

The Meaning of Emotional Overinvolvement in Early Development: Prospective Relations With Child Behavior Problems

Tamar Y. Khafi and Tuppert M. Yates
University of California, Riverside

Efrat Sher-Censor
University of Haifa

Emotional overinvolvement (EOI) in parents' Five Minute Speech Samples (FMSSs; Magaña-Amato, 1993) is thought to measure overconcern and enmeshment with one's child. Although related to maladaptive outcomes in studies of *adult* children, FMSS EOI evidences varied relations with behavior problems in studies with *young* children. These mixed findings may indicate that certain FMSS EOI criteria reflect inappropriate and excessive involvement with *adult* children, but do not indicate maladaptive processes when parenting younger children. Thus, this study evaluated relations of each FMSS EOI criterion with changes in child behavior problems from preschool to first grade in a community sample of 223 child–mother dyads (47.98% female; Wave 1 $M_{\text{age}} = 49.08$ months; 56.50% Hispanic/Latina). Maternal FMSS EOI ratings were obtained at Wave 1, and independent examiners rated child externalizing and internalizing behavior problems at Wave 1 and again 2 years later. Path analyses indicated that both the self-sacrifice/overprotection (SSOP) and statements of attitude (SOAs) FMSS EOI criteria predicted increased externalizing problems. In contrast, excessive detail and exaggerated praise were not related to child externalizing behavior problems, and Emotional Display was not evident in this sample. None of the FMSS EOI criteria evidenced significant relations with internalizing behavior problems. Multigroup comparisons indicated that the effect of SOAs on externalizing behavior problems was significant for boys but not for girls, and there were no significant group differences by race/ethnicity. These findings point to the salience of SSOP and SOAs for understanding the developmental significance of EOI in early development.

Keywords: expressed emotion, emotional overinvolvement, behavior problems, preschool children, Five Minute Speech Sample

Expressed emotion (EE) is an index of family emotional climate that originated in studies of *adult* psychiatric patients and their caregivers to examine the contribution of family processes to psychiatric relapse and symptomatology (Brown & Rutter, 1966). In recent years, EE has garnered increased attention as an index of family emotional climate that is likely to influence *young* children's behavioral adjustment as well (e.g., Baker, Heller, & Henker, 2000). EE effects are presumed to be especially salient during the preschool period when children are strongly affected by the

familial context (Campbell, 1995), and early models of behavior and regulation form with enduring consequences for later adaptation (Calkins, Blandon, Williford, & Keane, 2007; Sroufe & Rutter, 1984). Moreover, because preschoolers' adjustment is associated with academic and social difficulties in middle childhood and adolescence (Campbell, 1995; Mesman, Bongers, & Koot, 2001), the current effort to understand whether and how the family emotional climate may influence stability or change in behavior problems across the transition from preschool to formal schooling has significant empirical and applied impact.

EE assessments include the semistructured Camberwell Family Interview (Brown, Birley, & Wing, 1972; Brown & Rutter, 1966) and the briefer Five Minute Speech Sample (FMSS; Magaña et al., 1986). In both assessments, EE refers to caregivers' expressed criticism (i.e., dislike or disapproval) of the child and/or their emotional overinvolvement (EOI), which is based on heterogeneous criteria (e.g., excessive worry/concern, self-sacrifice, exaggerated praise) that are thought to reflect enmeshed parent–child relationships. The attitudes expressed by a parent about their child during EE assessments are presumed to guide parenting behavior, with attendant implications for child adjustment (Brown et al., 1972; Hooley, 2007).

Relative to consistent associations between criticism and problem behaviors in EE studies with young children (e.g., McCarty & Weisz, 2002; Wamboldt, O'Connor, Wamboldt, Gavin, & Klinnert, 2000), relations between EOI and child behavior problems

This article was published Online First July 6, 2015.

Tamar Y. Khafi and Tuppert M. Yates, Department of Psychology, University of California, Riverside; Efrat Sher-Censor, The Interdisciplinary Program for Child Development, University of Haifa.

Preparation of this article was supported by a National Science Foundation Graduate Research Fellowship to the first author. The research reported herein was funded by grants from the National Institute of Child Health and Human Development (1R03HD065036-01A) to the second and third authors and from the National Science Foundation Developmental and Learning Sciences (ID 0951775) to the second author. Preliminary findings were presented at the 2013 Society for Research in Child Development Biennial Meeting. We express our gratitude to the parents and children who participated in this research.

Correspondence concerning this article should be addressed to Tamar Y. Khafi, Department of Psychology, 900 University Avenue, University of California, Riverside, CA 92521. E-mail: tamar.khafi@email.ucr.edu

are mixed (e.g., see Hirshfeld, Biederman, Brody, Faraone, & Rosenbaum, 1997, and Stubbe, Zahner, Goldstein, & Leckman, 1993, vs. McCarty & Weisz, 2002, and Wamboldt et al., 2000). This has stimulated debate among child researchers regarding how to conceptualize EOI in the context of parenting young children, and has prompted some to either modify EOI criteria (e.g., Daley, Sonuga-Barke, & Thompson, 2003) or omit EOI from studies of EE with young children entirely (e.g., Gravener et al., 2012). The present investigation utilized the FMSS measure, as it is the predominant means of assessing EE in child samples relative to the Camberwell Family Interview (Hooley & Parker, 2006).

The goal of this study was to evaluate whether adult-derived EOI criteria are appropriate indices of parental EOI with preschool-aged children as indicated by changes in child behavior problems from preschool to first grade. This investigation joins prior studies that have examined distinct relations between one or more EOI criteria and child behavior problems (Gar & Hudson, 2008; Hirshfeld et al., 1997; Kershner, Cohen, & Coyne, 1996; McCarty & Weisz, 2002; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007; Silk et al., 2009; Stubbe et al., 1993; Wamboldt et al., 2000). However, we extend prior research by examining (a) all facets of the EOI construct, (b) relations between each EOI criterion and changes in child behavior problems, (c) independent examiners' reports of child behavior instead of parent or child self-reports, and (d) gender and race/ethnicity as potential moderators of EOI criterion effects on behavior problems.

The parental attitudes and behaviors indexed by EOI have been described as a "destructive force among kin and a failure to preserve culturally appropriate boundaries among self-systems" (Jenkins, 1992, p. 217). When parent-child boundaries become overly diffuse, intrusive patterns may ensue, wherein the parent either relies on the child to meet her or his needs without respecting the child's psychological separateness (e.g., role reversal; Jacobvitz & Sroufe, 1987), or engages in psychologically controlling processes, such as guilt induction, that suppress the child's bids for autonomy (Barber, 1996). Both patterns compromise the child's self-regulation, as the parent's expectation that the child meet her or his needs may be overstimulating (Jacobvitz & Sroufe, 1987); at the same time, the parent's lack of support may thwart the child's regulatory capacities (Carlson, Jacobvitz, & Sroufe, 1995). Early deficits in regulatory abilities may be particularly pernicious as children encounter academic and socioemotional challenges in school, and are expected to meet higher standards of behavior regulation.

As discussed earlier, EOI has been associated with poor psychiatric prognosis and observational ratings of enmeshed family interactions among *adults* with psychiatric illnesses (e.g., Wuerker, Haas, & Bellack, 1999; Yan, Hammen, Cohen, Daley, & Henry, 2004), but associations between EOI and child outcomes are inconsistent. Some studies found associations between parents' EOI and child anxiety (e.g., Hirshfeld et al., 1997; Stubbe et al., 1993), and two studies documented elevated rates of EOI among parents with depressed children (Asarnow, Tompson, Hamilton, Goldstein, & Guthrie, 1994; Asarnow, Tompson, Woo, & Cantwell, 2001), yet most studies have not found significant relations between EOI and either children's adjustment or the quality of observed parent-child interactions (e.g., Baker et al., 2000;

Cruise, Sheeber, & Tompson, 2011; McCarty & Weisz, 2002; Wamboldt et al., 2000).

