Assessing children's appraisals of security in the family system: the development of the Security in the Family System (SIFS) scales

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Background: Although delineating the processes by which children appraise the family as a source of security from their collective experiences in the family subsystem has assumed center stage in many conceptualizations of child development, the dearth of measures of child adaptation in the family system has hindered empirical advances. Therefore, this study introduced and tested the psychometric properties of the Security in the Family System (SIFS) scales, a new measure designed to assess children's appraisals of security in their family as a whole. **Methods:** The SIFS was administered to 853 10–15-year-old schoolchildren and readministered to a smaller subsample two weeks later. Additional data was gathered from children, caregivers and teachers using a variety of instruments tapping family instability, cohesion, and conflict; parenting warmth and psychological control; child externalizing and internalizing symptoms; parent–child and interparental insecurity; and children's reactions to conflict simulations. **Results:** Consistent with models of emotional security in the family, exploratory and confirmatory factor analyses yielded three reliable (i.e., good internal consistency, test–retest reliability) dimensions of family security: Preoccupation, Security, and Disengagement. Concurrent and prospective associations between the SIFS scales and measures of family functioning, children's psychological problems, and insecurity in specific family relationships supported the validity of the SIFS. Support for the discriminant validity of the SIFS was evidenced by its specific patterns of relations with children's psychological problems and ability to predict psychological problems after controlling for insecurity in specific family subsystems. **Conclusions:** Results indicate that the SIFS is a psychometrically sound tool capable of advancing family process models, and that family security is a viable construct whose factors parallel already-identified patterns of children's security in other family relationships. **Keywords:** Attachment, family factors, child development, adolescence, assessment, psychometrics, factor analysis.

Achieving a holistic, comprehensive understanding of how children develop within the contexts of their families requires extending family process models beyond the level of dyadic relationships and individual functioning (Cox & Paley, 1997). Attesting to the value of family-level conceptualizations, assessments of global family functioning have been shown to predict parent and child adjustment even after taking into account individual or dyadic (e.g., marital, parent–child relations) measures of family functioning (Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999; Dickstein et al., 1998; McHale & Rasmussen, 1998). Despite these new empirical advances, the study of the processes by which family characteristics directly affect children's adjustment has been limited to assessments of children's coping or reactivity within specific family (e.g., parent–child, interparental) subsystems (Armsden & Greenberg, 1987; Cowan, Cohn, Cowan, & Pearson, 1996; Finnegan, Hodges, & Perry, 1996; Furman & Buhrmester, 1985; Grych, Seid, & Fincham, 1992; Kerns, Klepac, & Cole, 1996). Although this level of specificity in family process measures has yielded informative findings, heavy reliance on relatively narrow process assessments may hinder advances

in understanding the whole family as a context for socialization.

From a methodological perspective, assessing mediating processes in narrow, specific contexts of the family does not correspond well to multi-factor (e.g., mother–child, father–child, interparental) or holistic (e.g., family-level instability, composites of family adversity) conceptualizations of the family. Measurement of child adaptation or coping within a *specific* family relationship constitutes only a fraction of the many processes that may account for the direct effects of family functioning on children's adjustment. Thus, mediators in process models may account for a very limited amount of variance in predictive relations between family history and child adjustment. Assessing children's adaptation in each family relationship (e.g., sibling, interparental) does not fully resolve the problem because it may miss significant family relationships and limit the applicability of process measures to diverse family forms (e.g., single-parent families). Furthermore, significant shared variance among forms of adversity in different family contexts or relationships diminish the power and precision of models designed to examine the effects of any single family factor

(Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999). At a conceptual level, the principle of holism in family systems theory further underscores that the collective evaluation of the family provides unique and valuable information that cannot be captured by the study of specific dyadic relationships or their derivative sums (Minuchin, 1985). By extension, family process models further postulate that child coping and appraisals of the whole family cannot be fully captured by an aggregate of assessments of adaptation within each specific family relationship. Accordingly, delineating the processes by which children actively appraise the family as a source of security from their collective experiences with family risks and buffers has assumed center stage in many conceptualizations of developmental psychopathology (Bretherton, Walsh, Lependorf, & Georgeson, 1997; Sandler, Wolchik, Braver, & Fogas, 1991).

