Journal of Family Psychology

Cumulative Socioeconomic Status Risk and Observations of Parent Depression: Are There Associations With Child Outcomes?

Alexandra D. Sullivan, Renee Benoit, Nicole L. Breslend, Allison Vreeland, Bruce Compas, and Rex Forehand

Cumulative Socioeconomic Status Risk and Observations of Parent Depression: Are There Associations With Child Outcomes?

Alexandra D. Sullivan, Renee Benoit,
and Nicole L. Breslend
University of Vermont

Allison Vreeland and Bruce Compas
Vanderbilt University

Rex Forehand
University of Vermont

Parental depression (Goodman et al., 2011) and low socioeconomic status (SES) are important risk factors for child maladjustment. Further, depression and low SES are linked; low SES adults are more likely to experience depression. Whereas studies commonly covary out noise associated with SES variability, research on the association of SES with child outcomes after controlling for parental depression is limited. This study aimed to extend the literature by observing parent depressive affect and evaluating the relationship between cumulative SES risk and child problems as well as whether child gender moderates this association using multigroup nested model comparisons. Findings suggested that cumulative SES risk status explained significant variance in child- and parent-reported internalizing problems and parent-reported externalizing problems after accounting for observed parent depressive affect. Of importance, child gender moderated 2 of these significant findings (i.e., child-reported internalizing and parent-reported externalizing behaviors), such that girls, but not boys, were at higher risk of problems in the context of high cumulative SES risk.

Keywords: cumulative SES risk, parent depression, child internalizing, child externalizing, gender

Parent depression is a well-established risk factor for child maladjustment, and it is related to both child internalizing and externalizing problems at similar magnitudes (Goodman et al., 2011). Further, children's risk of these negative outcomes, particularly depression, may persist across the life span (Plant, Pariante, Sharp, & Pawlby, 2015; Weissman et al., 2016), establishing parent depression as an important risk factor for poor child outcomes. However, research suggests that additional contextual factors may account for some of the difficulties presented to children of depressed parents. In particular, in their recent meta-analysis on the relationship between parent depression and child outcome,

Goodman and colleagues (2011) highlighted the importance of considering socioeconomic status (SES).

Depression and low SES are linked: Meta-analytic evidence indicates that low-SES adults are more likely to experience depression relative to those of higher SES and, whereas some evidence indicates that depression predicts low SES, more evidence indicates that SES precipitates depression (e.g., Lorant et al., 2003). Further, SES may account for some of the variability in child maladjustment in the context of parent depression (Mikkonen, Moustgaard, Remes, & Martikainen, 2016), suggesting that parent depression may share its detrimental effects with impacts of low SES. As the clinical and policy implications of treating a parent with depression versus supporting a parent of low SES differ, it is important to pinpoint the precise risk factors predicting child maladjustment in order to facilitate effective prevention and intervention efforts. Therefore, the primary purpose of this study was to investigate the roles of low SES and parent depression in predicting child well-being in a sample of families in which at least one parent has a history of depression. In line with research calling for further investigation of moderators of the relationship between risk and child outcome (Evans, Li, & Whipple, 2013), we also examined child gender as a moderator of the relationship between SES risk and child maladjustment.

Many diverse, interrelated factors make up SES (e.g., family income, parent education level), making SES a complex sociocultural construct to operationalize (Huston & Bentley, 2010; Jones et al., 2016). Given the heterogeneity of factors involved in SES, one potential method of studying this construct is using a cumulative

risk scale. Cumulative risk indices transform a broad, heterogeneous group of risk factors into a translatable scale. In the creation of a cumulative risk scale, researchers identify theoretically meaningful cutoff points (e.g., family income below the poverty line), dichotomize variables, and sum them in order to assess how many risks with which each family copes. As some research indicates the accumulation of SES indicators confers more risk than singular factors (Huston & Bentley, 2010), a focus on *cumulative* SES risk may be particularly relevant to understanding the implications of poverty on childhood outcome. Cumulative risk literature indicates that children subjected to minimal numbers of risks typically exhibit minimal negative outcomes (e.g., Appleyard, Egeland, van Dulmen, & Sroufe, 2005; Atkinson et al., 2015; Felitti et al., 1998). However, children are likely to experience increased maladjustment in the context of multiple, co-occurring risk factors, including markedly elevated internalizing and externalizing problems (for a review, see Evans et al., 2013). Consequently, the use of a cumulative risk scale is well suited to better understanding the relationship between the complex, multifaceted construct of SES and child outcome (Huston & Bentley, 2010), particularly when a child is embedded in a low-SES family context in which a parent also has a history of depression.

Psychologists posit that exposure to stressful environments (e.g., low SES) is a risk factor for the transmission of depression and other disorders among children of depressed parents (Beardslee, Gladstone, & O'Connor, 2011; Goodman & Gotlib, 1999). Whereas studies commonly control for SES, research on the additive effects of SES to parent depression predicting child outcome is limited. Barker, Copeland, Maughan, Jaffee, and Uher (2012) found that cumulative risk predicted child maladjustment, even when accounting for parent-reported maternal depression, suggesting that cumulative risk contributes to child well-being above and beyond the influence of maternal depression. Further, although their measure of cumulative risk accounted for factors related to, but outside of, the conceptualization of SES (e.g., maternal substance abuse), many of the risk factors identified (e.g., single parent status, low income, low educational attainment) pertained to low SES. However, Barker and colleagues used a population-based sample rather than a sample with a history of depression, and SES may contribute differently to our understanding of child outcome in the context of parent depression. Taken together, extant research indicates that low SES, particularly when measured cumulatively, and parent depression are each important predictors of child maladjustment and should be further researched in conjunction. In addition, low SES may uniquely account for some of the variance in child problems above and beyond the influence of parent depression. However, such a model remains unexamined in the context of parents who have a history of depression.

To date, most research assesses parent depression using two methods: self-report (e.g., Beck Depression Inventory [BDI-II]; Beck, Steer, & Brown, 1996) or interview (e.g., Structured Clinical Interview for DSM–5 [SCID-V]; First, Williams, Karg, & Spitzer, 2015; Goodman et al., 2011). However, such measures may represent only some aspects of parents' depression, as research investigating self-report data indicates that depressive symptoms are often underreported (e.g., Hunt, Auriemma, & Cashaw, 2003), whereas race, class, and gender may bias clinicians in their assessment of psychopathology, including depression (Garb, 1997). In fact, recent research indicates that as parent depressive symptoms increase and SES decreases, the discrepancy between parent self-report and behavioral observations increases for one area of family functioning (i.e., parenting; Herbers, Garcia, & Obradović, 2017). Particularly when examining SES factors in concordance with parental depression, using behavioral observations of parental affect and behavior may offer a uniquely valid perspective on depressive symptoms to which children are regularly exposed. Thus, this investigation used observational data on parent–child interactions to operationalize parental depressive symptoms.

Extant research supports the construct and external validity of using behavioral observations of parental depression to better understand how parental psychopathology relates to child outcomes. Research using observations of depressed mothers suggests that sadness, dysphoria, and low affective involvement characterize their interactions with their children (Chiariello & Orvaschel, 1995; Jaser et al., 2008). Further, observations of maternal sadness and low positive mood, elements of depression, have been associated with child internalizing (Jaser et al., 2008) and externalizing problems (Foster, Garber, & Durlak, 2008). Foster and colleagues (2008) found that observed low positivity partially mediated the relationship between current maternal depressive symptoms and child externalizing problems, highlighting that the low-positivity depressed parents experience and display may play a central role in *why* these children have poor outcomes. Accordingly, observing parent–child interactions and evaluating displays of parental sadness and low mood, behavioral indicators of parental depression, may closely map on to child problem behaviors. This facet of parental depression may thus validly aid in disentangling the relationship between parental depression and child adjustment.