Given varied findings, researchers have suggested that only some EOI criteria indicate inappropriate and excessive parental involvement in childhood. In the FMSS measure, a high EOI score is given based on the presence of (a) statements reflecting attitudes and/or behaviors that are overprotective, self-sacrificing, lack objectivity, or indicate boundary dissolution (SSOP; e.g., "I'm concerned for him that he may starve for my attention"); (b) an emotional display (e.g., participant cries during the narrative); or (c) a combination of two or more of the following: excessive detail about the child's past (e.g., a minute-long description of the child's first week postdelivery without relating it to the present), one or more statements of attitude (SOAs; i.e., statements of love or a willingness to do anything for the child in the future), and/or exaggerated praise of the child (i.e., five or more positive remarks that praise the child's behavior or characteristics). These elements tap a range of parental attitudes that may connote enmeshed and/or intrusive behaviors, or an idealization of the child. FMSSs that include either moderate (but not full) evidence of SSOP, and FMSSs that include SOAs *or* exaggerated praise (but not both) are categorized as "borderline EOI" (Magaña-Amato, 1993).

Extant work suggests that SSOP and emotional display may be associated with enmeshed and/or intrusive parent-child relationships and elevated rates of child behavior problems. For example, in a study of adolescents, a revised FMSS EOI rating, which exempted cases rated solely on the basis of SOAs and exaggerated praise, found that EOI was positively related to concomitant youth internalizing problems and parent-adolescent boundary dissolution (Wamboldt et al., 2000). In younger children, cross-sectional findings suggest that SSOP and emotional display are positively associated with externalizing and internalizing problems (McCarty & Weisz, 2002), and higher rates of SSOP and emotional display have been found among mothers of anxious children relative to mothers of comparison children (Gar & Hudson, 2008). However, in other studies, SSOP did not differentiate between depressed children and controls (Silk et al., 2009), or was entirely absent from parents' FMSS (Kershner et al., 1996).

Researchers suggest that SOAs and exaggerated praise may indicate appropriate parental involvement with young children (Kershner et al., 1996; McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000). In support of these assertions, positive remarks, which form the basis of exaggerated praise, have been related to concurrent reports of fewer child behavior problems (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000), are less frequent in child clinical versus community samples (Kershner et al., 1996; Silk et al., 2009), and are related to more maternal sensitivity during observed parent-child interactions (e.g., Daley et al., 2003; Kim Park, Garber, Ciesla, & Ellis, 2008; Wamboldt et al., 2000). In contrast to positive remarks, there is little evidence that SOAs are associated with positive child adjustment (McCarty & Weisz, 2002; Silk et al., 2009), and the only study to suggest as much evaluated a global index of positivity that combined SOAs with positive remarks (Psychogiou et al., 2007).

Only a few studies have assessed excessive detail, with some showing negative associations with child adjustment (e.g., metabolic control in children and adolescents with diabetes; Liakopoulou et al., 2001), and others finding no significant relations with behavior problems (McCarty & Weisz, 2002; Silk et al., 2009).

Joining the mixed evidence regarding relations between EOI and child behavior problems, efforts to identify family determinants of parental EOI, such as parental psychopathology and stress, have yielded inconsistent findings. EOI has been associated with elevated rates of maternal psychopathology (Goodman, Adanson, Riniti, & Cole, 1994; Stubbe et al., 1993) and stress (Boger, Tompson, Briggs-Gowan, Pavlis, & Carter, 2008) in some studies, but not in others (Baker et al., 2000; Rogosch, Cicchetti, & Toth, 2004; Sullivan & Miklowitz, 2010). Likewise, whereas studies of adult schizophrenic patients have documented higher rates of EOI among single mothers (e.g., Parker & Johnson, 1987), albeit not uniformly (e.g., Mueser et al., 1993), those utilizing younger child samples have not found significant associations (Asarnow et al., 1994; Boger et al., 2008; Hirshfeld et al., 1997; Stubbe et al., 1993; Wamboldt et al., 2000). Although the majority of studies have not detected associations between EOI and socioeconomic status (SES; e.g., Baker et al., 2000; Hirshfeld et al., 1997; Stubbe et al., 1993), some suggest this may be related to the restricted ranges of SES in extant work (Boger et al., 2008). Finally, although some work suggests that maternal age is related to more positive remarks (St John-Seed & Weiss, 2002) and negatively related to relevant constructs, such as boundary dissolution (e.g., Shaffer & Egeland, 2011), most studies examining associations between maternal age and EOI have not found significant associations (e.g., Stubbe et al., 1993; Wamboldt et al., 2000). In light of these varied findings, and to strengthen our inferences about the contribution of EOI criteria to child behavior problems, we examined relations of maternal psychopathology, maternal stress, single mother status, SES, and maternal age with EOI criteria.

Finally, in a novel contribution to this literature, we examined the potential for EOI to exert differential effects by child gender or maternal race/ethnicity. Some work suggests boys and girls may be differentially affected by features of the family environment, with some studies showing that boys may be more sensitive to the quality of mother-child interactions than girls (Egeland & Farber, 1984; Sroufe & Egeland, 1991), but others suggesting that girls may be more sensitive to relational features, including intrusive and enmeshed caregiving (Carlson et al., 1995; Jacobvitz & Sroufe, 1987). Likewise, prior studies suggest that facets of the parent-child relationship may have different meanings across racial/ethnic groups. In this view, permeable parent-child relations and intrusion (i.e., the core features of EOI) may be more problematic in cultures that value autonomy and separateness (e.g., Carlson et al., 1995), whereas these same features may connote positive parenting in cultures that value interdependence and communality (e.g., Markus & Kitayama, 1991). Given the value placed on family cohesion and attachment in Hispanic/Latino cultures (Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987), statements reflecting enmeshment and/or intrusiveness may indicate normative and adaptive family relations in these groups, and may be less strongly associated with child behavior problems relative to other racial/ethnic groups. However, some findings suggest that EOI may be maladaptive even within these Hispanic/Latina groups, given its association with higher relapse rates among adult Mexican Americans with schizophrenia in several studies (e.g., Aguilera, López, Breitborde, Kopelowicz, & Zarate, 2010; López et al., 2009).

In sum, this study elucidated the implications of mothers' EOI, which was assessed via FMSS administrations during the preschool period, for understanding changes in children's behavioral adjustment across the transition to first grade. Path analyses evaluated prospective relations of each EOI criterion (i.e., SSOP, emotional display, excessive detail, SOAs, exaggerated praise) with changes in observer-rated externalizing and internalizing behavior problems from the preschool period to first grade. Moreover, we evaluated these relations in consideration of potential contextual influences on EOI and/or child behavior problems (i.e., maternal psychopathology, maternal stress, single mother status, and SES), as well as possible moderating effects of child gender and/or maternal race/ethnicity on these relations. First, we hypothesized that SSOP and emotional display would be associated with increased child behavior problems. Second, we explored relations of excessive detail and SOAs with child behavior problems, given these associations were not significant in the only studies to examine these EOI facets independently thus far (McCarty & Weisz, 2002; Silk et al., 2009). Third, we hypothesized that exaggerated praise would be associated with decreased child behavior problems. Fourth, we explored these relations among boys versus girls, and among non-Hispanic/Latinas versus Hispanic/Latinas, in light of the mixed evidence to date.

