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The Family Socialization Interview—Revised (FSI-R): a Comprehensive Assessment of Parental Disciplinary Behaviors

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Abstract

Elucidating the complex mechanisms by which harsh parenting increases risk of child psychopathology is key to targeted prevention. This requires nuanced methods that capture the varied perceptions and experiences of diverse families. The Family Socialization Interview—Revised (FSI-R), adapted from an interview developed by Dodge et al. (Child Development, 65,649–665,1994), is a comprehensive, semi-structured interview for characterizing methods of parental discipline used with young children. The FSI-R coding system systematically rates parenting style, usual discipline techniques, and most intense physical and psychological discipline based on rater judgment across two eras: (1) birth to the previous year, and (2) the previous year to present. The current study examined the psychometric properties of the FSI-R in a diverse, high-risk community sample of 386 mothers and their children, ages 3 to 6 years. Interrater reliability was good to excellent for codes capturing physically and psychologically harsh parenting, and restrictive/punitive parenting styles. Findings supported the FSI-R's convergent and incremental validity. Importantly, the FSI-R demonstrated incremental utility, explaining unique variance in children's externalizing and internalizing symptoms beyond that explained by traditional surveys and observed parenting. The FSI-R appeared particularly

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Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

promising for capturing risk associated with young children's depressive symptoms, as these were generally not significantly associated with other measures of harsh parenting. Overall, findings support the added value of the FSI-R within a multi-method assessment of disciplinary practices across early child development. Future implications for prevention are discussed.

Keywords

Parenting; Validity; Reliability; Family Socialization Interview—Revised; Discipline

Healthy socioemotional development of young children is supported by the quality of the caregiving relationship. Parent-child relationships and parenting behavior traits can have long-term consequences for children (Lansford et al. 2014; Zaslow et al. 2006). Harsh disciplinary practices, which at the most severe include maltreatment, increase risk of developmental psychopathology and maladaptation. Specifically, studies employing survey data have reported associations between harsh parenting and negative outcomes, including externalizing and internalizing symptoms (Chang et al. 2003; Gershoff et al. 2012; Lansford et al. 2014; Shumow et al. 1998). Many studies show such associations, but the variance explained is typically modest, especially in young children (Ferguson 2013). More limited effects in young children may partially reflect the challenges of studying these phenomena in a developmental period when “normative misbehaviors” are common (Wakschlag et al. 2012) and spanking remains a prevalent disciplinary practice (Straus and Stewart 1999; Taylor et al. 2010). With frequent opportunities for discipline, obtaining a balanced picture of young children's day-to-day experiences of harsh parenting is complex. Checklist measures often used to assess harsh parenting provide valuable information about cumulative exposure. However, they offer limited insight into parents' typical disciplinary practices and, in this developmental period especially, scores may be disproportionately influenced by the frequency of spanking. Characterization of parents' typical and most extreme methods of discipline may be essential for understanding the features of harsh parenting that increase psycho-pathology risk in young children, but such measures are lacking. The current study examines the psychometric properties of the Family Socialization Interview—Revised (FSI-R), an interview-based method and coding system for characterizing parenting styles, including harsh methods, in families with preschool-age children.

One common method of assessing harsh parental discipline is the Parent-Child Conflict Tactics Scale (Straus et al. 1998), a behavior checklist that generates frequency counts of parenting behaviors over the past year. The CTSPC garners information about the frequency of a set of specific behaviors of varying severity. Thus, for example, a mother might report that she spanked her child on the bottom “more than 20 times,” used a belt on the child's bottom “3to 5” times, and slapped his hand, arm or leg “more than 20 times,” providing an important indicator of how many times she behaved aggressively toward the child over a 1-year period. However, as behaviors are weighted equally regardless of their severity, a parent who used her hand to spank her child on the bottom through the clothes 20+ times might receive a much higher score than a parent who reported hitting her child with a fist “3 to 5” times, thus missing the greater impact of punching versus spanking with an open hand

through clothing. Similarly, for psychologically aggressive behaviors, threatening to send the child away is weighted the same as threatening to spank the child but not actually doing it. While such frequency-based approaches have proven to be of clear value (Ferguson 2013), they do not provide insight into the patterning of harshness over the course of children's ongoing experience.

Parents' disciplinary practices may vary from one episode to another depending on contextual factors, such as parental mood or stress, the perceived severity of the child's misbehavior, or the timing of the episode relative to other recent transgressions. Thus, a mother's usual method of discipline might involve threatening to spank the child, followed by a quick corrective spank on the child's bottom if the child does not correct his behavior. Other disciplinary episodes may be more intense, escalating into more severe behaviors, such as screaming at the child and repeatedly hitting him with a belt. An assessment that captures the patterning of disciplinary episodes may yield important information to complement that obtained by checklists. The FSI is designed to capture this information via an open-ended, semi-structured interview that engages parents in conversations about their usual disciplinary practices and methods used in situations when they feel angrier than usual or are at their highest intensity.

To bolster the validity of retrospective reporting, the FSI utilizes a timeline follow-back procedure that is increasingly used in substance abuse research (Estabrook et al. 2016). This method includes a review of (1) the dates of salient anchoring events (e.g., birthdays, holidays, developmental milestones) from the time of the child's birth to the present day, and (2) the child's positive and challenging behaviors over the same time period. Questions about discipline are embedded within the broader FSI interview about a wide range of child and family experiences, including family stressors, children's exposure to conflicts, and perceived social support, as well as, crucially, child misbehavior and parenting strategies (Dodge et al. 1994). This ordering is intended to allow the interviewer to develop rapport with the parent and put her at ease before querying about the potentially difficult topic of discipline, thus facilitating disclosure of more sensitive or negatively perceived parenting behaviors. Two eras of the child's life are probed: Era 1 (*Historical Era*) covers the first years of the child's life from birth to 1 year before the interview, and Era 2 (*Past Year Era*) pertains to the previous year. Interviewers ask mothers to describe how they discipline their children with open-ended questions that are followed by probes intended to elicit descriptions of a broad range of practices, from positive methods to those that are more severe or harsh. Questioning is designed to elicit a rich description of the mother's disciplinary practices in her own words, capturing both qualitative and quantitative aspects of discipline along a spectrum from mild to more intense or severe. For example, mothers are asked if and how they may spank, hit, slap, or grab their child, including frequency, number of hits, objects used, and whether or not they leave brief or lasting physical marks. The coding system (see below) rates parenting style and harsh parenting behaviors based on an integrative approach. Prior studies using the FSI in demographically diverse samples have linked spanking and more severe forms of physical discipline—including behaviors that constitute probable maltreatment—with adverse child outcomes, including antisocial behavior, aggression, and internalizing/externalizing problems (Jaffee et al. 2004; Keiley et al. 2001; Strassberg et al. 1994).