Whereas cumulative SES risk may predict child outcomes above and beyond the influence of observed parent depression, other variables may qualify the relationship between this risk variable and child outcome. In their literature review of 196 studies on the relationship between cumulative risk and child outcome, Evans and colleagues (2013) highlighted the need to explore potential moderators of cumulative risk. They highlighted child gender as a valuable target for research, given its differential relationship with child internalizing and externalizing problems (Zahn-Waxler, Crick, Shirtcliff, & Woods, 2015). Further, past research examining child outcome in the context of parent depression has emphasized the importance of considering child gender (Gruhn et al., 2016), as girls may be at higher risk of developing depression in the context of parental depression (Goodman et al., 2011; Hankin, Mermelstein, & Roesch, 2007).

Some research has examined various indicators of SES, typically in isolation (e.g., family income or being eligible for reduced-fee lunches), as a predictor of child internalizing and externalizing outcomes in girls versus boys. However, both narrative review and meta-analytic evidence highlight the inconsistency of these relationships (Korous, Causadias, Bradley, & Luthar, 2018; Wadsworth, Evans, Grant, Carter, & Duffy, 2016). A complex interplay of genetic, familial, and sociocultural processes facilitates the development of gender differences such that boys often exhibit elevated externalizing problems (e.g., Korous et al., 2018), whereas girls are prone to internalizing problems (Zahn-Waxler et al., 2015). From a diathesis-stress perspective (Roisman et al., 2012), it may be the case that these gendered developmental psychopathological processes are intensified in low-SES environments. Accordingly, gender may interact differently with ele-

vated cumulative SES risk, such that boys experiencing elevated cumulative SES risk may display elevated externalizing problems, and girls in similar contexts may display elevated internalizing problems.

This study aimed to investigate the relationship between cumulative SES risk and child outcomes in the context of an observed measure of parent depression (i.e., a composite of observed parent sadness and low positive mood). We hypothesized that, in an at-risk sample of parents with a history of depression, the addition of cumulative SES risk to a measure of observed parent depressive affect would account for unique variance in child internalizing and externalizing problems. In addition, we examined whether the relationship between cumulative SES risk and child outcome differed by gender using a multigroup path analysis framework, hypothesizing that elevated cumulative SES risk would be associated with elevated externalizing problems among boys and internalizing problems among girls.

Method

Participants

This study was a secondary analysis of baseline data from a previous study of a prevention intervention program of 242 children from 180 different families in which a parent has a history of depression (see Compas et al., 2015). For the purposes of this study, in families with multiple children, one child was randomly selected for study analyses, resulting in a sample of 180 children (49.4% females; M_{age} = 11.46 years, SD = 2.00). Families were recruited from the Burlington, Vermont, and Nashville, Tennessee, areas. Target parents were typically female (88.9%; M_{age} = 41.96 years), and a notable minority of the sample had college degrees (31.7% with 4-year college degree). Whereas all families included at least one parent who had a history of major depressive disorder (MDD), at baseline, 26.7% of the target parents reported currently experiencing a depressive episode. On average, target parents reported mild levels of depression, with high variability (BDI-II scores: M = 18.97, SD = 12.20). Most children were White; however, 25.6% of the sample identified as a racial minority. U.S. Census data from 2000 indicated that the sample was representative of the regions from which it was drawn.

Procedure

All study procedures received institutional review board approval. Families were recruited using flyers, newspaper and radio advertisements, and physician referrals. Parents who expressed interest were first screened over the telephone, then administered the Structured Clinical Interview for DSM–IV (SCID-IV; First, Spitzer, Gibbon, & Williams, 1997) in person to determine eligibility. Parents with a history of MDD during the lifetime of the target child(ren) met inclusion criteria. Parents were excluded if they had a history of bipolar I disorder, schizophrenia, or schizoaffective disorder (see Compas et al., 2015 for additional detail).

Youth aged 9 to 15 years old were eligible if they were free of lifetime diagnoses of autism spectrum disorders, intellectual disability, bipolar I disorder, and schizophrenia, and if they did not currently meet criteria for MDD, conduct disorder, or alcohol/substance use disorders (see Compas et al., 2015 for details on

training pertinent to conducting diagnostic interviews), as determined by the Schedule for Affective Disorders and Schizophrenia for School-Age Children—Present and Lifetime Version (Kaufman et al., 1997). When youth met criteria for current MDD at the initial screening, the family was deferred, given appropriate referrals, and rescreened at 2-month intervals.

Measures

Demographic information. Target parents and youth provided demographic information about themselves (e.g., age and education) and their families (e.g., household income).

Observed parent depressive affect. At baseline, two 15-min interactions between the parent with a history of MDD and the target child were video recorded. A global coding system, the Iowa Family Interaction Rating Scales (IFIRS; Melby et al., 1998), was used to code these interactions. First, the target parent and child discussed a pleasant activity they had participated in together within the past few months (e.g., going on family vacation). Next, the dyad was recorded discussing a difficult time for the family when the target parent was depressed, down, or irritable (e.g., mother had a bad day at work and was upset).

The IFIRS measures behavioral and emotional characteristics at both the person and dyad level. Behaviors and emotions are coded on a 9-point scale, in which a score of "1" indicates that the behavior or affect was *not* present and a "9" indicates it *was* present during the interaction. The frequency and intensity, as well as the contextual and affective nature of the behavior, are considered in determining the score for each code. The validity of the IFIRS system has been established using correlational and confirmatory factor analyses (Alderfer et al., 2008; Melby & Conger, 2001). The training and reliability process for the IFIRS is described in Compas et al. (2010). The current study used a composite code to capture parent depressive affect. Interrater reliability prior to consensus coding for the IFIRS composite codes, as indexed by an average ICC, was 0.73 across both the discussion of a pleasant activity and the discussion of a difficult time.

Following procedures used previously with the IFIRS codes (e.g., Melby et al., 1998), scores were averaged across the two 15-min interactions for each code, and then a composite code was created for depressed parent affect (possible range = 2–18) that reflected observed ratings of parent sadness (i.e., speaking in a low, slow tone; becoming tearful; being withdrawn) and the *inverse* of positive mood (i.e., smiling; positive involvement; body posture).

Parent depression. To investigate the external validity of the observations of depressed parent affect, we used (a) diagnoses from the SCID-IV mood disorder module (First et al., 1997), and (b) scores from the BDI-II (Beck et al., 1996). The BDI-II is a 21-item, self-report measure with a 4-point scale ranging from 0 to 3. The BDI-II has demonstrated adequate internal consistency and validity in distinguishing the severity of current MDD (Beck, Steer, Ball, & Ranieri, 1996; Steer, Brown, Beck, & Sanderson, 2001; α = .94).