Method

Participants

The current sample was drawn from an ongoing study of 250 preschooler-caregiver dyads that were recruited via community-based child development centers and preschools. Caregivers completed a brief intake screening by phone before scheduling a 3-hr laboratory assessment. Exclusionary criteria included children with diagnosed developmental disabilities and delays ($n = 3$), children who did not understand English ($n = 4$), and children outside the age range of 45 to 54 months (not tracked). These analyses excluded dyads if they were not biological mother-child dyads at Waves 1 ($n = 22$; 8.80%) or 2 ($n = 3$; 1.20%), or the FMSS was invalidated by administration errors ($n = 2$; .80%). The remaining 223 mothers were Hispanic/Latina (56.50%), White/European American (20.18%), Black/African American (17.49%), Asian American (1.79%), or multiracial/other (4.04%) and representative of the surrounding community (U.S. Census Bureau, 2011). At Wave 1, the majority of mothers were in a committed relationship (81.17%), but maternal education was variable (i.e., 19.28% had not completed high school, 12.11% had completed college), as was family income, with 36.77% in poverty per U.S. Census Bureau (2012) guidelines, and an additional 30.94% receiving some form of public assistance. Children averaged 49.08 months ($SD = 2.91$) of age at Wave 1 (47.98% female).

Procedure

At Wave 1, dyads participated in a 3-hr laboratory assessment during which mothers completed the FMSS and self-report measures, and examiners observed child behavior problems while the child completed measures of intelligence, representation, and regulation in an adjacent room. Follow-up observations of behavior problems were completed for 193 children (86.55% retention) 2

years later ($M_{\text{age_w2}} = 73.34$ months; $SD = 2.55$) during a similar 3-hr laboratory assessment. Returning dyads did not differ from those who did not, except that returning mothers were older, $t(221) = 2.52$, $p = .012$. Informed consent was obtained from the biological mother at each wave. All procedures were approved by the research board of the participating university.

Measures

Maternal EOI. Mothers were audio-recorded during an FMSS about what kind of a person their child is and how the two of them get along (Magaña-Amato, 1993). The FMSS of seven (3.14%) mothers who responded in Spanish were translated to English for coding and reverse-translated by two native Spanish speakers. Each FMSS transcript was rated by three to six coders who were blind to other information about the mother and child. Disagreements between coders were resolved through discussion until consensus was reached. Coders were trained to reliability (i.e., 85% agreement) by Wamboldt and colleagues using scoring procedures they adapted from Magaña-Amato (1993; Wamboldt et al., 2000). A random subset of 48 cases was double-coded by a separate group of three to six coders to check for reliability using Krippendorff's alpha (Hayes & Krippendorff, 2007).

Following prior work (e.g., Rogosch et al., 2004), raters evaluated global EOI on a 3-point scale (*high*, *borderline*, or *low*) across the five EOI criteria (Krippendorff's $\alpha = .82$): (a) self-sacrifice/overprotection (SSOP), which was conveyed by statements reflecting attitudes and/or behaviors that are self-sacrificing, overprotective, lack objectivity, or indicate boundary dissolution and scored as "low" (0), "borderline" (1), or "full" (2), $\alpha = .78$; (b) emotional display (e.g., crying during the FMSS), not evident in this sample; (c) excessive detail about the child's past without relating it to the present, $\alpha = 1.00$; (d) SOAs, including love or willingness to do anything for the child, coded as "present" or "absent," $\alpha = 1.00$; and (e) exaggerated praise, coded as "present" or "absent" based on the presence of five or more positive remarks (e.g., "she's caring"), $\alpha = .83$. High global EOI was assigned based on full SSOP, or two or more of the following: excessive detail, one or more SOAs, and exaggerated praise. Borderline global EOI was rated only if one of the latter three criteria was present or SSOP was borderline.

Child behavior problems. The Test Observation Form (TOF; McConaughy & Achenbach, 2004) is a standardized tool for acquiring examiner ratings of child behavior for Ages 2 to 18. Immediately following the laboratory visit at each wave, examiners rated the child across 125 behavioral descriptors using a 4-point scale that ranged from no occurrence of the behavior (0), to very slight or ambiguous occurrence of the behavior (1), to a definite occurrence with mild to moderate intensity and frequency and less than three minutes total duration (2), to a definite occurrence with severe high intensity, high frequency, or three or more minutes total duration (3). Examiners coded child behavior across 3 hr of observation, during which the child faced various emotionally and cognitively challenging tasks, including tests of IQ, delay of gratification, inhibitory control, and self-concept. The broadband externalizing problems (e.g., "defiant, talks back, or sarcastic," "resistant or refuses to comply") and internalizing problems (e.g., "nervous, high-strung, or tense," "withdrawn, doesn't get involved with examiner") raw scores were used in analyses. TOF

scores are scaled with respect to child age and gender with a t score ≥ 63 connoting clinically significant problems (McConaughy & Achenbach, 2004). Clinically elevated externalizing problems were observed in 33.3% and 38.4% of the current sample at Waves 1 and 2, respectively, and clinically elevated internalizing problems were observed in 41.1% and 35.8% of the current sample at Waves 1 and 2, respectively.

Raters were doctoral- and bachelor-level examiners trained and supervised by the second author. Although not available from the single rater data in this study, McConaughy and Achenbach (2004) reported interrater reliabilities of $r = .78$ and $.43$ for the externalizing and internalizing behavior scores, respectively, and test-retest reliabilities of $r = .83$ for both scales. The TOF was validated in a diverse sample, and has since been used in other ethnographically diverse samples (Marcelo & Yates, 2014; Rettew, Stanger, McKee, Doyle, & Hudziak, 2006).

Child intelligence. The Vocabulary and Block Design subtests of the Wechsler Preschool and Primary Scale of Intelligence-III were administered at Wave 1 to yield an abbreviated assessment of child IQ (Wechsler, 2002).

Maternal psychopathology. The Brief Symptom Inventory (BSI; Derogatis, 1993) evaluated mothers' psychopathology during the week preceding the Wave 1 interview. Participants indicated how much 53 symptoms (e.g., "feeling lonely") bothered them on a 5-point Likert scale from *not at all* (0) to *extremely* (4). The BSI is an abbreviated form of the Symptom Checklist 90-Revised (Derogatis, 1983), with acceptable reliability in clinical and community populations (Boulet & Boss, 1991; Derogatis & Melisaratos, 1983), diverse racial/ethnic groups (Hoe & Brekke, 2009), and in this sample ($\alpha = .94$). Clinical elevations in maternal psychopathology (i.e., global severity index t score ≥ 63) were observed in 14.16% of this sample at Wave 1.

Maternal stress. Mothers reported on their exposure to Stressful Life Events during the Wave 1 assessment using a list of 19 items from the widely used Parent Stress Index (Abidin, 1995). Participants were asked if an array of events (e.g., divorce, death, change in finances) had occurred in the immediate family during the preceding 12 months. If the mother endorsed "yes," she was asked to rate how much of an effect it had on her using a 5-point Likert scale ranging from an *extremely positive* (1) to an *extremely negative* (5) impact (Sarason, Johnson, & Siegel, 1978). Scores were recoded from extremely negative (2) to neutral (0) to extremely positive (-2) values and composited to yield an index of maternal stress.

Family socioeconomic status. Hollingshead's (1975) Four-Factor Index of Social Status evaluated SES based on caregivers' education and occupation. Scores ranged from "unemployed with a 10th grade education" (9) to "an attorney with a graduate degree" (66), with higher scores connoting higher SES ($M_{\text{SES}} = 31.95$; $SD = 12.31$; e.g., a licensed vocational nurse).