The current study uses a revised FSI interview and coding manual by Briggs-Gowan et al. (2011). Building closely on the original version, this revised version (FSI-R) includes additional probing and updated codes to comprehensively assess physically harsh and restrictive/punitive forms of discipline. Enhanced probing of psychologically harsh discipline, such as threats, yelling, and insults, allows for a rating of psychological discipline. For example, probes inquire about mothers' feelings of being "out of control," time spent yelling, and usual and most intense things said. Examples of probes and anecdotal responses are provided in Table S-1 (available online).

The original FSI coding system included usual and most severe codes for Harsh Physical Discipline, as well as a global code for Restrictive/Punitive parenting, within each era. FSI-R adds new codes to capture the usual and most severe Psychological discipline used in each era. The Usual code for each of these ratings characterizes the parent's typical method of discipline, whereas the Most Intense code captures the methods used when episodes are most severe. All ratings are made on a five-point Likert scale ranging from 0 to 4, as shown in Table 1. For Physical Discipline, increasing physical severity is rated on potential for bodily harm as evidenced by method used (e.g., child spanked with hand or whipped with belt), how it is used (e.g., on bare skin or through clothing), where on the body it was used (e.g., bottom, hand, face), frequency, and duration. Ratings for Physical Discipline range from 0 (none), or no physical punishment, to 4 (severe), which may include physical discipline that left a mark. The Psychological Discipline rating measures intensity and threat, which could be related to volume, content, or both. Ratings for Psychological Discipline ranged from 0 (none), meaning no loud, harsh, aggressive, or threatening psychological discipline, to 4 (severe), in which the parent's anger is out of control and may cause the child great distress. Raters take into consideration both the qualitative and quantitative information obtained by the interviewers (e.g., whether mother reports feeling out of control, duration of episode, number of hits or spanks, what she says to child, and how she says it). For the Restrictive/Punitive code, the overall information obtained from the discussion of discipline methods, including information from the Psychological and Physical codes, is used to determine the level to which the parent's overall discipline practices falls on a five-point scale, ranging from authoritative to authoritarian parenting styles. This style code ranges from 0 (authoritative/non-punitive) to 4 (restrictive/punitive). A rating of 0 characterizes a mother who is often authoritative and addresses misbehavior with controlled and appropriate, non-physical punishments. A rating of 4 characterizes a mother who is highly punitive and enforces strict obedience. This code provides important consolidation of all information obtained into one code that captures the overall style of parenting. Table 1 summarizes anchors for the new codes and codes from the original interview that include minor wording modifications to enhance reliability.

The present study examines the psychometric properties of the FSI-R in a community sample of young children enriched for psychopathology and violence exposure (Wakschlag et al. 2015). Initial analyses examine the distributions of the FSI-R codes, their interrater reliability, and correlations among the codes within and across the *Historical* and *Past Year Eras*. These analyses are followed by examination of convergent validity, with the hypothesis that the FSI-R harsh parenting codes will be positively associated with other measures of harsh parenting, including mothers' responses on traditional self-report measures and

independent coder ratings of problematic discipline observed in mother-child interactions, and negatively associated with indicators of mothers' self-reports of positive parenting practices and independent coder ratings of responsive involvement. Finally, analyses investigate predictive validity, with the hypothesis that the FSI-R harsh parenting codes will be positively associated with children's symptoms, and incremental validity, with the hypothesis that they will explain unique variance in young children's symptoms not explained by mothers' responses on self-report measures or independent observation of harsh parenting.

Method

Participants

The current study's participants were part of an enriched sub-study of 497 families recruited by stratified random sampling of a survey sample of 1857 3–6 year olds in the Multidimensional Assessment of Preschoolers (MAPS) Study originally recruited from pediatric practices (Wakschlag et al. 2015). As the goal of the sub-study was to investigate behavioral and environmental risk for psychopathology, families were oversampled based on past-year intimate partner violence (IPV) or elevated child disruptive behavior, based on scores at or above the 80th percentile on the Multidimensional Assessment Profile of Disruptive Behavior (MAP-DB; Wakschlag et al. 2014). Within the selected sample, 44 % were high in disruptive behavior and 23 % reported IPV. Participants were restricted to children with no significant cognitive delays or neurocognitive conditions and English-speaking children and mothers.

Of the 497 families in the MAPS-enriched sub-study, 425 participated in the lab-based assessment. Of these, 406 attended the second visit during which the FSI-R was administered. Five percent of these interviews could not be coded (e.g., due to incomplete interviews or poor video quality), resulting in an analytic sample of 386 families. Families were largely treatment naïve—6.5 % of mothers reported receiving “help for problems with [child's] feelings or behaviors” currently, or in the past. The analytic sample was comparable to the 111 families in the enriched sub-study without FSI-R data in terms of child sex, child age, respondent education, employment status, and IPV ($p > 0.10$). However, those in the analytic sample were more likely to be living in poverty (50.3 vs. 30.4 %, $\chi^2(1) = 11.02$, $p = 0.001$), be of minority ethnicity (80.6 vs. 71.2 %, $\chi^2(1) = 4.51$, $p = 0.034$), and have elevated MAP-DB disruptive behavior scores in the survey (44.3 vs. 31.5 %, $\chi^2(1) = 5.79$, $p = 0.016$), than those without FSI-R data.

