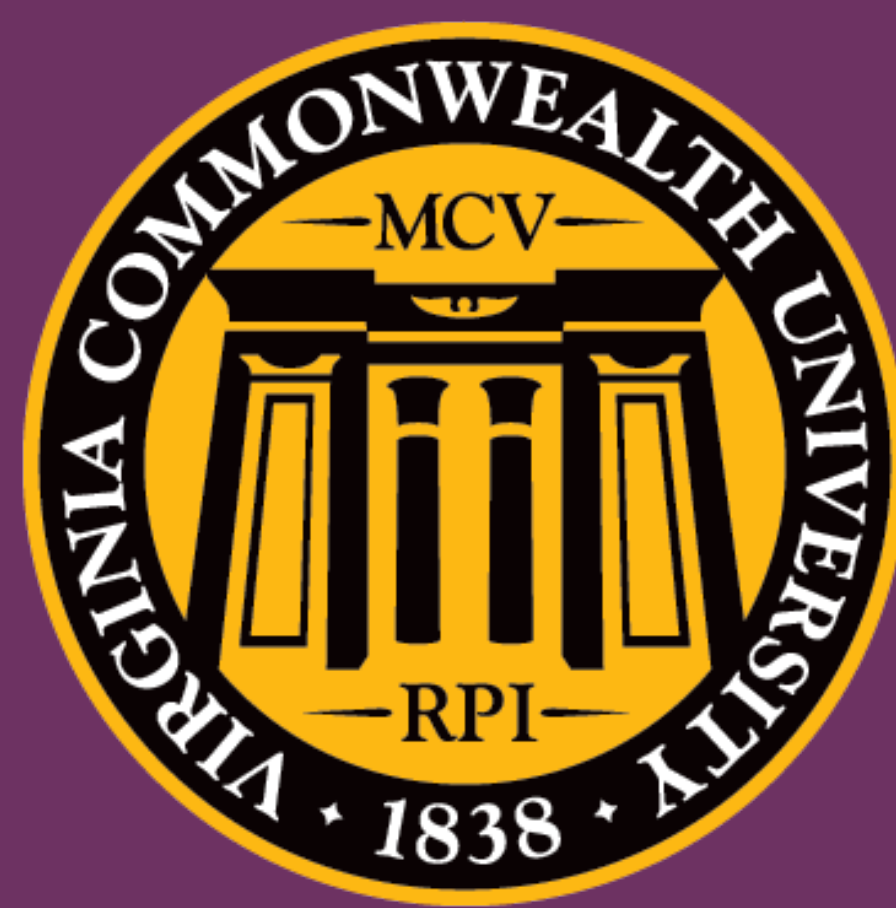
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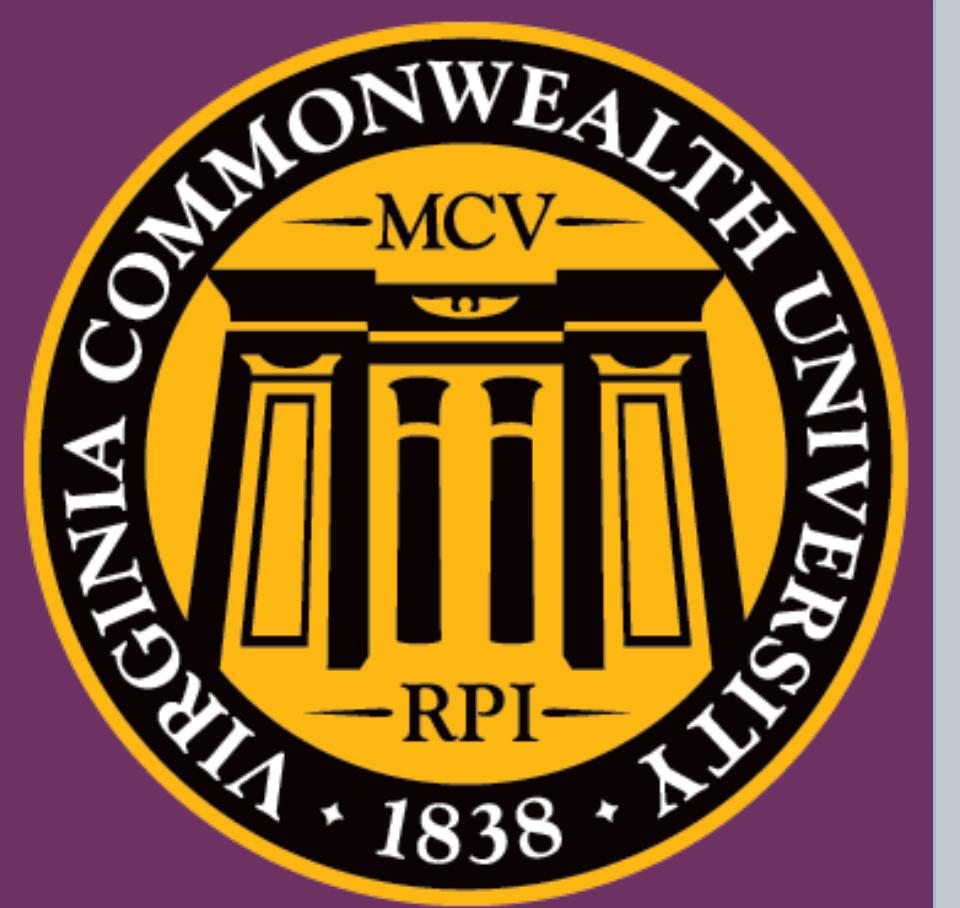
Critical Parenting's Role in Asthma Severity:

How Does a Child's Emotional and Behavioral Adjustment Matter?

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INTRODUCTION

- The family is an essential contributor to child development, especially in contexts of chronic illness. As our understanding of asthma etiology has advanced over time, the importance of the role of the family has consistently been observed in the onset and maintenance of asthma symptoms (Kaugars et al., 2004).
- Studies have found that negative family environments predict greater asthma symptom severity (e.g., Wood et al., 2006). For example, parenting difficulty when a child was three weeks old significantly predicted asthma onset and later child immunological functioning (Klinnert et al., 2001).
- Internalizing symptoms may reflect emotion dysregulation that can promote airway constriction and exacerbate asthma symptoms (Miller & Wood, 2003). Wood et al. (2006) found that children with more negative family climates were more depressed than those in positive family environments; depression was also linked with asthma severity.
- Relations between internalizing and asthma symptoms may vary depending on whether asthma symptoms are reported subjectively or objectively (Winter et al., 2011) and it is unclear whether parents are accurate reporters of children's asthma severity (Ungar et al., 2007; Yoo et al., 2007).

AIMS

- To assess the indirect impact of maternal rejection/critical parenting on children's asthma severity via child internalizing symptom levels, over and above any effects of family SES, child age, and medication adherence.
- To examine whether this proposed pathway is supported for objectively measured lung functioning.
- To identify whether these indirect effects of maternal rejection/critical parenting on child asthma severity apply to parent-reported lung functioning.

HYPOTHESES

- Children in families characterized by more rejection/criticism will have significantly more severe asthma symptoms.
- The effects of greater maternal rejection on poorer pulmonary functioning will be mediated by increased child internalizing symptoms.
- Results may differ depending on whether asthma severity is measured via parent report or objective pulmonary functioning.

METHODS

Participants

- 215 children with asthma, aged 5-12 (M = 7.86, SD = 2.18) and their families participated.
 - 101 children (53 %) were Caucasian and 114 (47 %) Non-White Minorities
 - 79 children (36.7 %) were males and 136 (63.3 %) females
 - 35.3 % of children lived in single-parent households

Measures

- Child Behavior Checklist (CBCL) Parent Form:
 - T-scores for CBCL internalizing were calculated for this study's purposes
- Childhood Asthma Severity (CHAS) Parent Report:
 - 14 items assessing the child's asthma symptom severity over the past year ($\alpha = .75$)
- Objective lung Functioning: PDS 313100-WSU KOKO Spirometer
- Maternal Rejection
 - Parent-child interactions were videotaped and coded with the System for Coding Interactions and Family Functioning (SCIFF; Lindahl & Malik, 1996)
 - Rejection coded on a 1 to 5 scale based on rude, dismissive, critical, blaming, or insulting comments to child: 1 = Not at all rejecting, 5 = High maternal rejection/criticism
- Medication Adherence (number of doses taken over doses prescribed daily over a six-week period).
- Hollingshead Socioeconomic Status

Procedure

- Children and their primary caregivers were recruited through pediatric clinics in a medical school/teaching hospital.
- Children and caregivers completed measures in a laboratory setting
- Parent and child were asked to complete a 15-minute, videotaped interaction task: construct a family crest together
- Pulmonary functioning was tested via spirometry and later interpreted by a pediatric pulmonologist.