Despite the conceptual and methodological value of studying the whole family or family-level dynamics (Belsky, Putnam, & Crnic, 1996; McHale & Rasmussen, 1998; Kerig, 2001; also see Cummings, Davies, & Campbell, 2000), the thin battery of measures available for assessing child adaptation in the whole family unit has hindered advances in understanding process associations between family and child. For example, in our analysis of the 367 measures of family functioning in the latest edition of the *Handbook of Family Measurement Techniques* (Touliatos, Perlmutter, & Straus, 2001), none of these measures specifically captured children's evaluations of the implications the family unit as a whole has on their well-being. Therefore, the current study is designed to introduce and test the psychometric properties of the Security in the Family System (SIFS) scale, a new self-report instrument for indexing children's aggregate analysis of the *whole family unit* as a source of security and threat.

The development of the SIFS was guided by the emotional security hypothesis (Davies & Cummings, 1994). Although the emotional security hypothesis accepts some of the same tenets as attachment theory, it also differs from conventional attachment theory in significant ways. Attachment theory has defined attachment security as 'skillful secure base use over time and contexts in naturalistic settings' and 'confidence in a caregiver's availability and responsiveness' (Waters & Cummings, 2000, p. 166). Thus, primary emphasis is placed on understanding how children organize dyadic relations with an attachment figure to *preserve their sense of security*. Although the emotional security hypothesis accepts these basic assumptions of attachment theory, our family-wide model draws on family systems theory in proposing that the child's emotional security is a significant goal in the context of multiple family relationships. Furthermore, the emotional security hypothesis underscores that family processes like interparental conflict and family violence can also directly undermine children's goal of preserving

security relationships (Davies, Harold, Goeke-Morey, & Cummings, 2002). Consistent with these advances, our family-wide assessment of emotional security is designed to more broadly capture children's overall evaluation of their *whole family units* as *sources of threat and security*.

Although the development of the SIFS was inspired by the assumptions of the emotional security hypothesis, both the emotional security hypothesis and attachment theory provide important insights into the dimensionality of the SIFS. Despite some differences in theoretical assumptions, attachment theory and the emotional security hypothesis are remarkably similar in their identification of three patterns of child security in community samples: secure, preoccupied, and dismissing strategies. High levels of security are reflected in children's confidence in their ability to directly rely on socialization figures in the family as sources of safety, support, and predictability. Warm, cohesive family relationships are thought to promote children's representations of: (a) themselves as worthy of support and capable of successfully coping with stress and (b) their families as consisting of available, supportive figures who are worthy of commitment even in the face of family adversity (Finnegan et al., 1996; Kobak et al., 1993). The emotional security hypothesis further postulates that children's experiences in other family contexts may also bolster their sense of security in the family. Witnessing parents effectively manage and resolve their own disputes in a way that preserves family harmony may increase children's confidence in the ability of the family to act as a source of security (Ackerman, Kogos, et al., 1999; Coyne et al., 1992; Davies & Cummings, 1994). Children's favorable representations of themselves in the family context are also postulated to lay the foundation for healthy psychological adjustment by serving as a blueprint for the development of harmonious social relations, flexible use of coping strategies, and emotion regulation skills (Cassidy, Kirsh, Scolton, & Parke, 1996; Davies & Cummings, 1994; Weinfield, Ogawa, & Sroufe, 1997).

When children are exposed to inaccessible, frightening, or inconsistent attachment figures in the family, directly seeking protection and support from family members is not likely to be effective in regaining security. Thus, although children's representations of family relations may be relatively accurate depictions of family life, the emotional security hypothesis postulates that children actively alter reality in the service of emotional security (Cummings & Davies, 1996; Davies & Forman, 2002). Preoccupied and dismissing response patterns are primary insecure strategies for altering representations. Children who show high levels of preoccupied coping are hypothesized to intensify or exaggerate the salience of family difficulties as a way of attempting to preserve a sense of emotional

security. Consistent with the sensitization hypothesis (Cummings & Davies, 1994b), children's vigilance, worry, and preoccupation with the welfare of themselves and their families may be adaptive in the context of family discord. The accompanying vigilance evident in these children's expectancies of family relations may specifically provide them with resources for readily perceiving and proactively identifying subsequent family events that may pose a threat to their well-being. Children may also attempt to preserve their sense of emotional security in the face of family difficulties by employing dismissing or 'deactivating' strategies. Dismissing strategies for coping with family stress reflect children's tendencies to emotionally disengage from the family and downplay the significance of the family in their lives (Davies & Forman, 2002; Fuhrman & Holmbeck, 1995; Kobak et al., 1993). Thus, distancing and disengagement from the family may serve as another method of tolerating distress in the context of family turmoil.