The study sample is socioeconomically and ethnically diverse. The sample was evenly distributed by sex (51.0 % boys), and diverse with respect to household income (50.3 % poverty), maternal employment (50.3 % unemployed), and race/ethnicity (50.3 % African American/Black, 28.8 % Hispanic, 19.4 % non-Hispanic Caucasian/White). Approximately two-thirds of mothers were living with a partner. Mean age of the child at the time of FSI-R administration was 56.72 months (SD = 10.27).

Procedures

Participants attended two laboratory visits that included interviews with mothers to assess children's mental health, family environment, and child-rearing practices. Mothers also completed a battery of questionnaires. Mothers were compensated for participation and transportation, and they provided informed consent. Study protocols were approved by two institutional review boards. Mandated child abuse and neglect reporting procedures were followed, with reports of suspected maltreatment made to Child Protective Services. All mothers were given parenting resource and referral information at the end of the visit, and additional consultative follow-up was provided for families in distress. A clinical psychologist was on-call during interviews to address reporting and acute clinical concerns.

FSI-R Administration—The FSI-R was administered by post-baccalaureate level research assistants trained in FSI-R administration by a clinical psychologist (third author) or a clinical psychology doctoral student (first author). Instruction consisted of an introductory training led by an expert in clinical interviewing (third author), a detailed review of the FSI-R administration manual, a “dry run” of challenging areas (e.g., probing violence exposure), an observation of experienced interviewers, practice administrations with training staff, and completion of pilot interviews until fidelity was achieved, as indicated by reliability reviews conducted by the training staff. Approximately 15–20 h of training and feedback were required until reliable administration was achieved. The training staff conducted ongoing reviews of video recordings and interview forms, to maintain fidelity of administration and response recording. Interviewers were trained in mandated child abuse and neglect reporting procedures.

FSI-R Coding—All interviews were videotaped and reviewed by trained coders. Raters consisted of post-baccalaureate research assistants and graduate students. Training involved a thorough review of the FSI-R coding manual, observation and coding of FSI-R administrations, and independent coding until fidelity was achieved as indicated by reliability reviews conducted by the senior coder. Twenty percent of the interviews were double-coded, with consensus codes established during weekly meetings to maintain reliability.

Measures

Parenting—by Interview—The Family Socialization Interview—Revised (FSI-R) is a semi-structured interview designed to obtain a history of family life stress and child-rearing practices from the child's birth to the present. The original version of the FSI (Dodge et al. 1994) was adapted by the authors with permission from the FSI developers. FSI-R administration takes approximately 60 min and begins with questions about the child's disposition and about household composition. The mother is then asked to focus her answers on the period of the child's life from birth until the beginning of the prior year (*Historical Era*). Family challenges and the child's social development and behavior during this period are assessed. Next, the mother responds to open-ended questions about overall discipline strategies, both positive and harsh. The interviewer probes for specific physical and psychological discipline strategies with examples. The mother is asked to report on physical discipline strategies of other primary care-givers (e.g., child's biological father or

grandparent/s). The interview continues by focusing on the prior year (*Past Year Era*) using the same questions about the child's development, familial stress, physical and psychological discipline strategies, and family conflict. The interview concludes with questions about the mother's current well-being and sense of support.

Parenting—by Maternal Report—The Conflict Tactics Scales Parent-Child version (CTSPC; Straus et al. 1998) was used to assess child-directed physical aggression and psychological aggression. Mothers were asked questions about behavior toward their children in the context of discipline. The CTSPC included eight items from the Physical Assault scale (e.g., “You hit your child with a fist or kicked your child hard”) and five items from the Psychological Aggression scale (e.g., “You swore or cursed at your child”). These scales have demonstrated good reliability (0.55 and 0.60, respectively) and validity as well as associations with disruptive behavior and social-emotional problems in children (Straus et al. 1998; Straus et al. 2003). Previous studies have demonstrated that extremely severe items on the physical assault scale (e.g. *intentional burning*) are rarely endorsed (Straus et al. 1998). Therefore, these items were not included due to the anticipated low base rates and concern that these questions might negatively impact the rapport between mother and interviewer, and thus compromise the reliability of reporting. The CTSPC sub-scales were scored by first applying a frequency value to each response using the midpoint of the ranges (i.e., *Never* = 0, *Once* = 1, *Twice* = 2, *3–5 Times* = 4, *6–10 Times* = 8, *11–20 times* = 15, *>20 Times* = 25), and then summing the frequency responses to produce a chronicity score. Responses indicating that the behavior occurred “Not in the Past Year, but it Happened Before” were scored as 0. Internal consistency was adequate (Physical $\alpha = 0.65$, Psychological = 0.68).

Parents also provided self-reports of positive parenting practices in the past month, including monitoring safety and positive involvement with child, on the Parenting Practices Questionnaire (PPQ; Gorman-Smith et al. 2010). Items were rated on a six-point scale from 0 (*never*) to 5 (*always*). Sample items included “Praise your child if he/she behaved well” and “Use a car seat or safety belt”. Two ten-item subscales reflecting positive parenting behaviors had acceptable internal consistency: positive involvement, $\alpha = 0.86$ and monitoring/safety, $\alpha = 0.79$. As these were correlated highly ($r = 0.71$), a Positive Parenting composite score was calculated using the means.