Maternal receptive vocabulary. Maternal receptive vocabulary was assessed with the Shipley-Hartford Institute of Living Scale (SILS) vocabulary subscale (Shipley, 1940). The SILS assesses intellectual ability, and has been employed in samples with Black/African American and Hispanic/Latino adults (Bowers & Pantle, 1998). Mothers circled a word with the same meaning as a target word from four options. Correct answers were summed over 40 items.

Data Analytic Plan

Data preparation and missingness. The rate of missing cases ranged across variables with a mean of 6.88% ($SD = 6.38$). Of the 223 dyads, four children at Wave 1 and 33 children at Wave 2 were missing examiner-reported child behavior problems, 14 mothers were missing vocabulary scores, and four mothers were missing Wave 1 psychopathology data. All available data on the 223 participants were included in analyses using maximum likelihood estimation with robust standard errors (Schafer & Graham, 2002).

A multivariate analysis of variance (ANOVA) tested mean differences in child age and IQ, maternal age, SES, psychopathology, stress, and vocabulary, and child externalizing and internalizing problems at Waves 1 and 2 as a function of child gender and maternal race/ethnicity. Chi-square analyses evaluated group differences in single mother status, SSOP, excessive detail, SOAs, and exaggerated praise. Bivariate relations informed the selection of covariates for path analyses to evaluate if and how EOI criteria predicted changes in child behavior problems. Predictors were measured at Wave 1 and centered to minimize collinearity.

Model evaluation and multigroup comparisons. Model evaluation and comparison of nested path analytic models were examined using Mplus version 6.1 (Muthén & Muthén, 2010). Absolute model fit was evaluated with the comparative fit index (CFI; >0.90), the Tucker–Lewis index (TLI; >0.90), and the root mean square error of approximation (<0.08). Failure to meet these criteria on one or more fit indices was interpreted as poor model fit. Path analyses evaluated associations between EOI criteria and change in child externalizing and internalizing behavior problems from preschool to first grade. We specified a model including stability paths over time for each dependent variable (e.g., regressing externalizing at Wave 2 on externalizing at Wave 1), and prospective paths between salient covariates (i.e., child IQ, single mother status, family SES, maternal stress) and Wave 2 externalizing and internalizing problems, as well as between EOI criteria

and Wave 2 externalizing and internalizing problems. Multiple group comparisons tested the invariance of observed pathways as a function of child gender and maternal race/ethnicity using a scaling constant, the c coefficient, to evaluate chi-square difference tests between models with constrained and unconstrained paths between groups (i.e., boys vs. girls; Hispanic/Latina vs. non-Hispanic/Latina; Satorra, 2000). When the chi-square difference test was significant, we selected the less parsimonious (i.e., unconstrained) model, allowing the paths to differ between groups (i.e., moderation).

Results

Descriptive Statistics

A multivariate ANOVA indicated no significant main effects for child gender (Wilks' $\lambda = .970$, $p = .936$) or maternal race/ethnicity (Wilks' $\lambda = .771$, $p = .126$), nor for their interaction (Wilks' $\lambda = .820$, $p = .491$) across child age, child IQ, maternal age, family SES, maternal psychopathology, maternal stress, maternal vocabulary, and externalizing and internalizing problems at Waves 1 and 2. Chi-square analyses indicated that mothers of boys expressed higher levels of SSOP than mothers of girls, $\chi^2(2) = 9.31$, $p = .010$, and endorsed more SOAs than mothers of girls, $\chi^2(1) = 9.95$, $p = .002$; however, mothers of girls expressed more excessive detail than mothers of boys, $\chi^2(1) = 5.19$, $p = .023$ (see Table 1).

Continuous ratings of global EOI as high (21.52%), borderline (27.80%), or low (50.67%) were derived from SSOP scores (16.14% of FMSS were rated as full SSOP, 4.93% as borderline, and 78.92% as absent), excessive detail (present in 3.59% of FMSS), SOAs (present in 13.00% of FMSS), and exaggerated praise (present in 29.15% of FMSS; see Table 2).

Table 1
Descriptive and Bivariate Statistics for EOI Criteria, Child Behavior Problems, and Covariates

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Child age (months)	—															
2. Child IQ	-.05	—														
3. Maternal age (years)	.04	.26**	—													
4. Maternal vocabulary	-.08	.26**	.11	—												
5. Single mother status	.11	-.08	-.03	-.09	—											
6. Family SES	-.05	.31**	.18**	.38**	-.14*	—										
7. Maternal psychopathology	-.10	.02	.04	.05	.05	-.07	—									
8. Maternal stress	-.04	-.04	.14*	-.03	.19**	-.08	.30**	—								
9. SSOP	.06	-.15*	-.03	-.09	.10	-.05	.07	.03	—							
10. Excessive detail	.09	.00	-.09	-.03	-.03	-.02	-.07	-.03	.03	—						
11. SOAs	.09	-.03	.04	-.05	.19**	-.14*	-.09	-.04	.08	-.08	—					
12. Exaggerated praise	.07	.06	-.08	-.02	.07	-.13*	-.09	-.15*	.08	-.02	.10	—				
13. Externalizing W1	-.09	-.19**	-.09	-.04	.07	-.13	.10	-.05	.14*	-.08	.03	.08	—			
14. Internalizing W1	-.02	-.24**	-.12	-.03	.06	-.11	.06	-.08	.07	.06	-.07	-.01	.34**	—		
15. Externalizing W2	.04	-.22**	-.01	-.07	.24**	-.25**	.10	-.01	.27**	-.06	.35**	.10	.32**	.01	—	
16. Internalizing W2	.13	-.14*	-.11	-.14	.01	-.20**	-.01	.06	.13	.13	.01	.00	-.08	.17*	.02	—
Mean/%	49.08	95.41	30.51	24.76	18.83%	31.95	48.51	-1.08	.37	3.59%	13.00%	29.15%	16.91	8.61	10.73	4.42
SD	2.91	13.64	6.00	5.02	—	12.31	11.06	3.53	.75	—	—	—	18.07	9.08	12.49	5.02

Note. Single mother status: 0 = partnered, 1 = single. EOI = emotional overinvolvement; SES = socioeconomic status; SSOP = self-sacrifice/overprotection; SOAs = statements of attitude (0 = absent, 1 = present); W1 = Wave 1, W2 = Wave 2.

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

Table 2
Combinations of EOI Criteria by EOI Rating

EOI rating	EOI criteria combination	% (n) Within total sample	% (n) Within EOI rating
High		21.52% (48)	
	Full SSOP		35.42% (17)
	Full SSOP and exaggerated praise		20.83% (10)
	≥1 SOAs and exaggerated praise		18.75% (9)
	Full SSOP and ≥1 SOAs		10.42% (5)
	Full SSOP, exaggerated praise, and ≥1 SOAs		6.25% (3)
	Full SSOP and excessive detail		4.17% (2)
Borderline	Exaggerated praise and excessive detail		4.17% (2)
		27.80% (62)	
	Exaggerated praise		58.06% (36)
	≥1 SOAs		19.35% (12)
	Borderline SSOP and exaggerated praise		8.06% (5)
Low	Borderline SSOP		8.06% (5)
	Excessive detail		6.45% (4)
		50.67% (113)	

Note. EOI = emotional overinvolvement; SSOP = self-sacrifice/overprotection; SOAs = statements of attitude.