Although preoccupied and dismissing strategies of coping with stress may be adaptive in regaining some security in the proximal context of the family, the emotional security hypothesis proffers that the considerable psychological and physical resources necessary to preserve security limit the resources that can be allocated to other important developmental tasks. Consequently, in the long run, children who rely on these strategies may be at greater risk for psychological problems (Davies & Forman, 2002). According to the specific-linkage hypothesis (Finnegan et al., 1996), the risk for developing specific patterns of maladjustment may depend on the specific insecure strategy employed by the children. Thus, tendencies to blunt subjective distress and devalue the significance of family relationships, which characterize dismissing strategies, are postulated to eventually cohere into a broader pattern of emotional disengagement from social relations and violation of moral and conventional rules. Conversely, excessive worrying and vigilance about stressful family events that characterize high levels of preoccupation are theorized to culminate in the development of anxiety and depressive symptoms (Cassidy et al., 1996; Davies & Forman, 2002; Finnegan et al., 1996). Thus, whereas a dismissing pattern is postulated to be an especially strong predictor of externalizing symptoms, a preoccupied pattern of insecurity is postulated to be a particularly strong predictor of internalizing symptoms.

In summary, the current study reports on the development of the SIFS, a measure designed to assess children's confidence in the family unit to serve as a base of protection and support, especially during times of stress. Our first goal in this paper was to determine the dimensionality of the SIFS. Guided by the emotional security hypothesis and attachment theory (Davies & Forman, 2002; Finnegan et al., 1996), we hypothesized that the

measure of children's appraisals of their adaptation to the family would yield three distinct, but interrelated, strategies for preserving emotional security: secure, preoccupied, and dismissing. To remedy the tendency for studies in family psychology to predominantly examine hypotheses against the null hypothesis (Fincham, Grych, & Osborne, 1994), we followed recommendations to also examine our proposed factor structure in relation to the dimensionality proposed in another theoretically guided conceptual model. Sense of coherence theory specifically provided a useful alternative hypothesis about the dimensionality of the SIFS. In the context of the family, sense of coherence refers to perceived confidence that the overall family context is predictable, stable, and coherent through an evaluation of the balance of challenges, threats, and available resources (Antonovsky, 1987). Antonovsky (1987) theorized that sense of coherence is reflected in three relatively distinct components: (1) comprehensibility, characterized by perceptions of the world as ordered, consistent, and explicable; (2) manageability, defined as confidence that available resources are adequate to cope with the threat in the environment; and (3) meaningfulness, characterized by perceptions that life makes sense emotionally such that the stress and demands posed by living are worth investment, commitment, and engagement. Thus, the proposed factor structure derived in conceptualizations of emotional security is specifically examined in relation to the dimensionality proposed by sense of coherence theory.

Our second goal was to assess the construct (i.e., discriminant, convergent) validity of the SIFS. If children's appraisals of security in the family unit act as a mediator of the link between family experiences and adolescent adjustment as various theoretical models suggest (e.g., Davies & Cummings, 1998; Finnegan et al., 1996), then appraisals of security should be associated with measures of both family and child adjustment. Thus, as a test of convergent validity, we tested the hypothesis that secure appraisals on the SIFS would be associated with close, supportive, and warm family relations and relatively low levels of psychological symptoms among children. In contrast, SIFS scales indexing insecure appraisals were hypothesized to be related to: (a) adverse family experiences that serve to undermine children's confidence in the family as a source of security (e.g., interparental conflict, parental psychological control, family instability); and (b) children's vulnerability to psychological difficulties.

To examine the convergent and predictive validity of the SIFS, we also tested the hypothesis that the SIFS scales would predict children's insecurity in multiple family relationships (i.e., parent–child, interparental) across multiple informants (i.e., child, parent), methods (i.e., questionnaire, analogue), and

measurement occasions (i.e., concurrently, six months later). First, we predicted that the SIFS scales would be concurrently associated with parental and child reports of insecurity in the interparental and parent–child relationships. Second, we also examined whether SIFS scales predicted children's responses to simulations of parental conflict six months later. Our reliance on parental conflict as a context for assessing security in the family was guided by earlier models that conceptualize interparental difficulties as significant threats to the integrity of the whole family unit (Emery, Fincham, & Cummings, 1992).

To test the discriminant validity of the SIFS, two additional sets of analyses were conducted. First, guided by the specific-linkage hypothesis described earlier, we tested the predictions that: (1) dismissing appraisals would be stronger predictors of externalizing symptoms than preoccupied and secure appraisals, and (2) preoccupied appraisals would be stronger predictors of internalizing symptoms than dismissing and secure appraisals. Second, to test the hypothesis that family-level indices capture processes beyond the summative effects of specific family relationships, we examined whether the SIFS would uniquely predict children's psychological symptoms even after controlling for the effects of children's insecurity in the primary family subsystems (i.e., interparental, parent–child).