Cumulative socioeconomic status risk. We dichotomized and summed measures of family income (i.e., below $25,000 per year = 1), household use of public assistance (e.g., Med-

Table 1
Correlations and Descriptives Among Cumulative Risk Indices

Variable	M	SD	1	2	3	4
1. Income below $25,000 year	.24	.43	—			
2. Single parent	.38	.49	.44**	—		
3. Teenage parent	.08	.27	.19*	.11	—	
4. Use of public assistance	.33	.47	.49**	.33*	.15	—
5. High school degree or less	.14	.35	.24**	.13	.24**	.25**

* $p < .05$.   ** $p < .01$.

icaid, Supplemental Security Income; 0 = no, 1 = yes), education (i.e., high school degree or less = 1), single-parent status (0 = no, 1 = yes), and teen parent status (i.e., at the time of the child's birth, the parent was more than 20 years old [0] or less than 20 years old [1]) to create a 5-point cumulative SES risk scale. As 16.11% of parents were missing data on one measure of SES, and 1.11% of parents were missing data on two measures of SES, a proportion scale was then generated, in which we divided the number of present risks by the number of total possible risks for which each participant had data, creating a continuous cumulative SES risk scale. For example, if a parent only had data on four of the five possible risks, and they endorsed three of those risks, they would have a cumulative SES risk score of .75.

Child internalizing and externalizing problems. Parents completed the Child Behavior Checklist (CBCL) and children completed the Youth Self Report (YSR; Achenbach & Rescorla, 2001). These measures included 118 items assessing a wide range of problem behaviors in children that parents and children rate as *not true* (0), *somewhat or sometimes true* (1), or *very true* (2). The CBCL and YSR each have substantial reliability and validity data (e.g., Achenbach & Rescorla, 2001). The subscales representing internalizing and externalizing problems were used from each measure. The alpha coefficients were .91 (YSR) and .85 (CBCL) for internalizing problems, and .84 (YSR) and .84 (CBCL) for externalizing problems.

Data Analytic Plan

Does cumulative SES risk account for unique variance in child outcome? We conducted hierarchical regressions using SPSS 24.0 to assess whether cumulative SES risk explained unique

variance in child internalizing and externalizing problems above and beyond observed depressed parent affect. Approximately two percent of data was missing for reports of child problems, and six percent was missing for observations of parents' depressive affect. Graham (2009) suggests that missing data at levels of approximately 5% are unlikely to bias findings. In addition, Little's missing completely at random (MCAR) test was nonsignificant, $\chi^2(25) = 22.60$, $p = .60$, suggesting that data were MCAR. Therefore, we used listwise deletion to handle missing data for analyses in SPSS 24.

First, we entered demographic controls of child age and gender in Block 1, observed depressed parent affect in Block 2, and cumulative SES risk in Block 3. To account for skew of the cumulative SES risk scale, regressions were bootstrapped 5,000 times, and we present unstandardized coefficients, bias, bootstrapped standard errors, bias-accelerated and corrected (BCa) 95% confidence intervals, and R^2 change statistics. According to Preacher, Rucker, and Hayes (2007), BCa intervals lacking a zero reflect significant effects.

Does the relationship between cumulative SES risk and child outcome differ across child gender? To test for child gender moderation, we conducted multigroup path analysis nested model comparisons in Mplus 8.1 (Muthén & Muthén, 1998–2017). As missing data in this series of analyses were accounted for using maximum likelihood estimation with robust standard errors, we used Satorra-Bentler scaled chi-square values for the comparisons (Satorra & Bentler, 2001).

First, we obtained correlation coefficient estimates for child age by observed parent depression and cumulative SES risk from just-identified models. Then, these estimates were used to free eight degrees of freedom to allow for nested model comparisons. We then obtained chi-square values, scaling factors, and degrees of freedom from models first constraining then freeing the cumulative SES Risk → Child Problems path across gender. If restricting the cumulative SES Risk → Child Problems path across gender resulted in a significant decrease in model fit, there would be evidence for gender moderation.

Whereas we used Satorra-Bentler scaled chi-square values to assess moderation, we evaluated overall model fit using Hu and Bentler's (1999) recommended fit statistics: chi-square (χ^2; $p >$ .05 excellent), comparative fit index (CFI; >.90 acceptable, >.95 excellent), root mean square error of approximation (RMSEA; <.08 acceptable, <.05 excellent), and the standard-

Table 2
Correlations and Descriptives

Variable	M	SD	1	2	3	4	5	6	7
1. Child's gender	1.49	.50	—						
2. Child's age	11.46	2.00	.10	—					
3. Observed depressed parent affect	10.01	1.80	.01	.06	—				
4. Cumulative SES risk	.23	.26	.09	−.05	.34**	—			
5. CBCL child externalizing	9.74	8.22	.11	−.01	.23**	.25**	—		
6. CBCL child internalizing	11.80	7.85	.09	.04	.14	.25**	.53**	—	
7. YSR child externalizing	9.53	6.98	−.04	.15*	.21**	.15*	.47**	.27**	—
8. YSR child internalizing	13.57	9.50	.09	.02	.15	.24**	.41**	.42**	.73**

Note. Gender was coded such that 1 represents boys and 2 represents girls. SES = socioeconomic status; CBCL = Child Behavior Checklist; YSR = Youth Self Report.
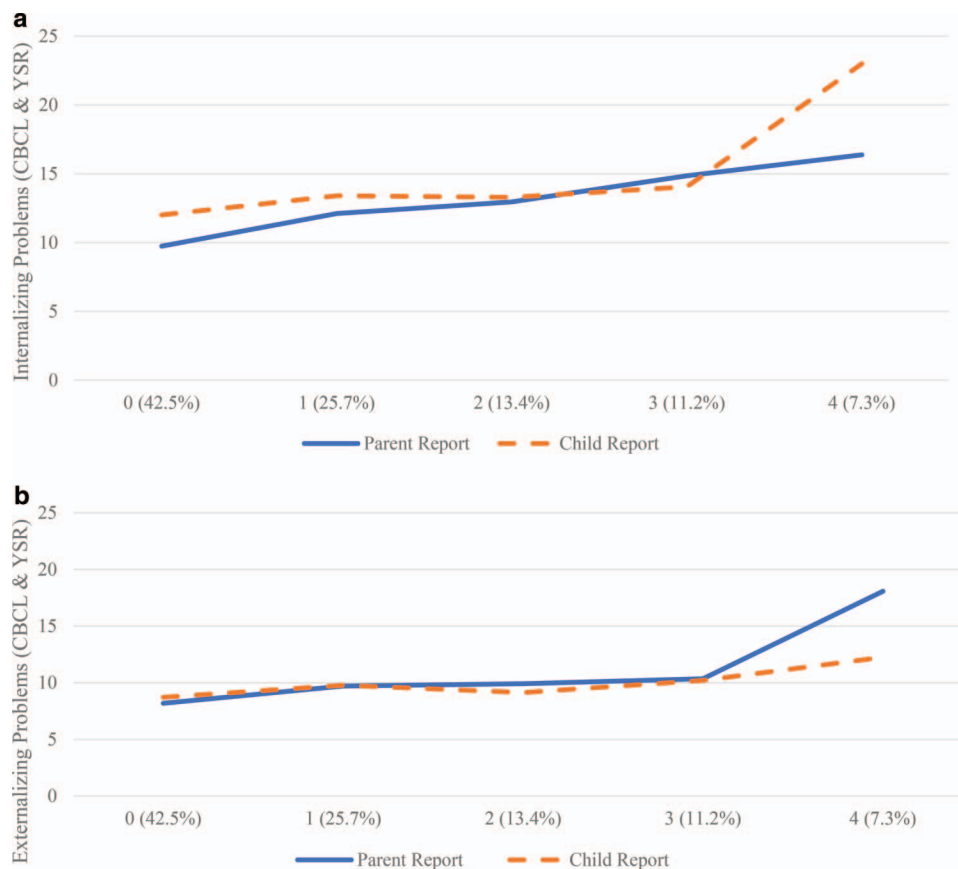* $p < .05$.   ** $p < .01$.