Figure A) Frequencies of Maternal Rejection

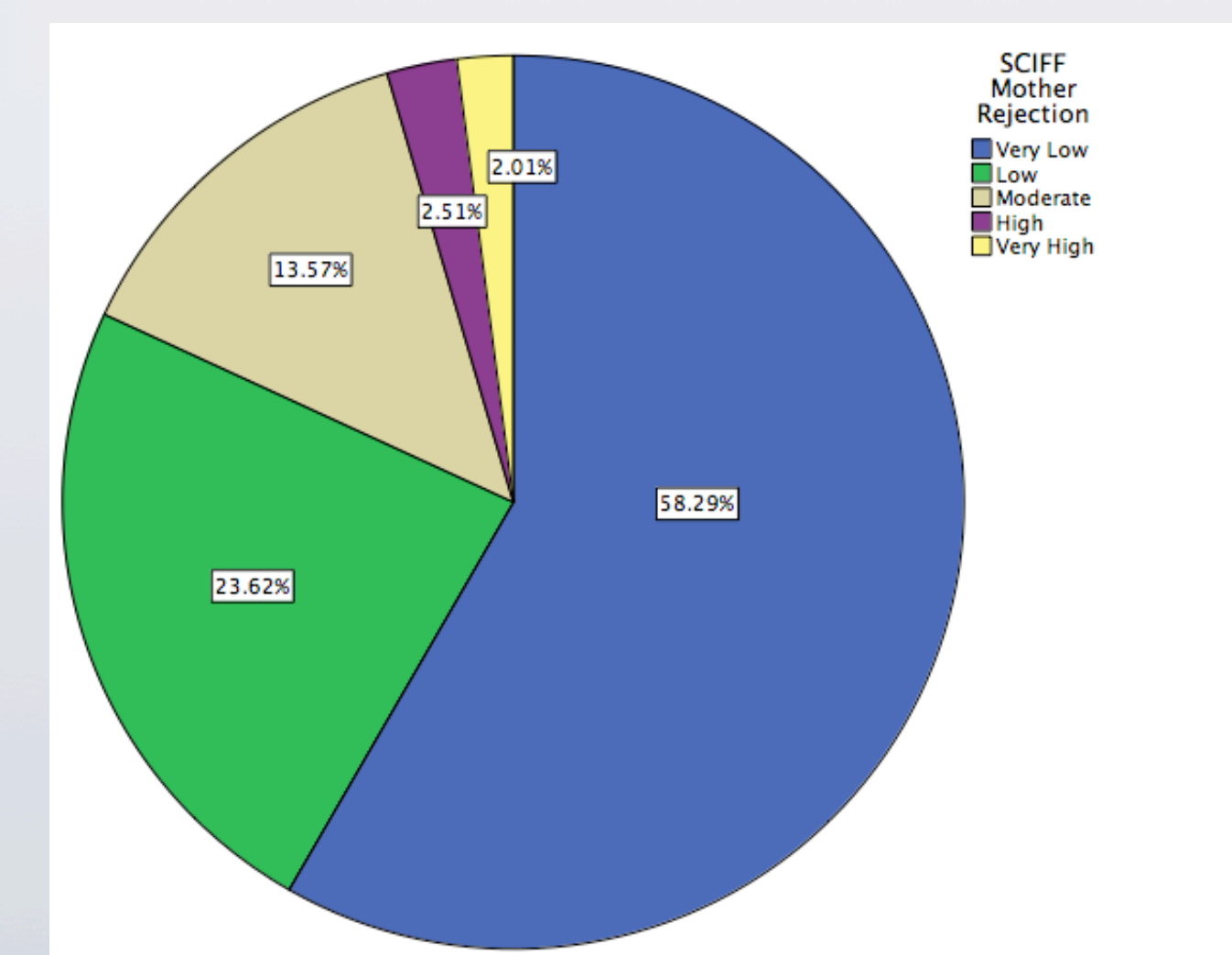
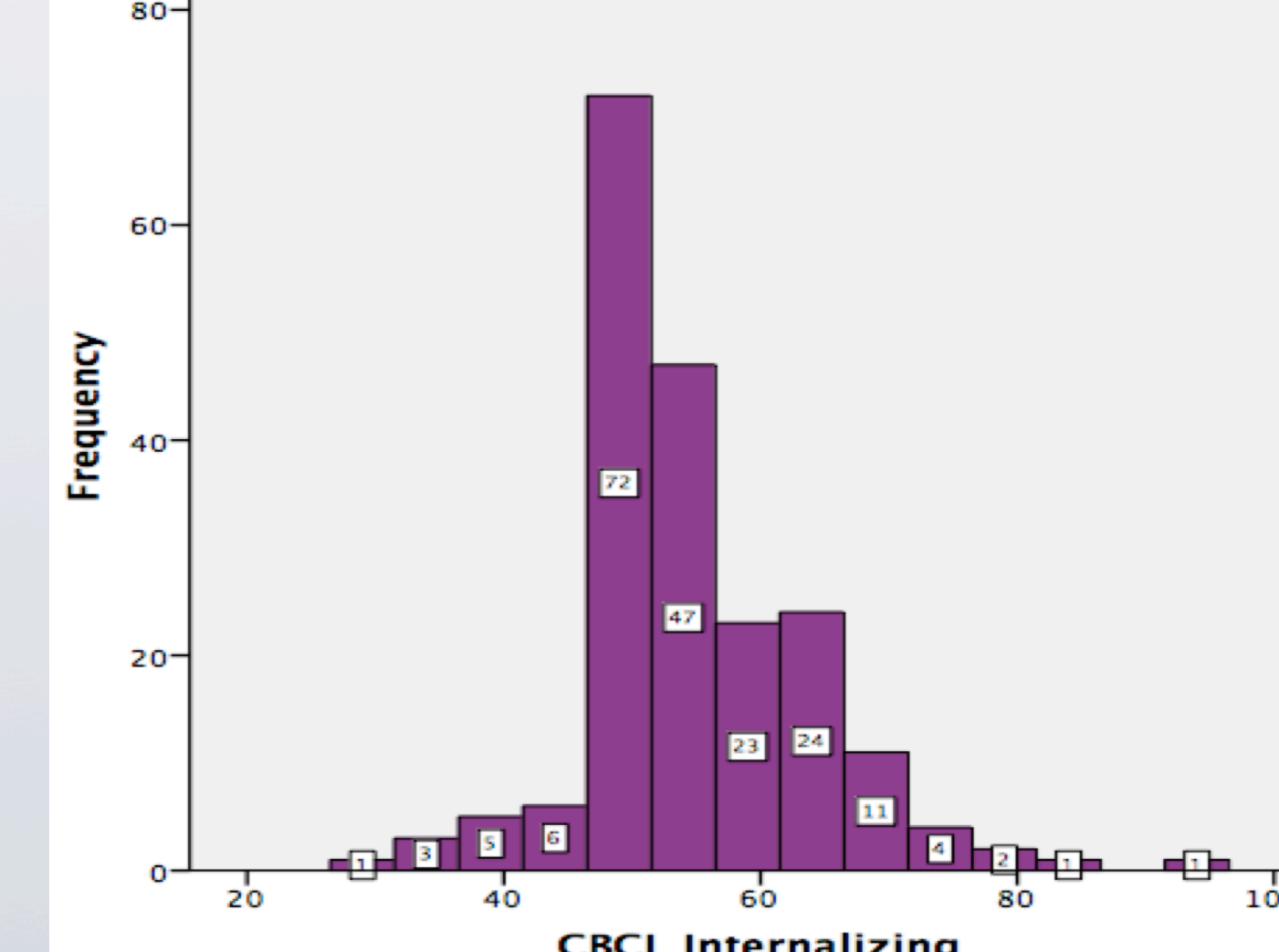