Parenting—by Observation—The Parenting Clinical Observation Schedule (P-COS; Hill et al. 2008) was used to assess observed problematic discipline and positive parenting. The P-COS is coded from 20 min of videotaped interactions collected in the parent context of the Disruptive Behavior Diagnostic Observation Schedule (DB-DOS) that uses “presses” to elicit misbehavior in a manner that distinguishes normative variation from clinically concerning problems (e.g., frustrating puzzle, putting crayons away, waiting task, free play). These presses increase the likelihood of seeing key parent and child behaviors of clinical concern. The problematic discipline domain used in this paper included ratings of harshness, emotional misattunement, hostility, and negative power struggles. The responsive involvement domain captured parental engagement with the child, the provision of positive verbal and behavioral feedback, and scaffolding. Reflective of standardized global

observation methods, this global coding method goes beyond observation of discrete behaviors to offer an integrated examination of multiple facets of the parental behavior. The system is standardized via the coding system, which is geared toward the gestalt of the parent behavior in a particular facet of parenting (e.g., power struggles). The ongoing assessment of interrater reliability ensures that these overarching codes are applied reliably across parents (Wakschlag et al. 2005). Coding was completed independent of administration, and coders were blind to IPV exposure or disruptive behavior status. Coding was done on a four-point scale, recoded into dichotomous categories of presence vs. absence, and summed to calculate the problematic discipline score. Approximately 20 % of tapes were double-coded. Percent agreement was excellent, ranging from 85 to 100 % for the problematic discipline domain and from 72 to 85 % for the responsive involvement domain (Hill et al. 2008).

Psychiatric Symptoms—During the laboratory visits, parents completed the Preschool-Age Psychiatric Assessment (PAPA; Egger et al. 2006), a semi-structured diagnostic interview of child psychiatric symptoms. This study uses symptom counts for depression/dysthymia, anxiety, disruptive behavior disorders (DBD), and Attention Deficit Hyperactivity Disorder (ADHD). All interviews were administered by trained research assistants. Twenty percent of interviews were reviewed for interrater reliability by a clinical psychologist (percent agreement = 81 to 98 %).

Analytic Plan

Interrater Reliability—To assess interrater reliability, 20 % of FSI-R interviews were randomly assigned to a second coder. Weighted Kappas were calculated to examine level of reliability between coders. Level of interrater reliability was evaluated using standard criteria for establishing adequacy, where Kappa of 0.40 to 0.59 is fair, 0.60 to 0.74 is good, and 0.75+ is excellent (Cicchetti 1994). Codes with less than ten non-zero codes within the interrater reliability sample were dichotomized prior to testing Kappa.

Convergent Validity—Convergent validity was examined by way of one-tailed Spearman correlations between FSI-R codes and self-report and observational measures of harsh parenting behaviors, with positive associations hypothesized. Convergent validity was also examined in relation to the Positive Parenting composite and observed responsive involvement, with negative correlations expected.

Predictive and Incremental Validity—The predictive validity of the FSI-R Physical, Psychological, and Restrictive/Punishment codes in relation to preschoolers' symptoms was initially examined using two-tailed Spearman correlations, reported in Table 4. A second more stringent analysis tested for predictive validity once covariates (age, sex, time interval) were controlled in a series of regressions conducted in SPSS (IBM Corp., 2013); underlining in Table 4 indicates the significance of these effects. A series of blocked hierarchical regressions in SPSS examined incremental validity, meaning the extent to which the FSI-R predicted child symptoms above and beyond the subscales of the CTSPC and P-COS. For the sake of statistical parsimony, these models were designed to evaluate two validity goals. First, they tested the incremental validity of the *Past Year* FSI-R codes—whether these codes

predicted child symptoms when covariates and self-report and observational methods of assessing harsh parenting were included in the models. Second, they examined the incremental validity of the FSI-R *Historical Era*, testing for added prediction of child symptoms beyond that accounted for by the *Past Year* FSI-R, as well as self-report and observational methods. The rationale for entering the *Past Year* FSI-R into the models prior to the *Historical* FSI-R was that it covered a similar time-frame as the self-reports and observations. Adding the *Historical Era* into the last step explicitly tested if the FSI-R's *Historical Era* provided added predictive value beyond a comprehensive past year assessment.

The models were built as follows: step 1 included the control variables (child's age in months when the FSI-R was administered, child's sex, and time between study visits, i.e., between PAPA and FSI-R data collection). Step 2 included control variables plus the *Past Year Era* FSI-R code; step 3 included all of the variables in step 2 plus the CTSPC Physical Aggression and Psychological Aggression subscales and the P-COS Problematic Discipline scale, thus testing whether the FSI-R explained unique variance in symptoms beyond other indicators of harsh parenting. Finally, step 4 added the FSI-R *Historical Era* to determine if it added incremental value to the model. Dependent variables for these models were PAPA symptoms of depression/dysthymia, anxiety, DBD, and ADHD. Each dependent variable was modeled separately. The models presented in the body of the paper focus on the Restrictive/Punitive code because it was strongly associated with all other codes (see below) and given the practical consideration that a single code is more feasible to use and interpret than composite or factor scores. Parallel models for other FSI-R codes are provided in Supplemental tables available online.

Results

Descriptive Statistics

The distribution of scores for the FSI-R codes revealed good distribution across the coding range (see Table 2). Most mothers used milder forms of psychological and physical discipline, with codes falling in the 0 or 1 range. However, review of the most intense codes revealed that more than half used moderately harsh psychological forms of discipline at some point in each era. Approximately 60 % used moderate to severe forms of physical discipline in the *Past Year Era*.

Reliability

The interrater reliabilities were good to excellent with *weighted kappas* averaging between 0.68 and 0.87 for *Historical Era* and between 0.62 and 0.89 for *Past Year Era* (see Table 2). The four Psychological and Physical codes correlated significantly with one another within the *Historical Era*, $r=0.49-0.88$, and *Past Year Era*, $r=0.51-0.93$ (see Table S-2, available online). Not surprisingly, correlations between the Usual and Most Intense codes for a given behavior were especially high (all $r=0.72$ to 0.93). Each code was moderately correlated with itself from one era to the next, $r=0.48$ to 0.60 . The Physical and Psychological codes correlated moderately with the Restrictive/Punitive code, $r=0.45$ to 0.77 , suggesting that the Restrictive/Punitive code may serve as a single indicator of harsh parenting within each era.