Bivariate Relations

As shown in Table 1, child IQ was related to lower SSOP, and fewer externalizing and internalizing problems at Waves 1 and 2. Single mother status was positively associated with SOAs and with higher levels of child externalizing problems at Wave 2. Family SES was negatively associated with SOAs, exaggerated praise, and externalizing and internalizing problems at Wave 2. Maternal stress was negatively associated with exaggerated praise. Relations among EOI criteria were not significant. SSOP was positively related to externalizing at Waves 1 and 2, whereas SOAs were positively related to externalizing at Wave 2. Neither excessive detail nor exaggerated praise was associated with behavior problems at either wave.

Path Analyses

Model 1 evaluated the effects of each EOI criterion on change in externalizing and internalizing behavior problems from pre-

school to first grade while accounting for covariates related to EOI and/or child behavior problems, including child IQ, single mother status, family SES, maternal stress, and Wave 1 externalizing and internalizing problems. Child age, maternal age, maternal vocabulary, and psychopathology were not related to the study variables, and were omitted from further analyses. We evaluated EOI criteria simultaneously to account for co-occurring criteria that could suppress or augment other effects.

Model fit indexes are shown in Table 3. The hypothesized model (Model 1) evidenced poor fit to the data, as indicated by the chi-square test, and low CFI and TLI values. The revised model (Model 2) omitted internalizing problems given the absence of significant relations with EOI criteria, but the model fit remained poor, albeit improved over Model 1. Model 3 trimmed nonsignificant paths to Wave 2 externalizing problems, including child IQ, single mother status, maternal stress, excessive detail, and exaggerated praise, yielding modest fit. Model 4 applied suggested modifications produced by Mplus, including two theoretically

Table 3
Fit Statistics for Path Analyses Showing Associations of EOI Criteria With Child Behavior Problems

Model	Description	χ^2	df	p	$\Delta\chi^2$	Δdf	p	RMSEA	90% CI	CFI	TLI
1	Initial model—EXT & INT	37.883	18	.004	—	—	—	.070	[.038, .102]	.714	.666
2	EXT only	16.801	8	.032	—	—	—	.070	[.020, .117]	.840	.820
3	EXT only—trimmed ns covariates	7.923	3	.048	—	—	—	.086	[.008, .161]	.892	.856
4	EXT only—added covariances ^a	5.914	4	.206	—	—	—	.046	[.000, .119]	.958	.958
5	Final model freed by gender	6.925	8	.545	—	—	—	.000	[.000, .101]	1.000	1.019
5.1	Final model constrained by gender	21.809	14	.083	14.39	6	.026	.071	[.000, .125]	.859	.919
5.2	Gender constrained covariances	10.946	10	.362	3.93	2	.140	.029	[.000, .109]	.983	.986
5.3	Gender constrained stability	7.300	9	.606	0.42	1	.519	.000	[.000, .092]	1.000	1.027
5.4	Gender constrained SES → EXT W2	7.006	9	.637	0.06	1	.808	.000	[.000, .089]	1.000	1.032
5.5	Gender constrained SSOP → EXT W2	7.244	9	.614	0.40	1	.525	.000	[.000, .091]	1.000	1.029
5.6	Gender constrained SOAs → EXT W2	17.328	9	.044	9.34	1	.091	.091	[.015, .155]	.849	.866
6	Final model freed by Latina	13.343	8	.101	—	—	—	.077	[.000, .148]	.892	.892
6.1	Final model constrained by Latina	16.652	14	.275	4.09	6	.664	.041	[.000, .105]	.946	.969

Note. EOI = emotional overinvolvement; df = degrees of freedom; RMSEA = root mean square error of approximation; CI = confidence interval; CFI = comparative fit index; TLI = Tucker-Lewis index; EXT = externalizing; INT = internalizing; SES = socioeconomic status; W1 = Wave 1; W2 = Wave 2; SSOP = self-sacrifice/overprotection; SOAs = statements of attitude.

^a Additional covariances included (a) SES with EXT W1, and (b) SSOP with EXT W1.

defensible covariance terms: (a) SES with Wave 1 externalizing, and (b) SSOP with Wave 1 externalizing. This final model evidenced good fit and explained 23.9% of the variance in externalizing behavior problems at Wave 2 (see Figure 1). Externalizing behavior problems evidenced significant stability over time. Externalizing at Wave 1 was negatively associated with family SES and marginally associated with more SSOP. Family SES predicted a decrease in externalizing problems. SSOP and SOAs predicted increased externalizing behavior problems.

Invariance Analyses

Child gender. The final model with unconstrained paths by gender (Model 5) was compared with a fully constrained model (Model 5.1) with all paths fixed to equality between boys and girls, yielding a significant decrease in model fit as a function of the equality constraints, $\Delta\chi^2(6) = 14.39, p = .026$. To identify moderated paths, five models were estimated in which the exogenous covariances (Model 5.2), stability of externalizing (Model 5.3), or the effects of family SES (Model 5.4), SSOP (Model 5.5), or SOAs (Model 5.6) on externalizing at Wave 2 were constrained (see Table 3). Only constraining the path from SOAs to Wave 2 externalizing problems yielded a significant decline in model fit, $\Delta\chi^2(1) = 9.34, p = .002$, indicating a significant effect for boys ($\beta = .446, p < .001$) but not for girls ($\beta = -.021, p = .776$).

Maternal race/ethnicity. A comparison of fit between a model with unconstrained parameters across Hispanic/Latina and non-Hispanic/Latina mothers (Model 6), and a model with fully fixed parameters (Model 6.1) was not significant, $\Delta\chi^2(6) = 4.09, p = .664$ (see Table 3).

Discussion

The findings of the current study support prior suggestions that EOI is not a cohesive construct for research and practice with young children (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000), and clarify the developmental implications of specific EOI criteria for understanding children's behavioral adjustment. Significant predictive relations emerged between SSOP and SOAs (but not exaggerated praise and excessive detail) with increases in children's externalizing problems from preschool

to first grade. However, EOI criteria were not related to changes in children's internalizing behavior problems. Observed relations were largely consistent across boys and girls, and did not significantly differ between Hispanic/Latina and non-Hispanic/Latina mothers.

Parental expressions of SSOP encompass enmeshing or controlling attitudes about the parent-child relationship that likely guide parenting patterns that overtax (Jacobvitz & Sroufe, 1987) and/or fail to support (Carlson et al., 1995) children's emergent capacities to modulate arousal. Deficits in emotion and behavior regulation abilities may contribute to increased child behavior problems amid growing demands for self-regulation during the transition to formal school. Whereas most studies that examined SSOP did so with exclusive attention to internalizing problems (e.g., Gar & Hudson, 2008; Silk et al., 2009), the present study examined both internalizing and externalizing behavior problems in a longitudinal design, yielding important evidence that SSOP may be relevant to growth in externalizing behavior problems. Regarding SOAs, prior studies have either failed to detect effects (McCarty & Weisz, 2002; Silk et al., 2009), or have documented concurrent relations with fewer behavior problems when combining SOAs with exaggerated praise to yield a global index of positivity (Psychogiou et al., 2007). The current study is among the few to examine SOAs independently and prospectively, yielding evidence that SOAs may have negative implications for children's externalizing problems, despite prior assumptions that SOAs are proxies for global positivity. Importantly, SOAs may capture sentiments of warmth and affection (e.g., "I love my daughter") or overwhelming expressions (e.g., "I love him to death. He's my everything") that may burden the child or interfere with the child's normative bids for autonomy. Future research may benefit from revised coding of SOAs to account for this distinction.

Other EOI criteria were not associated with changes in externalizing problems, despite our expectation that exaggerated praise would predict decreased child behavior problems over time, given its negative concurrent relations with behavior problems in extant work (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000). This may be related to our use of examiner rather than maternal reports, as mothers whose narratives contain exaggerated praise may idealize their children and consequently underreport behavior problems, whereas observers may be less biased in their assessments. As suggested by prior cross-sectional findings (McCarty & Weisz, 2002), excessive detail was not associated with changes in externalizing problems. Finally, as emotional display was not evident in this sample, and is generally very low base-rate (e.g., Gar & Hudson, 2008; Wamboldt et al., 2000), its significance awaits further consideration.