Figure 1. (a) The relationship between number of risks and number of internalizing problems. (b) The relationship between number of risks and number of externalizing problems. See the online article for the color version of this figure.

ized root mean square residual (SRMR; <.08 acceptable, <.05 excellent; Hu & Bentler, 1999).

Results

Preliminary Analyses and Descriptive Statistics

We conducted preliminary analyses to describe and quantify the stressors comprising the cumulative SES risk scale and the relationship among them as well as among other primary variables of interest. Annual household incomes ranged from under $5,000 to over $180,000, with average values falling between $25,000 to $59,999 and median values falling between $40,000 and $59,999. Parents' highest education levels ranged from less than high school to some graduate school, with average levels falling between completing some college and graduating college. College graduate status was the median education level. Thirty-eight percent of parents were single parents, 8% were teenage parents, and 33% of households had at least one person who was receiving public assistance. Within the cumulative SES risk scale, there was a moderate degree of correlation among some of the stressors (*r*s ranging from .11 to .49), with 8% to 38% of families endorsing each stressor. These data suggest that these socioeconomic con-

structs have some overlap but are largely distinct categories (see Table 1). Further, the cumulative SES risk scale data were skewed, such that most families reported experiencing fewer stressors. Such skewness parallels previous research using cumulative risk indices (e.g., Evans & Kim, 2007).

On average, the level of proportional cumulative SES risk experienced was .23 (see Table 2).[1] As five risks went into this scale, this level suggests that, on average, families experienced approximately one stressor, a prevalence rate that is in line with previous cumulative risk research (see Evans & Kim, 2007). The relationship between cumulative SES risk and child problems is displayed in Figure 1a and b: to facilitate interpretation, the proportion scale score was rounded to the nearest risk integer (i.e., a proportion score of .33 would be considered two of five potential

---

[1] An outlier emerged while inspecting the data. This participant was unique in that they endorsed all five cumulative risks. Whereas the child report of internalizing and externalizing problems appeared to increase in line with the added risk, the parent report of problems was remarkably low and highly discrepant from the child report. Analyses were conducted with and without this outlier. Although results from both analyses displayed a similar pattern, given the uniqueness of this single case, we decided to take a conservative approach and display regression results excluding this outlier.

Table 3

Hierarchical Regression Analyses Assessing Predictors of Child Internalizing Problems

Step	Variable	b (bias; SE)	BCa 95% CI	ΔR^2
	Youth self-report			
1	Child age	.03 (−.01; .41)	[−.76, .76]	.01
	Child gender	1.61 (.01; 1.48)	[−1.25, 4.53]	
2	Child age	−.02 (−.02; .42)	[−.82, .72]	.02
	Child gender	1.56 (.05; 1.47)	[−1.31, 4.58]	
	Parent depressive affect	.74 (.01; .43)	[−.10, 1.60]	
3	Child age	.02 (−.02; .41)	[−.77, .77]	.03*
	Child gender	.98 (.02; 1.42)	[−1.91; 3.89]	
	Parent depressive affect	.40 (−.01; .46)	[−.50, 1.26]	
	CR	**7.35 (.08; 3.37)**	**[.44, 14.32]**	
	Parent report			
1	Child age	.14 (−.01; .31)	[−.49, .71]	.01
	Child gender	1.23 (−.02; 1.20)	[−1.12, 3.49]	
2	Child age	.09 (−.01; .31)	[−.53, .67]	.02*
	Child gender	1.17 (−.01, 1.18)	[−1.16, 3.45]	
	Parent depressive affect	**.67 (−.01, .32)**	**[.03, 1.26]**	
3	Child age	.16 (−.01; .31)	[−.45, .73]	.05**
	Child gender	.65 (−.02, 1.15)	[−1.60, 2.84]	
	Parent depressive affect	.31 (−.01; .33)	[−.39, .94]	
	CR	7.42 (.00; 2.34)	[2.89, 12.00]	

Note. Bolded text indicates BCa 95% CI is significant at $p < .05$. SE = standard error; BCa = bias-corrected and accelerated; CI = confidence interval; CR = cumulative SES risk.
* $p < .05$.   ** $p < .01$.

risks). As the number of cumulative SES risk stressors increased, the number of both child- and parent-reported youth internalizing and externalizing problems increased modestly with two exceptions: Child-reported internalizing problems and parent-reported externalizing problems demonstrated a more marked increase from three to four stressors.

Child and parent reports of youth problem behaviors were positively correlated with each other, and the cumulative SES risk index correlated with both reports of youth internalizing and externalizing problems, although the magnitude of the correlation was small (see Table 2). To assess the validity of the observed parent depressive affect composite, correlations between this measure and other measures of parent depression were examined. Observed parent depressive affect was significantly, but weakly, correlated with SCID-IV-indicated current MDD, $r(162) = .16$, $p = .04$, and significantly with BDI-II scores, $r(164) = .38$, $p < .001$, *suggesting* that observed parent depressive affect assesses similar, but distinct, aspects of parental depression relative to these other measures. Accordingly, observations may convey unique aspects of parent depression attributable to the parent–child interaction dynamic.

Cumulative SES Risk and Child Internalizing Problems

To test whether cumulative SES risk explained variance in child internalizing problems above and beyond observed parent depressive affect, we conducted hierarchical regressions with centered variables (see Table 3).[2] In Block 1, we entered child age and gender; in Block 2, we entered observed parent depressive affect; and in Block 3, we entered cumulative SES risk. In support of our first hypothesis, the addition of the cumulative SES risk scale explained an additional 3% of the variance in child-reported in-

ternalizing problems and 6% of the variance in parent-reported internalizing problems.

We then conducted nested model comparisons to evaluate whether child gender moderated the relationship between cumulative SES risk and child internalizing problems. We contrasted a constrained model, in which the cumulative SES Risk → Internalizing path was fixed across gender, with a model in which this path was freely estimated. These comparisons provided partial support for study hypotheses. For parent-reported youth internalizing problems, the cumulative SES Risk → Internalizing path appeared consistent across gender, $\chi^2_{diff}(1) = 2.52$, $p = .11$, with girls' and boys' internalizing problems increasing at similar rates as a function of cumulative SES risk. Constraining this path for child-reported internalizing problems resulted in a significant decrease in model fit, $\chi^2_{diff}(1) = 6.17$, $p = .01$, suggesting the strength of this relationship differs in girls versus boys. The model in which the cumulative SES Risk → Child-Reported Youth Internalizing path varied freely across gender demonstrated excellent fit, $\chi^2(7, N = 179) = 2.56$, $p = .93$, RMSEA = .000, 95% CI [.000, .044], CFI = 1.000, SRMR = .051. As displayed in Figure 2a, even after accounting for observed parent depressed affect, as cumulative SES risk increased, so did girls' reports of their internalizing problems ($b = .33$, $p = .00$). This path was nonsignificant for boys ($b = .00$, $p = .97$). These findings provide partial support for study hypotheses.