Convergent Validity

The FSI-R demonstrated moderate to strong convergent validity with other self-report measures of harsh parenting methods (see Table 3). The FSI-R *Past Year Era* codes for Physical Discipline and Restrictive/Punitive parenting correlated highly with the CTSPC Physical Aggression subscale, an expected pattern given that they all assess physical discipline strategies used within the past year. The Psychological codes and remaining Physical codes also correlated significantly with the CTSPC Physical Aggression scale with generally more modest associations. All FSI-R codes correlated moderately with the CTSPC Psychological Aggression scale. All but one *Past Year Era* FSI-R code had modest, but significant, correlations with observed Problematic Discipline on the P-COS. The FSI-R codes generally showed modest, but significant, negative correlations with positive parenting practices reported by mothers on the PPQ and observed on the P-COS (see Table 3).

Predictive Validity

Supporting predictive validity, nearly all FSI-R codes in the past year and historical eras correlated significantly with children's symptoms of ADHD, DBD, and depression/dysthymia symptoms (see Table 4). Small but significant associations between anxiety symptoms and FSI-R harsh parenting were also observed. Overall, these patterns of association between the FSI-R and children's symptoms were similar to those observed for the CTSPC. However, FSI-R was more strongly correlated with depression/dysthymia symptoms than were either of the CTSPC subscales (Fischer r to z' transformation = 1.56 and 2.21, $p < 0.05$) (see Table 4). Finally, most of these patterns remained significant with covariates controlled, with largely the same patterns of effect for all symptoms (see bold/italicized results in Table 4).

Incremental Validity

Multiple linear regressions were used to examine the incremental validity of the FSI-R Restrictive/Punitive code in predicting unique variance in child symptoms when both CTSPC subscales and the P-COS Problematic Discipline code were controlled. Table 5 presents the standardized B values for each variable. The *Past Year Era* Restrictive/Punitive code explained a significant amount of the variance for ADHD, DBD, and Depression/Dysthymia symptoms, even controlling for demographic variables, both CTSPC subscales, and observed Problematic Discipline (see Table 5, step 3). The CTSPC Physical subscale also captured unique variance for ADHD symptoms, and the CTSPC Psychological Aggression subscale captured unique variance for DBD symptoms, but neither was associated with Depression/Dysthymia or Anxiety symptoms (see Table 5, step 3). Finally, in contrast with consistent evidence supporting its predictive validity (Table 4), the *Historical Era* Restrictive/Punitive did not predict symptoms in any area once the *Past Year Era* Restrictive/Punitive code and other parenting measures were included in the model (see Table 5, step 4).

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¹Please note that when models were tested with *Historical* Restrictive/Punitive entered in steps 2–3 instead of the *Past Year* variable, it showed incremental validity in predicting ADHD, DBD, and Depressive symptoms $B = 0.12$ to 0.15 , $p < 0.05$; albeit with smaller effects relative to the *Past Year* findings presented in Table 5.

Further analyses examined the incremental validity of the *Past Year* Usual and Most Intense Physical and Psychological FSI-R codes, employing models paralleling those presented in Table 5 (see Tables S-3 to S-6, available online). Findings supported the incremental validity of these codes only in relation to depressive symptoms: the *Past Year* Usual and Most Intense Physical codes uniquely predicted depressive symptoms while the CTSPC and observed parenting did not (see Tables S-3 and S-4, available online). Other symptoms were explained by either the CTSPC Physical scale (ADHD) or CTSPC Psychological scale (disruptive). The *Historical Era* Physical FSI-R codes did not contribute significantly to any of these models, once the *Past Year* FSI-R and other measures were taken into consideration.

Different patterns emerged for the new Psychological FSI-R codes, where there was consistent evidence of the incremental validity of the *Historical* codes but very little support for the *Past Year* codes. For *Past Year*, the only significant association was between the FSI-R Most Intense Psychological code and depressive symptoms. Other symptoms were explained instead by either the CTSPC Physical (ADHD) or Psychological (disruptive) scale. However, the usual and most intense *Historical* Psychological codes demonstrated incremental utility over the CTSPC, P-COS, and *Past Year* FSI-R Psychological code in predicting young children's depression/dysthymia and disruptive symptoms, with a moderately large effect particularly for disruptive symptoms. Furthermore, as seen in the predictive validity findings, the *Historical* Usual Psychological code also predicted anxiety symptoms. No evidence of incremental validity in relation to ADHD symptoms was observed.

Discussion

Our examination of the psychometric properties of the FSI-R, an interview-based assessment of harsh disciplinary practices used by parents of young children, provided evidence supporting its reliability and validity and suggesting that it may offer a valuable complement to self-report and observational approaches. Several findings supported its value for enhanced characterization of harsh parenting of young children from socioeconomically and ethnically diverse backgrounds. Psychometrically, all of the FSI-R harsh parenting and Restrictive/Punitive parenting codes had good to excellent interrater reliability and acceptable convergent validity relative to other measures of harsh parenting. In addition, despite the high-risk nature of this sample, the FSI-R captured substantial variation in mild to severe disciplinary practices. Predictive and incremental validity also were supported, with important evidence that the FSI-R codes, especially the global Restrictive/Punitive parenting code, explained unique variance in children's concurrent psychiatric symptoms that was not accounted for by self-report or observed measures of parenting. More broadly, study findings underscore the value of employing a multi-method approach that captures both frequency-based data (CTSPC) and the manner of discipline in children's day-to-day lives (FSI-R) when investigating the relationship between harsh parenting and early emergent symptoms in young children.