None of the EOI criteria were related to changes in children's internalizing behavior problems. Although studies have not yet examined relations between most EOI criteria and internalizing problems, the absence of significant relations between SSOP and internalizing problems within and across time was surprising, given its association with child anxiety in cross-sectional studies with clinical samples (Gar & Hudson, 2008; Hirshfeld et al., 1997). Our use of observer reports rather than maternal reports, child reports, or structured clinical interviews may have limited the specificity of our assessment of internalizing behavior problems. Indeed, prior studies showing significant associations of SSOP with internalizing symptoms among young children utilized clinical

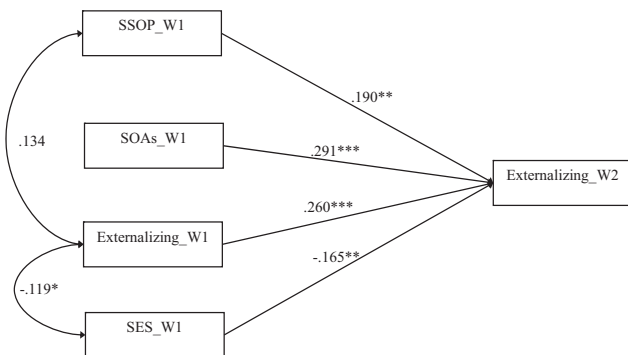


Figure 1. Standardized path coefficients in the final model (Model 4). SSOP = self-sacrifice/overprotection; SOAs = statements of attitude; W1 = Wave 1; W2 = Wave 2. Covariance of SSOP_W1 with Externalizing_W1 $p = .079$; * $p < .05$; ** $p < .01$; *** $p < .01$.

cian ratings based upon structured clinical interviews with the primary caregiver (Gar & Hudson, 2008; Hirshfeld et al., 1997; Stubbe et al., 1993). In addition, although examiner reports minimize the risk of shared method variance, the TOF may be a stronger indicator of readily observable behaviors that typify externalizing than internalizing problems.

This study further extended the literature by exploring potential differences in the significance of EOI criteria for development as a function of child gender and maternal race/ethnicity. SOAs emerged as a significant predictor of increased externalizing problems for boys, but not for girls. As discussed earlier, this pattern is consistent with prior evidence that boys may be especially sensitive to the quality of the parent-child relationship (Egeland & Farber, 1984; Sroufe & Egeland, 1991). Alternately, the quality of mothers' SOAs may vary between boys and girls, with more overwhelming expressions regarding sons than daughters. Interestingly, mothers of boys expressed more SSOP and SOAs than mothers of girls. Findings pointing to differences in the rates and/or significance of SSOP and SOAs by gender highlight the need for additional research on the etiology, form, and function of these constructs in early development.

Observed relations of SSOP and SOAs to change in children's externalizing behavior problems did not vary across Hispanic/Latina and non-Hispanic/Latina mothers. Unfortunately, the current sample size necessitated our categorization of both Black/African American and White/European American mothers as non-Hispanic/Latina. In light of evidence suggesting that the relational dynamics indexed by these constructs may be normative within Black/African American families given the value placed on close family ties and parent-child mutuality (McAdoo & Younge, 2009), the inclusion of Black/African American mothers in the comparison group may have occluded meaningful differences between Hispanic/Latina and White/European American mothers. Moreover, within the subsample of Hispanic/Latina mothers, differences in acculturation may have influenced the quality or impact of SSOP or SOAs on child behavior and adjustment, as prior studies with adult children have suggested (e.g., Aguilera et al., 2010).

These findings have important implications for future research on EE with young children. First, investigations of EE should consider EOI criteria as individual, orthogonal influences on child behavior, especially with regard to externalizing problems. Second, there is a need to examine gender differences in the salience of EOI criteria, as they may evidence qualitative differences across mothers' parenting of sons versus daughters. Third, multiwave longitudinal research is needed to explicate causal relations among EOI and child behavior problems. Although our findings offer preliminary support for a parent-effect model of EOI, the transactional nature of development necessitates extended designs that consider child effects. Fourth, although a core tenet of the EE model is that attitudes expressed by a parent about their child guide parenting behavior, few studies have assessed whether SSOP and SOAs are associated with theoretically relevant parenting behaviors (e.g., intrusiveness, enmeshment, role reversal). Therefore, future studies may benefit from exploring these constructs during observed parent-child interactions to elucidate the mechanisms that underlie the effects of SSOP and SOAs on child adjustment. Fifth, further research is needed to clarify if and how the expression and significance of EOI criteria may vary across clinical and

community samples in which rates of child behavior problems and/or parental distress and dysfunction may influence the prevalence and/or effects of these constructs. Finally, the use of independent examiners' reports of child adaptation is both a strength and limitation of this study as internalizing symptoms may be best assessed across multiple informants. Likewise, although single-examiner reports are widely used in research (e.g., Martel, Grémillion, & Tackett, 2014), the inclusion of multiple observational reports would have permitted additional reliability analyses.

In addition to its generativity for future research, this investigation supports the value of the FMSS as a tool to identify parent-child dynamics that influence the growth of externalizing problems in early development. In particular, our study highlights the need for parent-focused practices to redress problematic attitudes and behaviors indexed by SSOP and SOAs, which potentially undermine effective parenting, to prevent the early onset and/or exacerbation of child externalizing behavior problems.

References

- Abidin, R. (1995). *Parent stress index*. Odessa, FL: Psychological Assessment Resources.
- Aguilera, A., López, S. R., Breitborde, N. J. K., Kopelowicz, A., & Zarate, R. (2010). Expressed emotion and sociocultural moderation in the course of schizophrenia. *Journal of Abnormal Child Psychology*, *119*, 875–885. <http://dx.doi.org/10.1037/a0020908>
- Asarnow, J. R., Tompson, M., Hamilton, E. B., Goldstein, M. J., & Guthrie, D. (1994). Family-expressed emotion, childhood-onset depression, and childhood-onset schizophrenia spectrum disorders: Is expressed emotion a nonspecific correlate of child psychopathology or a specific risk factor for depression? *Journal of Abnormal Child Psychology*, *22*, 129–146. <http://dx.doi.org/10.1007/BF02167896>
- Asarnow, J. R., Tompson, M., Woo, S., & Cantwell, D. P. (2001). Is expressed emotion a specific risk factor for depression or a nonspecific correlate of psychopathology? *Journal of Abnormal Child Psychology*, *29*, 573–583. <http://dx.doi.org/10.1023/A:1012237411007>
- Baker, B. L., Heller, T. L., & Henker, B. (2000). Expressed emotion, parenting stress, and adjustment in mothers of young children with behavior problems. *Journal of Child Psychology and Psychiatry*, *41*, 907–915. <http://dx.doi.org/10.1111/1469-7610.00678>
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development*, *67*, 3296–3319. <http://dx.doi.org/10.2307/1131780>
- Boger, K. D., Tompson, M. C., Briggs-Gowan, M. J., Pavlis, L. E., & Carter, A. S. (2008). Parental expressed emotion toward children: Prediction from early family functioning. *Journal of Family Psychology*, *22*, 784–788. <http://dx.doi.org/10.1037/a0013251>
- Boulet, J., & Boss, M. W. (1991). Reliability and validity of the Brief Symptom Inventory. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *3*, 433–437. <http://dx.doi.org/10.1037/1040-3590.3.3.433>
- Bowers, T. L., & Pantle, M. L. (1998). Shipley institute for living scale and the Kaufman Brief Intelligence Test as screening instruments for intelligence. *Assessment*, *5*, 187–195. <http://dx.doi.org/10.1177/107319119800500209>
- Brown, G. W., Birley, J. L., & Wing, J. K. (1972). Influence of family life on the course of schizophrenic disorders: A replication. *The British Journal of Psychiatry*, *121*, 241–258. <http://dx.doi.org/10.1192/bjp.121.3.241>
- Brown, G. W., & Rutter, M. (1966). The measurement of family activities and relationships: A methodological study. *Human Relations*, *19*, 241–263. <http://dx.doi.org/10.1177/001872676601900301>