---

[2] We conducted analyses with raw scores while controlling for child age. Subsequently, analyses were repeated with age-normed percentile scores, resulting in a similar pattern of findings. Thus, we report analyses using raw scores.
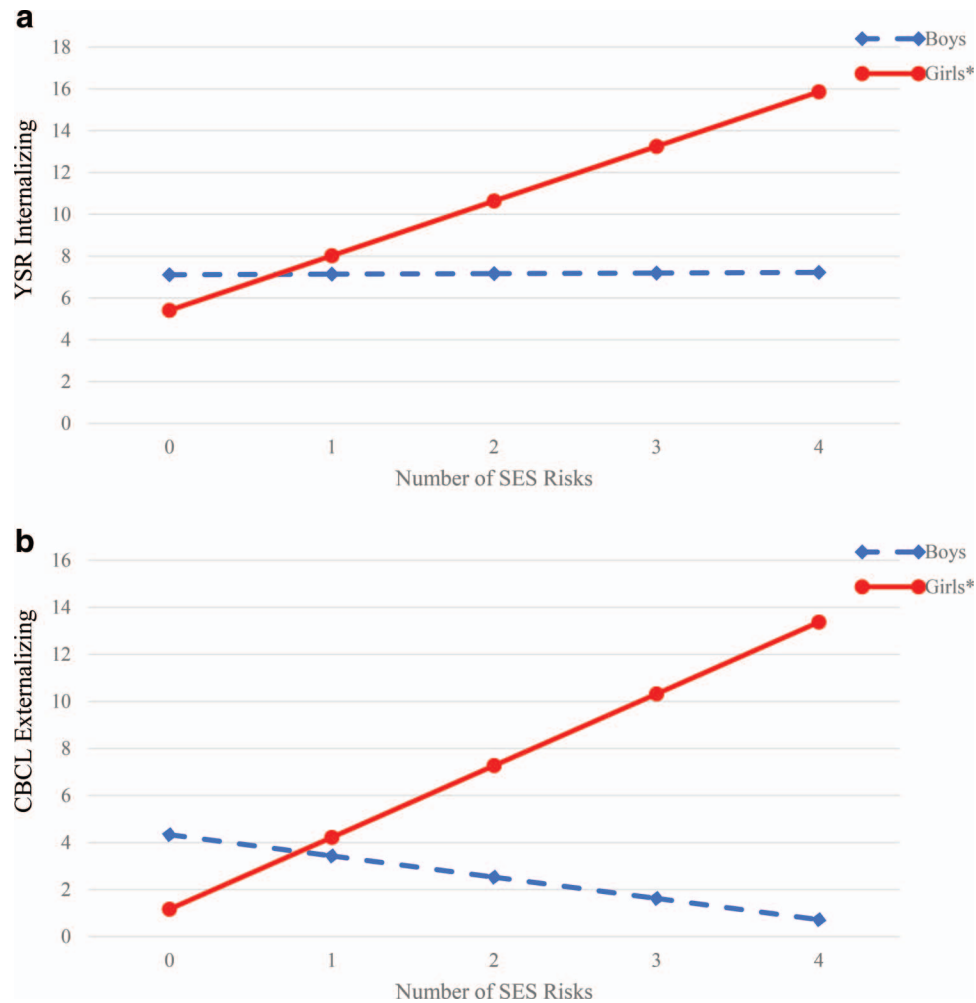
Figure 2. (a) The moderating role of gender on the relationship between cumulative SES risk and child-reported internalizing problems. (b) The moderating role of gender on the relationship between cumulative SES risk and parent-reported externalizing problems. See the online article for the color version of this figure.

Cumulative SES Risk and Child Externalizing Problems

To test whether cumulative SES risk explained additional variance in child externalizing behaviors beyond observed parent depressive affect, a second series of hierarchical regressions were conducted using a parallel procedure to the investigation of child internalizing problems (see Table 4). In the case of externalizing problems, parent depressive affect was significantly related to parent and child reports of youth externalizing problems. Further, providing partial support for study hypotheses, when entered in the third block, the addition of the cumulative SES risk scale explained 3% of variance in parent-reported child externalizing problems.

Nested model comparisons, run in a procedure paralleling that used for child internalizing problems, suggested that gender moderated the relationship between cumulative SES risk and parent-reported externalizing problems, $\chi^2_{\text{diff}}(1) = 33.36$, $p = .00$.[3] For parent-reported externalizing problems, the model in which the cumulative SES Risk → Externalizing Problems path varied freely across gender demonstrated adequate fit, $\chi^2(7, N = 179) = 10.06$,

$p = .19$, RMSEA = .070, 95% CI [.000, .158], CFI = .923, SRMR = .070. However, the direction of this relationship was unexpected. As depicted in Figure 2b, as cumulative SES risk increased, parent-reported externalizing problems increased *among girls* only ($b = 0.43$, $p < .001$). This path was nonsignificant for boys ($p = .11$).

Discussion

This study examined the relationship between cumulative SES risk and child problems when a parent has a history of depression. We also examined the moderating role of child gender. The find-

---

[3] Nested model comparisons also indicated that gender may moderate the relationship between cumulative SES risk and child-reported externalizing problems. However, sensitivity analyses indicated this model was unstable and contingent on the presence of both covariates child age and observed parent depression relative to the other two moderation models that were significant regardless of covariates. Accordingly, we elected a conservative approach and abstained from interpreting the fragile moderation model predicting child-reported externalizing problems.

Table 4

Hierarchical Regression Analyses Assessing Predictors of Child Externalizing Problems

Step	Variable	b (bias; SE)	BCa 95% CI	ΔR^2
	Youth self-report			
1	**Child age**	**.60 (.00; .25)**	**[.10, 1.09]**	.03
	Child gender	−.60 (.01; 1.11)	[−2.80, 1.54]	
2	**Child age**	**.55 (.00; .26)**	**[.02, 1.06]**	.03*
	Child gender	−.65 (.02; 1.09)	[−2.79, 1.47]	
	Parent depressive affect	**.72 (.00; .30)**	**[.12, 1.31]**	
3	**Child age**	**.56 (.00; .25)**	**[.06, 1.05]**	.00
	Child gender	−.79 (.00; 1.07)	[−2.87, 1.23]	
	Parent depressive affect	**.63 (−.01; .31)**	**[.03, 1.23]**	
	CR	1.76 (.04; 2.22)	[−2.60, 6.20]	
	Parent report			
1	Child age	−.15 (.00; .32)	[−.77, .47]	.01
	Child gender	1.70 (.00; 1.27)	[−.74, 4.19]	
2	Child age	−.23 (.00; .30)	[−.84, .36]	.06*
	Child gender	1.61 (.02; 1.24)	[−.78, 4.10]	
	Parent depressive affect	**1.15 (.00; .32)**	**[.52, 1.79]**	
3	Child age	−.17 (−.01; .31)	[−.78, .39]	.03*
	Child gender	1.18 (.00; 1.16)	[−1.11, 3.43]	
	Parent depressive affect	**.86 (.00; .32)**	**[.21, 1.51]**	
	CR	**6.11 (.01; 3.21)**	**[.19, 12.72]**	

Note. Bolded text indicates BCa 95% CI is significant at $p < .05$. SE = standard error; BCa = bias-corrected and accelerated; CI = confidence interval; CR = cumulative SES risk.
* $p < .05$.

ings indicated that both the reporter and type of child problem (i.e., internalizing vs. externalizing) are important in addressing these questions. Specifically, based on child report, as cumulative SES risk increased, internalizing problems increased for girls only. In contrast, based on parent report, as cumulative SES risk increased, internalizing problems increased regardless of gender, whereas externalizing problems increased for girls only. Our findings highlight that girls may be particularly vulnerable to high-risk (i.e., low SES) contexts.