The open-ended conversational structure of the FSI-R interview is designed to elicit information needed to characterize mothers' usual discipline, as well as their methods when episodes are at their most intense. Even within this high-risk sample, this approach revealed

significant heterogeneity in the severity of methods mothers used on a spectrum from mild to severe, including behaviors that crossed the threshold of child maltreatment (see Table 2). Taking past year practices as an example, most mothers' usual disciplinary practices were non-harsh or only mildly harsh, with approximately 30 % usually employing moderately severe to severe behaviors. However, up to 60 % of mothers reported using moderately severe to severe harshness during their most intense episodes. Thus, the FSI-R may be valuable for assessing not only the presence of more severe behaviors but also variation in the extent to which mothers use them as their usual or "go to" methods of discipline, or instead, only when episodes are at their most intense.

Findings further supported the predictive utility of the FSI-R codes in relation to a range of child symptoms. All FSI-R codes from both eras were associated with children's symptoms, with particularly consistent associations observed for externalizing symptoms. However, there also were relatively unique associations between the FSI-R codes and internalizing symptoms compared to the other validators—all of the FSI-R codes were associated with children's depressive symptoms, whereas only the CTSPC Physical Aggression scale showed this association. Moreover, the magnitude of the correlation between the FSI-R Punitive/Restrictive code and depression was significantly stronger than the correlations between the CTSPC and depressive symptoms. Perhaps risk associated with child-internalizing symptoms is better captured by the FSI-R's deeper characterization of the patterning of harsh parenting.

The final set of analyses addressed the critical questions of (1) whether the *Past Year* FSI-R codes provide added value beyond other measures for understanding the relationship between harsh parenting of young children and early emergent symptoms, and (2) whether the *Historical Era* contributed to this understanding beyond past year information. As a brief overview, the *Past Year* FSI-R demonstrated incremental validity in predicting ADHD, disruptive, and depressive symptoms (but not anxiety), whereas *Historical* harsh Psychological discipline showed incremental validity for disruptive, anxiety, and depressive symptoms (but not ADHD). The primary incremental validity analyses focused on the *Past Year* FSI-R Restrictive/Punitive code, a rating established from the integration of all maternal parenting practices described. Together, this FSI-R parenting style code and mothers' self-reports on the CTSPC each explained unique variance in ADHD and disruptive symptoms. This supports the incremental validity of the FSI-R and suggests the value of both approaches for understanding risk related to externalizing symptoms. Indeed, a substantial literature exists supporting a bidirectional relationship between parenting and child externalizing behavior problems, including ADHD (e.g., Combs-Ronto et al. 2009; Miner and Clarke-Stewart 2008).

In contrast, the FSI-R Restrictive/Punitive code, relative to the CTSPC, demonstrated stronger utility for predicting depressive symptoms. As childhood maltreatment has been associated with the development of persistent and recurrent depression that is less responsive to treatment (Nanni et al. 2012), an understanding of the relationship between early onset depressive symptoms and harsh parental discipline maybe an important component of early detection and prevention for preschoolers. Thus, our findings suggest that the FSI-R's

characterization of *Past Year* harshness and its association with child depressive symptoms may provide meaningful insight into this risk in young children.

Finally, evidence supporting the incremental validity of the *Historical* data was specific to psychologically harsh discipline. In contrast with the Physical and Restrictive/Punitive codes for the *Historical Era*, which offered no added value beyond their *Past Year* counterparts, the *Historical* Psychological code uniquely predicted disruptive, anxiety, and depressive symptoms, with small to moderate effect sizes and significant increases in variance explained by the addition of the *Historical* data. This could reflect a developmental timing effect, such that psychological adversity experienced early in life enhances risk. However, these questions cannot be answered within the current design. Thus, decisions about the use of the *Historical Era* may rest on the specific research question and outcomes of interest.

Clinical Implications

Ecologically valid information about how parents discipline young children on a day-to-day basis may prove clinically valuable for programs that are designed to identify, target, and modify parenting behaviors, such as the Parent Child Interaction Therapy (PCIT) and Triple P-Positive Parenting Program (Sanders 1999). While implementing the FSI-R coding system will not be practical in all clinical settings, the structured, detailed, conversational nature of the interview itself may elicit clinically important information about factors that influence disciplinary choices toward episodes of greater severity. For example, some mothers may use harsher forms of punishment when they feel stressed or because of pressure by familial or cultural factors. The interview also offers insight into the types of child transgressions that elicit harsher discipline. For example, some mothers may reserve harsh punishment for situations when the child's behavior is unsafe, whereas others may routinely employ harsh methods for normative misbehaviors (e.g., temper tantrums during daily routines). Although beyond the scope of this study, future research can bolster the clinical utility of the FSI-R by identifying clinical thresholds of harsh parenting that are most tightly linked with early emergent symptoms.

Future Directions

Evidence linking internalizing symptoms in adults with childhood experiences of harsh parenting (Lansford et al. 2014) highlights the importance of understanding the impact of harsh parenting on depressive and anxiety symptoms in young children. However, proven skill-based intervention and prevention parent programs for reducing harsh parenting and improving child outcomes, until recently, have largely focused on outcomes related to externalizing symptoms (Knerr et al. 2013). Our findings suggest that a multi-method approach that incorporates interview-based information such as that obtained by the FSI-R may prove valuable for identifying novel targets for prevention and intervention toward addressing internalizing risk. Although, as in many prior studies, cumulative exposure to harsh parenting assessed with a parent-report checklist was associated with externalizing symptoms, it offered little insight into internalizing risk. This is consistent with low effect sizes often observed between harsh parenting and internalizing outcomes (Yildirim and Roopnarine 2015). In contrast, the FSI-R revealed an association between depressive symptoms and exposure to psychologically harsh, restrictive/punitive discipline, even in the

absence of physical severity. Thus, the FSI-R may be a valuable resource for characterizing nuances of physical, psychological, and parenting style that may differentially influence developmental trajectories of psychopathology in young children to inform tailored interventions.