Psychometric tests of the SIFS were conducted on a sample of early adolescents and their caregivers and teachers. Our decision to select a sample of children in early adolescence for developing and testing the SIFS was based largely on the paucity of assessments and knowledge about how adolescents cope with family difficulties. Despite the lack of knowledge of adolescents' reactivity to family events, there is emerging evidence that early adolescence may be a period of particular vulnerability to stressful family events (e.g., Cummings & Davies, 1994a; Grych & Fincham, 1997; Hetherington, Bridges, & Insabella, 1998; LaRoche, 1989). Children become increasingly sensitive to wider and subtler forms of family adversity as they progress through adolescence. Likewise, newly emerging capacities for engaging in abstract thinking, inferring relational meanings from interpersonal interactions, and evaluating the psychological implications for interpersonal events on the self may further heighten adolescents' sensitivity to the quality of family life. As evolving products of transactions between adolescent social-cognitive capacities and family events, children's appraisals of their welfare in the family evidence greater consistency over time and context during adolescence (e.g., Jouriles, Spiller, Stephens, McDonald, & Swank, 2000; Turner & Cole, 1994). Thus, the impact of appraisals of security in the family on children's psychological adjustment may be especially powerful during early adolescence.

Method

Participants and procedure

The participants in this study were recruited from a pool of 1,290 adolescents and their caregivers from a public (i.e., state) school in a middle class suburb of a United States metropolitan area. Students who elected to participate (and whose parents did not refuse permission) completed a survey packet in their classrooms under the supervision and guidance of a trained research assistant. The participation rate among students was 80%, yielding a total sample of 1,032 students. Reasons for non-participation included absence from school ($n = 71$), parental refusal ($n = 115$), and child refusal ($n = 72$). Only children who completed all the measures of family and child functioning used in this study ($n = 853$; 83%) were included in the final sample. Additionally, four classrooms of children ($n = 84$) were randomly chosen to be readministered several measures two weeks subsequent the initial administration.

The sample was about equally divided in terms of gender (male $n = 421$, female $n = 432$) and grade (sixth, $n = 288$; seventh, $n = 280$; eighth, $n = 285$). The average age of the children was 12.7 years (range = 10 to 15 years old). The ethnic composition of participating students was comparable to the student body of the school: 83% non-Hispanic White, 7% African American, 3% Hispanic, and 7% other. Median family income for this sample was between $40,000 and $55,000. The majority of parents were married or living with their partners (i.e., 72%), followed by smaller portions of divorced (20%) and separated (7%) parents. The vast majority of households contained three or more family members (97%), two or more adults (87%), and two or more children (85%).

Parents of participating children were mailed survey forms on family and child functioning to complete and return in a postage-paid envelope. Parents who returned questionnaires received store coupons and chances to win books and store gift certificates. After several mailings, a primary caregiver of 252 children (23%) completed and returned a survey. In the sample of 853 children used in the current analysis, parents were only included in the current study if they completed all the focal measures of family and child functioning ($n = 209$; 186 mothers, 23 fathers). Analyses comparing the children of participating and non-participating parents on demographic characteristics and study measures of child and family functioning indicated that the two subsamples of children were statistically indistinguishable on the majority of characteristics (i.e., 12 out of 16 comparisons). However, relative to children with non-participating caregivers, children with participating caregivers were more likely to be White, $\chi^2 (1) = 26.18$, $p < .01$, and to report higher levels of internalizing symptoms (effect size = .15). In contrast, teachers reported that children whose parents participated actually experienced *lower* levels of internalizing (effect size = .17) and externalizing (effect size = .26) symptoms.

A volunteer subset of adolescent participants ($n = 58$; 32 girls, 26 boys) visited the laboratory with their mothers six months after the survey assessment. During the visit, children participated in a simulated

parental conflict task. Each child listened to six audiotaped conflict vignettes between an adult male and female after being instructed to imagine that the conflicts were taking place between their parents. The vignettes, which varied in intensity, content, and course, consisted of: (1) two mildly angry disagreements that were affectionately resolved by the adults, (2) two moderately angry, unresolved disagreements varying systematically by topic (i.e., 1 adult and 1 child-rearing issue), and (3) two disagreements characterized by escalating, intense hostility varying systematically by topic (i.e., 1 adult and 1 child-rearing issue). After each vignette, children responded to a series of interview questions designed to tap children's insecurity in the context of family difficulties. Comparisons of adolescent and parent survey participants who did and did not participate in the laboratory visit only yielded 2 out of 23 significant differences. Dyads who visited the laboratory were more likely to be White (χ^2 (1) = 8.43, $p < .01$) and exhibit higher levels of parent reports of parent–child attachment security (effect size = .29). Thus, the laboratory sample appeared to be relatively representative of the larger sample.