In support of hypotheses and paralleling previous research (e.g., Barker et al., 2012), results indicate that cumulative SES risk explains significant variance in parent-reported internalizing problems for both boys and girls, even after accounting for observed parent depressive affect. Past research indicates that exposure to stressful environments (e.g., low SES) among children of depressed parents puts children at increased risk for internalizing problems (Beardslee et al., 2011; Goodman & Gotlib, 1999). Our findings are congruent with this earlier research.

Child report also yielded a significant relationship between cumulative SES risk and internalizing problems; however, in contrast to parent report, multigroup path analyses indicated that this relationship was only significant for girls. When considered in the context of the assessment literature, this differential finding between parent and child report is unsurprising: children are often better reporters of their internal states (De Los Reyes et al., 2015). Further, epidemiologic data indicate that as puberty begins, girls exhibit higher levels of depression than boys (Cyranowski, Frank, Young, & Shear, 2000). A large literature has highlighted girls' sensitivity to interpersonal (e.g., peer stress) stressors in the development of internalizing pathology (Martel, 2013). Accordingly, when girls—both more likely to experience internal stressors (Hong & Espelage, 2012) and more vulnerable to subsequent internalizing problems—are from families with multiple SES

stressors, they are at particularly high risk of maladjustment. It may be the case that the risks associated with a low-SES environment further exacerbate adolescent girls' propensity toward internalizing problems.

Surprisingly, parent reports of girls' externalizing problems increased as cumulative SES risk increased. As we hypothesized that this path would be stronger among boys, this finding gives rise to questioning *why* such a relationship between cumulative SES risk and child externalizing would emerge only for girls. Diathesis-stress theory posits that some people possess vulnerabilities (i.e. diatheses) to maladaptive outcomes that assert themselves in the context of certain environments (i.e., stressors; Roisman et al., 2012). Further, research suggests girls may be more vulnerable to environmental and familial stressors (Gruhn et al., 2016). Across sociocultural contexts, girls are more likely to be the targets of sexual violence relative to boys (Finkelhor, Shattuck, Turner, & Hamby, 2014), and the risk of sexual violence is higher among low-income girls (Krug, Mercy, Dahlberg, & Zwi, 2002). Accordingly, girls may develop externalizing behaviors to protect themselves from such violence (e.g., Popkin, Leventhal, & Weismann, 2010). Consequently, increases in risk associated with low SES may exacerbate girls' externalizing problems as a defense mechanism. Additionally, it may be the case that familial dysfunction characterizes disadvantaged families, to which girls evidence a heightened sensitivity. The family stress model (Conger, Reuter, & Conger, 2000) posits that economic hardship causes familial processes (e.g., interparental conflict and low-quality parenting) that predict child maladjustment. Some research suggests that girls are particularly vulnerable to these processes (e.g., family discord, low-quality parenting; Zahn-Waxler, Shirtcliff, & Marceau, 2008), and they are thus more likely to exhibit increases in externalizing problems in the presence of such family dysfunction. Accordingly, increased socioeconomic disadvantage may correlate with dys-

functional family processes, which, in turn, are related to increases in girls' externalizing behaviors. Future research exploring this potential mechanism is necessary.

Notably, in contrast to child internalizing problems, observed parent depressive affect consistently emerged as a significant predictor only of child externalizing problems across reporters. One potential explanation is that depressed parents, regardless of socioeconomic disadvantage, are less effective in providing high-quality parenting. As symptoms of depression (e.g., low positive mood) contribute to parenting problems (e.g., higher levels of withdrawal; Champion et al., 2009; Lovejoy, Graczyk, O'Hare, & Neuman, 2000), children may use externalizing behaviors to elicit attention from their depressed parent. Thus, whereas characteristics of a low-income environment are important in understanding child internalizing problems, difficulties in parenting may be a central factor explaining variance in child externalizing problems.

The results from this study must be considered in the context of several limitations. First, this study is a secondary analysis of baseline data of children of parents with a history of depression. Although ideal for answering our research questions, the unique nature of this sample limits generalizations to other populations, and the cross-sectional design precludes interpretations of direction or causality. Second, mothers were overrepresented and racial minorities were underrepresented in this sample. Thus, generalizing these findings to fathers and racial minorities requires further research. Additionally, as SES and race are inextricably linked, future research should recruit a more demographically heterogeneous sample. Third, regarding construct operationalization, whereas approaching childhood socioeconomic adversity from a cumulative risk perspective affords many strengths, dichotomizing risk factors based on a cut point limits data analysis in some ways. Mainly, variability in individual risk factors is lost, and some factors may confer more risk than others. Further, whereas data from this sample supports the construct validity of behavioral observations of parental depression, specifically sadness and low positive mood, operationalizing parental depression with other observable indicators of parental depression or using diagnostic interviews may result in different findings. Additionally, the correlations between observational measures of depressive affect and SCID as well as BDI-II ratings were small to moderate. Whereas this low correspondence may indicate observational data are sensitive to unique aspects of how parental depression colors parent–child interactions, it may also be the case that it reflects low convergent validity. Future psychometric research on observations of depressive affect, particularly in the context of family interactions, may bolster the validity of this measure. Finally, although we examined the association of cumulative SES risk and child problems after accounting for parent depressive affect, it may be the case that SES disadvantage is a mechanism linking parent depression and child internalizing problems (Beardslee et al., 2011; Goodman & Gotlib, 1999).

Several strengths characterize this study. First, we used observations of aspects of parent depression, an underused method in clinical psychology research, affording an ecologically valid perspective of aspects of parental depression to which children are exposed. Second, we used both parent and child reports of child internalizing and externalizing problems. Given that the assessment literature highlights potential measurement error and bias in both parent and child reports (De Los Reyes & Kazdin, 2005),

using a multi-informant approach helps mitigate that error, providing a robust assessment of study hypotheses. As De Los Reyes et al. (2015) have noted, parents may be better reporters of external, observable problems than internalizing problems, and children may underreport their externalizing problems (Smith, 2007), potentially explaining the discrepancy between reporters. Our interaction models were most robust when predicting child-reported internalizing problems and parent-reported externalizing problems, indicating that the most statistically meaningful models emerged in the context of the most clinically meaningful reporters, strengthening the interpretability of these interactions. Finally, this study used a cumulative risk index approach, which aids in the translation of these findings to other researchers and disciplines.

These findings carry several implications. First, they indicate the importance of assessing child outcome from multiple informants and assessing risk factors across multiple contexts. Second, whereas, at a societal level, closing the wealth gap would decrease many children's socioeconomic risk, such a shift is implausible. However, preventions targeted toward children living in high socioeconomic distress, particularly girls, may buffer them against potential negative outcomes. Indeed, families in high-risk environments are likely more in need of such intervention given that the characteristics of a low-income environment (e.g., single parenthood, increased stress) facilitate engagement in the coercive parenting cycle (Deković et al., 2011). In fact, recent evidence indicates that parenting quality mediates the prospective association between cumulative risk and changes in child externalizing problems, such that higher quality parenting may mitigate the outcomes of cumulative risk (Gach, Ip, Sameroff, & Olson, 2018). Accordingly, as improving parenting and child coping skills are both well-documented mechanisms in decreasing child internalizing and externalizing problems (e.g., Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Forehand, Lafko, Parent, & Burt, 2014), it is necessary to further research whether leveraging these strategies effectively equips families to cope with socioeconomic disadvantage. Third, whereas this study focused on cumulative SES risk's contribution *after* accounting for observed parent depressive affect, the latter variable remained significant in the context of the former when assessing child externalizing problems. Thus, we must seek to better understand the import of parenting when children live in challenging environments.