Limitations

While this study supported the psychometric properties of the FSI-R within a diverse sample of preschool children, many of whom were exposed to family violence, additional research is needed to understand the applicability of the FSI-R to other populations. This is important both because the current sample was drawn with oversampling for IPV and disruptive behavior and also due to the relatively greater participation by families of minority ethnicity, living in poverty or with elevated child disruptive behavior. Given sociocultural and developmental differences in parenting practices (Julian et al. 1994; Kim et al. 2010), extension to the general population and to older children will be important. The current study also cannot speak to the utility of the FSI-R for populations in which the level of discipline has necessitated the involvement of child protective services or its ability to elicit information that would clearly be considered physical abuse. Since the more serious physical assault items from the CTSPC were removed for this study due to their very low base rates (Straus et al. 1998) and concerns about their effects on rapport, we cannot speak to the relationship between the CTSPC and the FSI-R for samples in which the harsher items from the CTSPC may be more frequently endorsed and therefore helpful to assess. Finally, the length of the interview and time to code may also be a limitation of this instrument in a clinical setting; thus, enhancing clinical utility may be a worthy direction for future research.

Conclusions

Overall, the study findings highlight the added knowledge to be gained through the use of multi-method approaches that capture both cumulative frequency (CTSPC) and the usual and most intense (FSI-R) harshness of parenting practices, as well as parenting style. The FSI-R provides rich information about the spectrum and complexity of parental discipline strategies with preschool-age children. This tool shows substantial promise in offering added value for understanding patterns of parenting that may aid identification of the emergence of a broad spectrum of early emergent symptoms, including externalizing symptoms, as well as depressive symptoms not well predicted by other measures of harsh parenting. Gaining a better understanding of the relationship between parenting practices and family violence may inform more targeted and effective interventions toward preventing child harm and negative outcomes associated with child maltreatment, including increased rates of psychopathology across the lifespan (Kaplow and Widom 2007).

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

FSI-R coding scales

Codes	0. None	1. Mild	2. Moderate	3. Moderately severe	4. Severe
Psychological (new code) Includes:	No loud, harsh, aggressive, threatening, insulting verbal discipline. Parent may raise voice but it is generally brief, calm, and in control. Consequences are appropriate.	Unnecessary use of raised voice or negative tone, mild, or empty (non-physical) threats such as 'or else.'	Parent yells or makes harsh remarks about the child, but does not say mean or insulting things. Includes threatening to spank.	Prolonged yelling and/or anger; or mean, insulting, or severely threatening comments.	Parent's anger is out of control, derogatory, and scary. Or, methods used are very inappropriate and designed to cause the child great distress.
1 Usual method when harsh					
2 Most intense					
Physical discipline (modified original code) Includes:	Did not spank or physically punish.	Likely causing minimal or no physical distress. Minor/brief light physical contact with child such as swats on hand or spansks on clothing.	Significant physical contact that causes discomfort but unlikely to leave a residual mark. Punitive spanking.	Significant physical contact that causes discomfort and may leave a residual mark (e.g., grabbing, prolonged spanking, use of object on clothing).	Physical discipline that leaves a more permanent mark, such as a bruise. Includes use of object on bare skin, use of fist, severe manhandling.
1 Usual method					
2 Most intense					
Restrictive/Punitive (original code)	Often authoritative. Misbehavior is controlled with appropriate use of non-physical punishments.	1. Predominantly authoritative, some punitive rarely physical The type of discipline covaries with the nature of the misbehavior. Methods used are rarely punitive.	2. Mixed style, sometimes punitive Sometimes authoritarian and sometimes authoritative.	3. Predominantly authoritarian and often punitive Often uses punitive methods. Occasionally will use authoritative strategies.	4. Highly authoritarian and punitive Caregiver uses numerous restrictive and physical means of discipline. Emphasis on obedience and control.

Additional information about the codes is available in the FSI-R coding manual upon request

Table 2

Distribution and interrater reliability of FSI-R codes

FSI-R codes	Distribution of codes (%) (N =386)					Kappa average	N
	0	1	2	3	4		
Psychological							
Usual when harsh (<i>Historical</i>)	19.9	55.2	22.0	2.1	0.3	0.71	91
Most intense (<i>Historical</i>)	13.7	25.6	50.5	9.1	0.5	0.78	91
Usual when harsh (<i>Past year</i>)	21.2	46.9	28.5	3.1	0.0	0.62	91
Most intense (<i>Past year</i>)	14.2	23.1	52.6	9.3	0.5	0.80	91
Physical							
Most intense physical (<i>Historical</i>)	18.9	44.8	21.8	11.9	1.8	0.87	94
Usual physical (<i>Past year</i>)	29.8	38.9	23.6	7.0	0.3	0.81	94
Most intense physical (<i>Past year</i>)	29.5	29.5	23.6	15.3	1.6	0.89	94
Parenting style							
Restrictive/Punitive (<i>Historical</i>)	18.9	45.9	23.1	8.5	2.8	0.68	91
Restrictive/Punitive (<i>Past year</i>)	22.3	40.4	21.5	13.2	2.8	0.77	94

Table 3

Convergent validity of FSI-R and other measures of parenting practices

Validators					
	Physical aggression (CTSPC)	Psychological aggression (CTSPC)	Problematic discipline (P-COS)	Responsive involvement (P-COS)	Positive parenting practices (PPQ)
Mean (standard deviation)	8.29 (12.76)	19.21 (18.61)	0.52 (0.98)	12.78 (3.50)	4.17 (0.59)
FSI-R codes					
Psychological (FSI-R)					
Usual when harsh (<i>Historical</i>)	0.33 ***	0.42 ***	0.04	-0.15 **	-0.15 **
Most intense (<i>Historical</i>)	0.31 ***	0.43 ***	0.08	-0.09 *	-0.12 *
Usual when harsh (<i>Past year</i>)	0.38 ***	0.48 ***	0.09 *	-0.13 **	-0.19 ***
Most intense (<i>Past year</i>)	0.38 ***	0.47 ***	0.09	-0.02	-0.19 ***
Physical (FSI-R)					
Usual physical (<i>Historical</i>)	0.41 ***	0.36 ***	0.06	-0.13 **	-0.09 *
Most intense physical (<i>Historical</i>)	0.42 ***	0.40 ***	0.06	-0.11 *	-0.12 *
Usual physical (<i>Past year</i>)	0.58 ***	0.42 ***	0.12 *	-0.09 *	-0.15 **
Most intense physical (<i>Past year</i>)	0.63 ***	0.44 ***	0.12 *	-0.09	-0.15 **
Parenting style (FSI-R)					
Restrictive/Punitive (<i>Historical</i>)	0.37 ***	0.36 ***	-0.12 *	-0.17 ***	-0.12 *
Restrictive/Punitive (<i>Past year</i>)	0.54 ***	0.46 ***	0.13 **	-0.17 **	-0.17 ***