- Calkins, S. D., Blandon, A. Y., Williford, A. P., & Keane, S. P. (2007). Biological, behavioral, and relational levels of resilience in the context of risk for early childhood behavior problems. *Development and Psychopathology, 19*, 675–700. <http://dx.doi.org/10.1017/S095457940700034X>
- Campbell, S. B. (1995). Behavior problems in preschool children: A review of recent research. *Child Psychology & Psychiatry & Allied Disciplines, 36*, 113–149. <http://dx.doi.org/10.1111/j.1469-7610.1995.tb01657.x>
- Carlson, E. A., Jacobvitz, D., & Sroufe, L. A. (1995). A developmental investigation of inattentiveness and hyperactivity. *Child Development, 66*, 37–54. <http://dx.doi.org/10.2307/1131189>
- Cruise, R. C., Sheeber, L. B., & Tompson, M. C. (2011). Behavioral correlates of maternal expressed emotion in interaction tasks. *Journal of Family Psychology, 25*, 781–784. <http://dx.doi.org/10.1037/a0024699>
- Daley, D., Sonuga-Barke, E. J. S., & Thompson, M. (2003). Assessing expressed emotion in mothers of preschool AD/HD children: Psychometric properties of a modified speech sample. *British Journal of Clinical Psychology, 42*, 53–67. <http://dx.doi.org/10.1348/014466503762842011>
- Derogatis, L. R. (1983). *SCL-90-R: Administration, scoring, and procedures manual II for the revised version*. Towson, MD: Clinical Psychometric Research.
- Derogatis, L. R. (1993). *Brief Symptom Inventory: Administration, scoring, and procedures manual* (4th ed.). Minneapolis, MN: NCS Pearson.
- Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine, 13*, 595–605. <http://dx.doi.org/10.1017/S0033291700048017>
- Egeland, B., & Farber, E. A. (1984). Infant-mother attachment: Factors related to its development and changes over time. *Child Development, 55*, 753–771. <http://dx.doi.org/10.2307/1130127>
- Gar, N. S., & Hudson, J. L. (2008). An examination of the interactions between mothers and children with anxiety disorders. *Behaviour Research and Therapy, 46*, 1266–1274. <http://dx.doi.org/10.1016/j.brat.2008.08.006>
- Goodman, S. H., Adamson, L. B., Riniti, J., & Cole, S. (1994). Mothers' expressed attitudes: Associations with maternal depression and children's self-esteem and psychopathology. *Journal of the American Academy of Child & Adolescent Psychiatry, 33*, 1265–1274. <http://dx.doi.org/10.1097/00004583-199411000-00007>
- Gravener, J. A., Rogosch, F. A., Oshri, A., Narayan, A. J., Cicchetti, D., & Toth, S. L. (2012). The relations among maternal depressive disorder, maternal expressed emotion, and toddler behavior problems and attachment. *Journal of Abnormal Child Psychology, 40*, 803–813. <http://dx.doi.org/10.1007/s10802-011-9598-z>
- Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures, 1*, 77–89. <http://dx.doi.org/10.1080/19312450709336664>
- Hirshfeld, D. R., Biederman, J., Brody, L., Faraone, S. V., & Rosenbaum, J. F. (1997). Associations between expressed emotion and child behavioral inhibition and psychopathology: A pilot study. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 205–213. <http://dx.doi.org/10.1097/00004583-199702000-00011>
- Hoe, M., & Brekke, J. (2009). Testing the cross-ethnic construct validity of the Brief Symptom Inventory. *Research on Social Work Practice, 19*, 93–103. <http://dx.doi.org/10.1177/1049731508317285>
- Hollingshead, A. B. (1975). *Four-factor index of social status*. Unpublished manuscript. Yale University, New Haven, CT.
- Hooley, J. M. (2007). Expressed emotion and relapse of psychopathology. *Annual Review of Clinical Psychology, 3*, 329–352. <http://dx.doi.org/10.1146/annurev.clinpsy.2.022305.095236>
- Hooley, J. M., & Parker, H. A. (2006). Measuring expressed emotion: An evaluation of the shortcuts. *Journal of Family Psychology, 20*, 386–396.
- Jacobvitz, D., & Sroufe, L. A. (1987). The early caregiver-child relationship and attention-deficit disorder with hyperactivity in kindergarten: A prospective study. *Child Development, 58*, 1496–1504.
- Jenkins, J. H. (1992). Too close for comfort: Schizophrenia and emotional overinvolvement among Mexicano families. In A. D. Gaines (Ed.), *Ethnopsychiatry: The cultural construction of professional and folk psychiatries* (pp. 203–221). Albany, NY: SUNY Press.
- Kershner, J. G., Cohen, N. J., & Coyne, J. C. (1996). Expressed emotion in families of clinically referred and nonreferred children: Toward a further understanding of the expressed emotion index. *Journal of Family Psychology, 10*, 97–106. <http://dx.doi.org/10.1037/0893-3200.10.1.97>
- Kim Park, I. J., Garber, J., Ciesla, J. A., & Ellis, B. J. (2008). Convergence among multiple methods of measuring positivity and negativity in the family environment: Relation to depression in mothers and their children. *Journal of Family Psychology, 22*, 123–134. <http://dx.doi.org/10.1037/0893-3200.22.1.123>
- Liakopoulou, M., Alifiraki, T., Katideniou, A., Peppas, M., Maniati, M., Tzikas, D., . . . Dacou-Voutetakis, C. (2001). Maternal expressed emotion and metabolic control of children and adolescents with diabetes mellitus. *Psychotherapy and Psychosomatics, 70*, 78–85. <http://dx.doi.org/10.1159/000056230>
- López, S. R., Ramírez García, J. I., Ullman, J. B., Kopelowicz, A., Jenkins, J., Breitborde, N. J. K., & Placencia, P. (2009). Cultural variability in the manifestation of expressed emotion. *Family Process, 48*, 179–194. <http://dx.doi.org/10.1111/j.1545-5300.2009.01276.x>
- Magaña, A. B., Goldstein, J. M., Karno, M., Miklowitz, D. J., Jenkins, J., & Falloon, I. R. H. (1986). A brief method for assessing expressed emotion in relatives of psychiatric patients. *Psychiatry Research, 17*, 203–212. [http://dx.doi.org/10.1016/0165-1781\(86\)90049-1](http://dx.doi.org/10.1016/0165-1781(86)90049-1)
- Magaña-Amato, A. (1993). *Manual for coding expressed emotion from the five-minute speech sample: UCLA Family Project*. Los Angeles, CA: University of California.
- Marcelo, A. K., & Yates, T. M. (2014). Prospective relations among preschoolers' play, coping, and adjustment as moderated by stressful events. *Journal of Applied Developmental Psychology, 35*, 223–233. <http://dx.doi.org/10.1016/j.appdev.2014.01.001>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253. <http://dx.doi.org/10.1037/0033-295X.98.2.224>
- Martel, M. M., Gremillion, M. L., & Tackett, J. L. (2014). Personality traits elucidate sex differences in attention-deficit/hyperactivity disorder comorbidity during early childhood. *Journal of Psychopathology and Behavioral Assessment, 36*, 237–245. <http://dx.doi.org/10.1007/s10862-013-9382-1>
- McAdoo, H. P., & Younge, S. N. (2009). Black families. In H. A. Neville, B. M. Tynes, & S. O. Utsey (Eds.), *Handbook of African American psychology* (pp. 103–115). Thousand Oaks, CA: Sage
- McCarty, C. A., & Weisz, J. R. (2002). Correlates of expressed emotion in mothers of clinically-referred youth: An examination of the five-minute speech sample. *Journal of Child Psychology and Psychiatry, 43*, 759–768. <http://dx.doi.org/10.1111/1469-7610.00090>
- McConaughy, S. H., & Achenbach, T. M. (2004). *Manual for the Test Observation Form for ages 2–18*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Mesman, J., Bongers, I. L., & Koot, H. M. (2001). Preschool developmental pathways to preadolescent internalizing and externalizing problems. *Journal of Child Psychology and Psychiatry, 42*, 679–689. <http://dx.doi.org/10.1111/1469-7610.00763>
- Mueser, K. T., Bellack, A. S., Wade, J. H., Sayers, S. L., Tierney, A., & Haas, G. (1993). Expressed emotion, social skill, and response to negative affect in schizophrenia. *Journal of Abnormal Psychology, 102*, 339–351. <http://dx.doi.org/10.1037/0021-843X.102.3.339>
- Muthén, L. K., & Muthén, B. O. (2010). *Mplus user's guide* (6th ed.). Los Angeles, CA: Author.