Figure B) CBCL Internalizing Distribution



RESULTS

- We conducted bootstrapping analyses, with 5000 samples, to examine the indirect effect of maternal rejection/criticism on pulmonary functioning via child internalizing symptoms, while controlling for child age, SES, and adherence, using the PROCESS SPSS Macro (Hayes, 2013).
- The estimate of the indirect effect between maternal rejection/criticism and *objective* lung functioning was supported, with a point estimate of $-.03$ (SE = $.02$; 95% CI = $-.0846$ to $-.0007$).
- The estimate of the indirect effect between maternal rejection/criticism and *subjective/parent-reported* lung functioning was *not* supported; point estimate $-.12$ (SE = 0.11 ; 95% CI = $-.4332$ to $.0102$).

RESULTS

Figure C) Direct relationship of X→Y

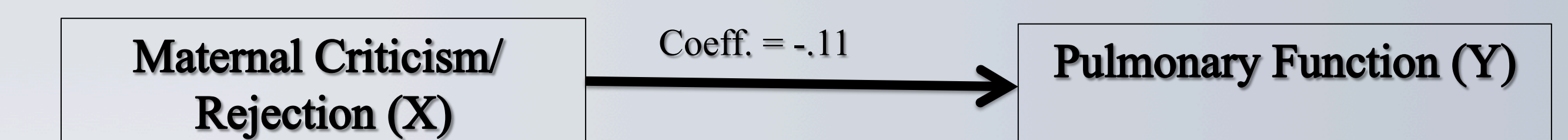
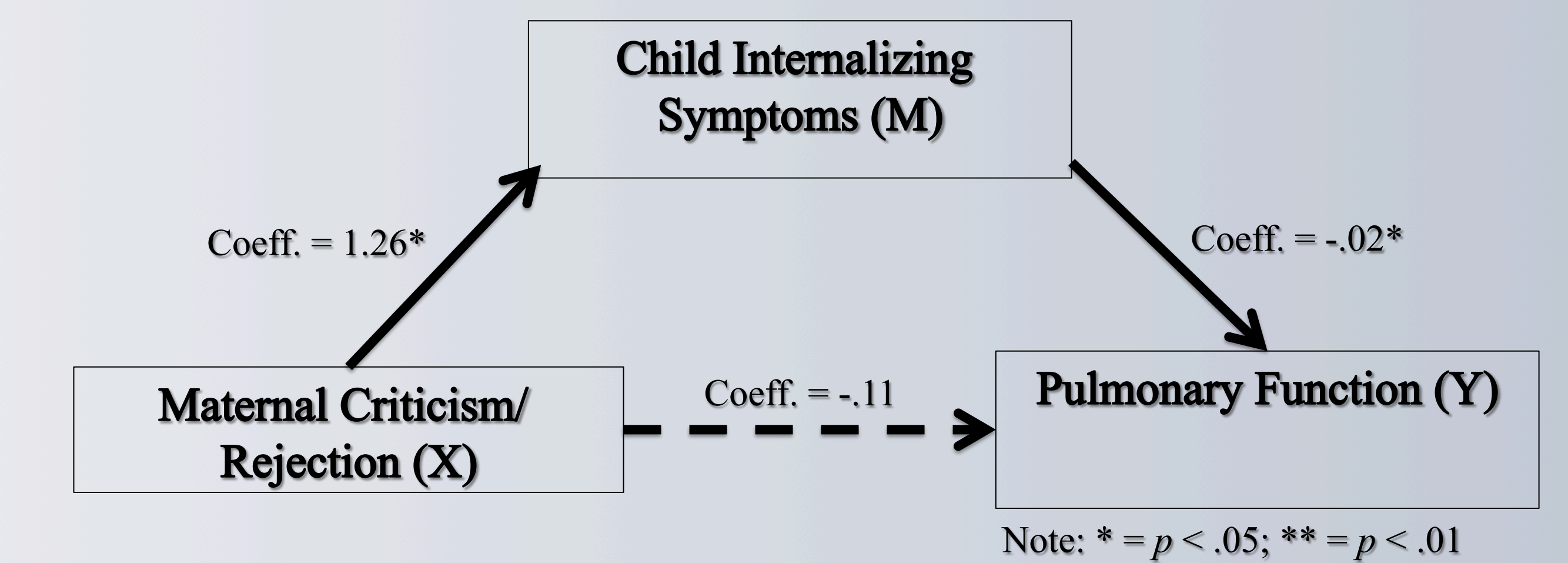


Figure D) Indirect relationship of X→Y Mediated by M



DISCUSSION

- Results support a theorized pathway in which critical parenting indirectly affects a child's lung functioning by increasing his/her internalizing symptoms.
- These findings only apply to objective physiological measures of asthma severity, perhaps supporting past findings of parents underestimating their child's asthma symptoms (Yoo et al., 2007).
- Proposed psychological interventions include helping families understand connections between emotional and physical well-being, reducing critical parenting behavior, and treating child internalizing symptoms.
- Future research should examine these indirect effects longitudinally and incorporate child-reported measures of asthma severity.

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