References

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for ASEBA school-age forms and profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

Alderfer, M. A., Fiese, B. H., Gold, J. I., Cutuli, J. J., Holmbeck, G. N., Goldbeck, L., . . . Patterson, J. (2008). Evidence-based assessment in pediatric psychology: Family measures. *Journal of Pediatric Psychology, 33,* 1046–1061. http://dx.doi.org/10.1093/jpepsy/jsm083

Appleyard, K., Egeland, B., van Dulmen, M. H., & Sroufe, L. A. (2005). When more is not better: The role of cumulative risk in child behavior outcomes. *Journal of Child Psychology and Psychiatry, 46,* 235–245. http://dx.doi.org/10.1111/j.1469-7610.2004.00351.x

Atkinson, L., Beitchman, J., Gonzalez, A., Young, A., Wilson, B., Escobar, M., . . . Villani, V. (2015). Cumulative risk, cumulative outcome: A 20-year longitudinal study. *PLoS ONE, 10,* e0127650. http://dx.doi.org/10.1371/journal.pone.0127650

Barker, E. D., Copeland, W., Maughan, B., Jaffee, S. R., & Uher, R. (2012). Relative impact of maternal depression and associated risk

factors on offspring psychopathology. *The British Journal of Psychiatry, 200,* 124–129. http://dx.doi.org/10.1192/bjp.bp.111.092346

Beardslee, W. R., Gladstone, T. R. G., & O'Connor, E. E. (2011). Transmission and prevention of mood disorders among children of affectively ill parents: A review. *Journal of the American Academy of Child & Adolescent Psychiatry, 50,* 1098–1109. http://dx.doi.org/10.1016/j.jaac.2011.07.020

Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. F. (1996). Comparison of Beck Depression Inventories-I and -II in psychiatric outpatients. *Journal of Personality Assessment, 67,* 588–597. http://dx.doi.org/10.1207/s15327752jpa6703_13

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II.* San Antonio, TX: Psychological Corporation.

Champion, J. E., Jaser, S. S., Reeslund, K. L., Simmons, L., Potts, J. E., Shears, A. R., & Compas, B. E. (2009). Caretaking behaviors by adolescent children of mothers with and without a history of depression. *Journal of Family Psychology, 23,* 156–166. http://dx.doi.org/10.1037/a0014978

Chiariello, M. A., & Orvaschel, H. (1995). Patterns of parent-child communication: Relationship to depression. *Clinical Psychology Review, 15,* 395–407. http://dx.doi.org/10.1016/0272-7358(95)00022-H

Compas, B. E., Champion, J. E., Forehand, R., Cole, D. A., Reeslund, K. L., Fear, J., . . . Roberts, L. (2010). Coping and parenting: Mediators of 12-month outcomes of a family group cognitive-behavioral preventive intervention with families of depressed parents. *Journal of Consulting and Clinical Psychology, 78,* 623–634. http://dx.doi.org/10.1037/a0020459

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127,* 87–127. http://dx.doi.org/10.1037/0033-2909.127.1.87

Compas, B. E., Forehand, R., Thigpen, J., Hardcastle, E., Garai, E., McKee, L., . . . Sterba, S. (2015). Efficacy and moderators of a family group cognitive-behavioral preventive intervention for children of parents with depression. *Journal of Consulting and Clinical Psychology, 83,* 541–553. http://dx.doi.org/10.1037/a0039053

Conger, K. J., Reuter, M. A., & Conger, R. D. (2000). The role of economic pressure in the lives of parents and their adolescents: The family stress model. In L. J. Crockett & R. J. Silbereisen (Eds.), *Negotiating adolescence in times of social change* (pp. 201–223). Cambridge, UK: Cambridge University Press.

Cyranowski, J. M., Frank, E., Young, E., & Shear, M. K. (2000). Adolescent onset of the gender difference in lifetime rates of major depression: A theoretical model. *Archives of General Psychiatry, 57,* 21–27. http://dx.doi.org/10.1001/archpsyc.57.1.21

Deković, M., Slagt, M. I., Asscher, J. J., Boendermaker, L., Eichelsheim, V. I., & Prinzie, P. (2011). Effects of early prevention programs on adult criminal offending: A meta-analysis. *Clinical Psychology Review, 31,* 532–544. http://dx.doi.org/10.1016/j.cpr.2010.12.003

De Los Reyes, A., Augenstein, T. M., Wang, M., Thomas, S. A., Drabick, D. A. G., Burgers, D. E., & Rabinowitz, J. (2015). The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychological Bulletin, 141,* 858–900. http://dx.doi.org/10.1037/a0038498

De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131,* 483–509. http://dx.doi.org/10.1037/0033-2909.131.4.483

Evans, G. W., & Kim, P. (2007). Childhood poverty and health: Cumulative risk exposure and stress dysregulation. *Psychological Science, 18,* 953–957. http://dx.doi.org/10.1111/j.1467-9280.2007.02008.x

Evans, G. W., Li, D., & Whipple, S. S. (2013). Cumulative risk and child development. *Psychological Bulletin, 139,* 1342–1396. http://dx.doi.org/10.1037/a0031808

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., . . . Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine, 14,* 245–258. http://dx.doi.org/10.1016/S0749-3797(98)00017-8

Finkelhor, D., Shattuck, A., Turner, H. A., & Hamby, S. L. (2014). The lifetime prevalence of child sexual abuse and sexual assault assessed in late adolescence. *Journal of Adolescent Health, 55,* 329–333. http://dx.doi.org/10.1016/j.jadohealth.2013.12.026

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. (1997). *Structured clinical interview for DSM–IV: Clinical version (SCID-I/CV).* Arlington, VA: American Psychiatric Association.

First, M. B., Williams, J. B. W., Karg, R. S., & Spitzer, R. L. (2015). *Structured clinical interview for DSM–5: Clinical version (SCID-5-CV).* Arlington, VA: American Psychiatric Association.

Forehand, R., Lafko, N., Parent, J., & Burt, K. B. (2014). Is parenting the mediator of change in behavioral parent training for externalizing problems of youth? *Clinical Psychology Review, 34,* 608–619. http://dx.doi.org/10.1016/j.cpr.2014.10.001

Foster, C. J. E., Garber, J., & Durlak, J. A. (2008). Current and past maternal depression, maternal interaction behaviors, and children's externalizing and internalizing symptoms. *Journal of Abnormal Child Psychology, 36,* 527–537. http://dx.doi.org/10.1007/s10802-007-9197-1

Gach, E. J., Ip, K. I., Sameroff, A. J., & Olson, S. L. (2018). Early cumulative risk predicts externalizing behavior at age 10: The mediating role of adverse parenting. *Journal of Family Psychology, 32,* 92–102. http://dx.doi.org/10.1037/fam0000360

Garb, H. (1997). Race bias, social class bias, and gender bias in clinical judgment. *Clinical Psychology: Science and Practice, 4,* 99–120. http://dx.doi.org/10.1111/j.1468-2850.1997.tb00104.x

Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: A developmental model for understanding mechanisms of transmission. *Psychological Review, 106,* 458–490. http://dx.doi.org/10.1037/0033-295X.106.3.458

Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. *Clinical Child and Family Psychology Review, 14,* 1–27. http://dx.doi.org/10.1007/s10567-010-0080-1

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60,* 549–576. http://dx.doi.org/10.1146/annurev.psych.58.110405.085530

Gruhn, M. A., Dunbar, J. P., Watson, K. H., Reising, M. M., McKee, L., Forehand, R., . . . Compas, B. E. (2016). Testing specificity among parents' depressive symptoms, parenting, and child internalizing and externalizing symptoms. *Journal of Family Psychology, 30,* 309–319. http://dx.doi.org/10.1037/fam0000183

Hankin, B. L., Mermelstein, R., & Roesch, L. (2007). Sex differences in adolescent depression: Stress exposure and reactivity models. *Child Development, 78,* 279–295. http://dx.doi.org/10.1111/j.1467-8624.2007.00997.x

Herbers, J. E., Garcia, E. B., & Obradović, J. (2017). Parenting assessed by observation versus parent-report: Moderation by parent distress and family socioeconomic status. *Journal of Child and Family Studies, 26,* 3339–3350. http://dx.doi.org/10.1007/s10826-017-0848-8

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological system analysis. *Aggression and Violent Behavior, 17,* 311–322. http://dx.doi.org/10.1016/j.avb.2012.03.003

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struc-*

tural Equation Modeling, 6, 1–55. http://dx.doi.org/10.1080/10705519909540118

Hunt, M., Auriemma, J., & Cashaw, A. C. (2003). Self-report bias and underreporting of depression on the BDI-II. *Journal of Personality Assessment, 80,* 26–30. http://dx.doi.org/10.1207/S15327752JPA8001_10

Huston, A. C., & Bentley, A. C. (2010). Human development in societal context. *Annual Review of Psychology, 61,* 411–437, C1. http://dx.doi.org/10.1146/annurev.psych.093008.100442

Jaser, S. S., Fear, J. M., Reeslund, K. L., Champion, J. E., Reising, M. M., & Compas, B. E. (2008). Maternal sadness and adolescents' responses to stress in offspring of mothers with and without a history of depression. *Journal of Clinical Child and Adolescent Psychology, 37,* 736–746. http://dx.doi.org/10.1080/15374410802359742

Jones, D. J., Anton, M., Zachary, C., Pittman, S., Turner, P., Forehand, R., & Khavjou, O. (2016). A review of the key considerations in mental health services research: A focus on low-income children and families. *Couple & Family Psychology: Research and Practice, 5,* 240–257. http://dx.doi.org/10.1037/cfp0000069

Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., . . . Ryan, N. (1997). Schedule for Affective Disorders and Schizophrenia for School-Age Children- Present and Lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child & Adolescent Psychiatry, 36,* 980–988. http://dx.doi.org/10.1097/00004583-199707000-00021

Korous, K. M., Causadias, J. M., Bradley, R. H., & Luthar, S. S. (2018). Unpacking the link between socioeconomic status and behavior problems: A second-order meta-analysis. *Development and Psychopathology, 30,* 1889–1906. http://dx.doi.org/10.1017/S0954579418001141

Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. *Lancet, 360,* 1083–1088. http://dx.doi.org/10.1016/S0140-6736(02)11133-0

Lorant, V., Deliège, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic inequalities in depression: A meta-analysis. *American Journal of Epidemiology, 157,* 98–112. http://dx.doi.org/10.1093/aje/kwf182

Lovejoy, M. C., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical Psychology Review, 20,* 561–592. http://dx.doi.org/10.1016/S0272-7358(98)00100-7

Martel, M. M. (2013). Sexual selection and sex differences in the prevalence of childhood externalizing and adolescent internalizing disorders. *Psychological Bulletin, 139,* 1221–1259. http://dx.doi.org/10.1037/a0032247

Melby, J., & Conger, R. D. (2001). The Iowa Family Interaction Rating Scales: Instrument summary. In P. K. Kerig & K. M. Lindahl (Eds.), *Family observational coding systems: Resources for systemic research* (pp. 33–58). Mahwah, NJ: Erlbaum.

Melby, J. N., Conger, R. D., Book, R., Ruter, M., Lucy, L., Repinski, D., . . . Scaramella, L. (1998). *The Iowa Family Interaction Rating Scales.* Unpublished Manuscript 5, Institute for Social and Behavioral Research, Iowa State University, Ames, IA.

Mikkonen, J., Moustgaard, H., Remes, H., & Martikainen, P. (2016). Intergenerational transmission of depressive symptoms – The role of gender, socioeconomic circumstances, and the accumulation of parental symptoms. *Journal of Affective Disorders, 204,* 74–82. http://dx.doi.org/10.1016/j.jad.2016.06.036

Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Los Angeles, CA: Author.

Plant, D. T., Pariante, C. M., Sharp, D., & Pawlby, S. (2015). Maternal depression during pregnancy and offspring depression in adulthood: Role of child maltreatment. *The British Journal of Psychiatry, 207,* 213–220. http://dx.doi.org/10.1192/bjp.bp.114.156620

Popkin, S. J., Leventhal, T., & Weismann, G. (2010). Girls in the 'hood: How safety affects the life chances of low-income girls. *Urban Affairs Review, 45,* 715–744. http://dx.doi.org/10.1177/1078087410361572

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42,* 185–227.

Roisman, G. I., Newman, D. A., Fraley, R. C., Haltigan, J. D., Groh, A. M., & Haydon, K. C. (2012). Distinguishing differential susceptibility from diathesis-stress: Recommendations for evaluating interaction effects. *Development and Psychopathology, 24,* 389–409. http://dx.doi.org/10.1017/S0954579412000065

Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika, 66,* 507–514. http://dx.doi.org/10.1007/BF02296192

Smith, S. R. (2007). Making sense of multiple informants in child and adolescent psychopathology: A guide for clinicians. *Journal of Psychoeducational Assessment, 25,* 139–149.

Steer, R. A., Brown, G. K., Beck, A. T., & Sanderson, W. C. (2001). Mean Beck Depression Inventory-II scores by severity of major depressive episode. *Psychological Reports, 88,* 1075–1076.

Wadsworth, M. E., Evans, G. W., Grant, K., Carter, J. S., & Duffy, S. (2016). Poverty and the development of psychopathology. In D. Cicchetti (Ed.), *Developmental psychopathology: Vol. 4: Risk, resilience, and intervention* (3rd ed., pp. 136–180). Hoboken, NJ: Wiley.

Weissman, M. M., Wickramaratne, P., Gameroff, M. J., Warner, V., Pilowsky, D., Kohad, R. G., . . . Talati, A. (2016). Offspring of depressed parents: 30 years later. *The American Journal of Psychiatry, 173,* 1024–1032. http://dx.doi.org/10.1176/appi.ajp.2016.15101327

Zahn-Waxler, C., Crick, N. R., Shirtcliff, E. A., & Woods, K. E. (2015). The origins and development of psychopathology in females and males. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology. Volume 1: Theory and method* (pp. 76–138). Hoboken, NJ: John Wiley.

Zahn-Waxler, C., Shirtcliff, E. A., & Marceau, K. (2008). Disorders of childhood and adolescence: Gender and psychopathology. *Annual Review of Clinical Psychology, 4,* 275–303. http://dx.doi.org/10.1146/annurev.clinpsy.3.022806.091358