- Parker, G., & Johnson, P. (1987). Parenting and schizophrenia: An Australian study of expressed emotion. *Australian and New Zealand Journal of Psychiatry*, *21*, 60–66. <http://dx.doi.org/10.3109/00048678709160900>
- Psychogiou, L., Daley, D. M., Thompson, M. J., & Sonuga-Barke, E. J. S. (2007). Mothers' expressed emotion toward their school-aged sons: Associations with child and maternal symptoms of psychopathology. *European Child & Adolescent Psychiatry*, *16*, 458–464. <http://dx.doi.org/10.1007/s00787-007-0619-y>
- Rettew, D. C., Stanger, C., McKee, L., Doyle, A., & Hudziak, J. J. (2006). Interactions between child and parent temperament and child behavior problems. *Comprehensive Psychiatry*, *47*, 412–420. <http://dx.doi.org/10.1016/j.comppsy.2005.12.008>
- Rogosch, F. A., Cicchetti, D., & Toth, S. L. (2004). Expressed emotion in multiple subsystems of the families of toddlers with depressed mothers. *Development and Psychopathology*, *16*, 689–709. <http://dx.doi.org/10.1017/S0954579404004730>
- Sabogal, F., Marin, G., Otero-Sabogal, R., Marin, B. V., & Perez-Stable, E. J. (1987). Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences*, *9*, 397–412. <http://dx.doi.org/10.1177/07399863870094003>
- Sarason, I. G., Johnson, J. H., & Siegel, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*, *46*, 932–946. <http://dx.doi.org/10.1037/0022-006X.46.5.932>
- Satorra, A. (2000). Scaled and adjusted restricted tests in multi-sample analysis of moment structures. In D. D. H. Heijmans, D. S. G. Pollock, & A. Satorra (Eds.), *Innovations in multivariate statistical analysis: A festschrift for Heinz Neudecker* (Vol. 36, pp. 233–247). Dordrecht, The Netherlands: Kluwer Academic.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, *7*, 147–177. <http://dx.doi.org/10.1037/1082-989X.7.2.147>
- Shaffer, A., & Egeland, B. (2011). Intergenerational transmission of familial boundary dissolution: Observations and psychosocial outcomes in adolescence. *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, *60*, 290–302. <http://dx.doi.org/10.1111/j.1741-3729.2011.00653.x>
- Shipley, W. C. (1940). A self-administering scale for measuring intellectual impairment and deterioration. *The Journal of Psychology: Interdisciplinary and Applied*, *9*, 371–377. <http://dx.doi.org/10.1080/00223980.1940.9917704>
- Silk, J. S., Ziegler, M. L., Whalen, D. J., Dahl, R. E., Ryan, N. D., Dietz, L. J., . . . Williamson, D. E. (2009). Expressed emotion in mothers of currently depressed, remitted, high-risk, and low-risk youth: Links to child depression status and longitudinal course. *Journal of Clinical Child and Adolescent Psychology*, *38*, 36–47. <http://dx.doi.org/10.1080/15374410802575339>
- Sroufe, L. A., & Egeland, B. (1991). Illustrations of person-environment interaction from a longitudinal study. In T. D. Wachs & R. Plomin (Eds.), *Conceptualization and measurement of organism-environment interaction* (pp. 68–84). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/10100-004>
- Sroufe, L. A., & Rutter, M. (1984). The domain of developmental psychopathology. *Child Development*, *55*, 17–29. <http://dx.doi.org/10.2307/1129832>
- St John-Seed, M., & Weiss, S. (2002). Maternal expressed emotion as a predictor of emotional and behavioral problems in low birth weight children. *Issues in Mental Health Nursing*, *23*, 649–672. <http://dx.doi.org/10.1080/01612840290052767>
- Stubbe, D. E., Zahner, G. E., Goldstein, M. J., & Leckman, J. F. (1993). Diagnostic specificity of a brief measure of expressed emotion: A community study of children. *Child Psychology & Psychiatry & Allied Disciplines*, *34*, 139–154. <http://dx.doi.org/10.1111/j.1469-7610.1993.tb00976.x>
- Sullivan, A. E., & Miklowitz, D. J. (2010). Family functioning among adolescents with bipolar disorder. *Journal of Family Psychology*, *24*, 60–67. <http://dx.doi.org/10.1037/a0018183>
- U.S. Census Bureau. (2011). *State and County QuickFacts*. Retrieved from <http://quickfacts.census.gov/qfd/states/06/06065.html>
- U.S. Census Bureau. (2012). *Current Population Reports, P60-243, Income, poverty, and health insurance coverage in the United States: 2011*. Washington, DC: U.S. Government Printing Office.
- Wamboldt, F. S., O'Connor, S. L., Wamboldt, M. Z., Gavin, L. A., & Klinnert, M. D. (2000). The five minute speech sample in children with asthma: Deconstructing the construct of expressed emotion. *Journal of Child Psychology and Psychiatry*, *41*, 887–898. <http://dx.doi.org/10.1111/1469-7610.00676>
- Wechsler, D. (2002). *Wechsler Preschool and Primary Scale of Intelligence* (3rd ed.). San Antonio, TX: Harcourt Assessment.
- Wuerker, A. K., Haas, G. L., & Bellack, A. S. (1999). Racial and gender differences in expressed emotion and interpersonal control in families of persons with schizophrenia. *Family Process*, *38*, 477–496. <http://dx.doi.org/10.1111/j.1545-5300.1999.00477.x>
- Yan, L. J., Hammen, C., Cohen, A. N., Daley, S. E., & Henry, R. M. (2004). Expressed emotion versus relationship quality variables in the prediction of recurrence in bipolar patients. *Journal of Affective Disorders*, *83*, 199–206. <http://dx.doi.org/10.1016/j.jad.2004.08.006>

Received September 26, 2014

Revision received April 17, 2015

Accepted May 13, 2015 ■