One-tailed Spearman correlations

CTSPC Conflict Tactics Scales Parent-child version, FSI-R Family Socialization Interview—Revised, P-COS Parent Clinical Observation Schedule, PPQ Parenting Practices Questionnaire

* $p < 0.05$;** $p < 0.01$;*** $p < 0.001$

Table 4

Predictive validity of FSI-R codes

	ADHD symptoms	DBD symptoms	Anxiety symptoms	Depression/Dysthymia symptoms
Mean (standard deviation)	4.87 (4.25)	2.80 (2.54)	1.11 (0.91)	1.59 (1.54)
Predictor variables				
Psychological (FSI-R)				
Usual when harsh (<i>Historical</i>)	0.12 *	0.30 ***	<i>0.12</i> *	0.20 ***
Usual when harsh (<i>Past year</i>)	0.12 *	0.23 ***	0.05	<i>0.15</i> **
Most intense (<i>Historical</i>)	0.14 **	0.25 ***	<i>0.12</i> *	0.18 ***
Most intense (<i>Past year</i>)	<i>0.14</i> **	0.20 ***	0.11 *	0.16 **
Physical (FSI-R)				
Usual (<i>Historical</i>)	0.13 *	0.18 ***	0.05	0.14 **
Usual (<i>Past year</i>)	0.16 **	0.20 ***	0.07	0.17 **
Most intense (<i>Historical</i>)	0.10	0.16 **	0.04	0.15 **
Most intense (<i>Past year</i>)	0.16 **	0.21 ***	0.07	0.18 **
Parenting style (FSI-R)				
Restrictive/Punitive (<i>Historical</i>)	0.19 ***	0.22 ***	0.09	0.18 **
Restrictive/Punitive (<i>Past year</i>)	0.26 ***	0.32 ***	0.13 *	0.23 ***
CTSPC				
Physical aggression	0.26 ***	0.17 **	0.08	<i>0.12</i> *
Psychological aggression	0.14 **	0.27 ***	0.01	0.08
P-COS				
Problematic discipline	<i>0.12</i> *	0.05	0.05	0.07

Values reported are Spearman correlation coefficients (two-tailed) for the categorical FSI-R codes, and Pearson correlation coefficients are reported for correlations with the CTSPC and P-COS. In addition, blocked hierarchical regressions were computed for each variable. Step 1 included the covariates of age, sex, and time interval. Step 2 included the respective variable. Italic indicates variable is significant at $p < 0.05$ and bold indicates variable is significant at $p < 0.01$ when controlling for covariates

CTSPC Conflict Tactics Scales Parent-child version, *FSI-R* Family Socialization Interview—Revised, *PAPA* Preschool-Age Psychiatric Assessment, *P-COS* Parent Clinical Observation Schedule, *Sx* symptoms

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$

Table 5

Incremental utility of FSI-R authoritarian/punitive code over CTSPC and P-COS

Predictor	ADHD symptoms (PAPA)			DBD symptoms (PAPA)			Anxiety symptoms (PAPA)			Depression/Dysthymia symptoms (PAPA)		
	β	R^2		β	R^2		β	R^2		β	R^2	
Step 1		0.01			0.02			0.00			0.03	
Control variables ^a												
Step 2		0.06			0.07			0.01			0.05	
Restrictive/Punitive (FSI-R; <i>Past year</i>)	0.24***			0.27***			0.08			0.22***		
Step 3		0.04			0.02			0.01			0.01	
Restrictive/Punitive (FSI-R; <i>Past year</i>)	0.17**			0.22***			0.08			0.20**		
Phys aggression (CTSPC)	0.24***			-0.02			0.12			0.09		
Psych aggression (CTSPC)	-0.08			0.14*			-0.11			-0.04		
Problematic discipline (P-COS)	0.06			0.00			0.03			0.06		
Step 4		0.00			0.00			0.00			0.00	
Restrictive/Punitive (FSI-R; <i>Past year</i>)	0.13			0.21**			0.08			0.20**		
Phys aggression (CTSPC)	0.25***			-0.01			0.12			0.09		
Psych aggression (CTSPC)	-0.09			0.14*			-0.11			-0.04		
Problematic discipline (P-COS)	0.06			0.00			0.03			0.06		
Restrictive/Punitive (FSI-R; <i>Historical</i>)	0.07			0.03			0.00			0.00		
Total R^2	0.11			0.11			0.02			0.09		
<i>n</i>	337			339			334			336		

The first step included control variables. Step 2 included the FSI-R Restrictive/Punitive code (*Past Year*). Step 3 included CTSPC subscales (Physical Aggression and Psychological Aggression) and the P-COS Problematic Discipline subscale. Step 4 included FSI-R Restrictive/Punitive code (*Historical*). For each step, the R^2 is reported. The standardized beta and significance of each predictor is also reported for each step. *CTSPC* Conflict Tactics Scales Parent-child version, *FSI-R* Family Socialization Interview—Revised, *PAPA* Preschool-Age Psychiatric Assessment, *P-COS* Parent Clinical Observation Schedule

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ ^aControl variables included child's age, child's gender, and days between study visits