Measures

Security in the family system. The original Security in the Family System (SIFS) scale contained 24 items designed to tap children's perceived confidence in their families to serve as a base of protection, stability, and support. To provide a psychometrically fair test of the factor structures proposed by the emotional security and sense of coherence theories, items were developed to ensure that relatively equal proportions of items represented each of the dimensions in the two conceptualizations. Therefore, the 24 items were equally divided into the sense of coherence dimensions of comprehensibility (e.g., 'The things that go on in my family don't seem to make any sense'), manageability (e.g., 'I feel that there is no solution to the problems in my family'), and meaningfulness (e.g., 'I feel I can count on my family to give me help and advice when I need it'). Likewise, similar proportions of items served as indicators of the three patterns of emotional security, including secure (e.g., 'It's worth caring about family members, even when things go wrong'), dismissing (e.g., 'I don't care what goes on in my family'), and preoccupied (e.g., 'I feel like something could go very wrong in my family at any time') dimensions. In answering the items, adolescents responded to the prompt, 'How much do you agree with each of these statements?', using a four-point scale ranging from 1 (*Completely disagree*) to 4 (*Completely agree*).

Family instability. Family instability, which is defined as the degree to which families fail to provide continuity, cohesiveness, and stability for children, was measured by having parents complete a revised version of the Family Instability Index (Ackerman, Kogos, et al., 1999). This revised index consisted of nine items designed to tap the frequency of disruptive life events over the past five years across five major domains (i.e., changes in residence, changes in the primary and/or secondary caregiver, transitions in romantic relationships of the

primary caregiver, significant loss of family income, and death or serious illness of a close family member). The validity of the revised Family Instability Index is supported by previous research (see Forman & Davies, 2003).

Family cohesion. Parents completed the Family Cohesion scale from the Family Adaptability and Cohesion Evaluation Scales-III (FACES III; Olson, Portner, & Lavee, 1985) to assess family cohesion. The FACES Cohesion scale, which is designed to measure family emotional bonding and support, consists of 10 items, each with five response alternatives ranging from 1 (*almost never*) to 5 (*almost always*). The Cohesion scale has satisfactory internal consistency (alpha = .87 in this sample) and support for construct validity has been shown in its ability to discriminate between clinic and nonclinic families (FACES III; Olson et al., 1985).

Interparental conflict. Children provided reports of their exposure to destructive conflict by completing the Frequency (6 items), Intensity (7 items), and Resolution (6 items) scales from Children's Perception of Interparental Conflict Scale (CPIC; Grych et al., 1992). Children respond to each statement describing destructive forms of interparental conflict by endorsing *true*, *sort of true,* or *false*. Sample items included 'I often see my parents arguing' and 'When my parents have an argument, they yell a lot.' The three CPIC scales were standardized and summed to form a destructive conflict properties scale. The resulting composite demonstrated good reliability in the current study ($\alpha = .91$). Support for the validity of the CPIC is shown by its significant interrelations with multi-informant reports of child adjustment and marital discord (e.g., Grych et al., 1992).

To obtain a comparable parental report index of destructive parental conflict, parents completed Frequency, Verbal Aggression, Physical Aggression, Resolution, and Child Involvement scales from the Conflict and Problem-Solving Scales (CPS; Kerig, 1996). Frequency assesses the number of times parents report engaging in minor and major conflicts over the past year, with response alternatives ranging on a six-point scale from 1 (*once a year or less*) to 6 (*just about every day*). Items on the remaining scales are rated on four-point continua (0 = *never*; 3 = *often*) reflecting the frequency with which parents and their partners engage in (a) verbally aggressive conflict tactics (i.e., Verbal Aggression, 16 items), (b) physically aggressive conflict (i.e., Physical Aggression, 14 items), (c) strategies for effectively resolving disputes (i.e., Resolution, 13 items), and (d) strategies that involve the child in parental conflict, such as arguing in front of the child and drawing the child into the argument (i.e., Child Involvement, 10 items). The internal consistency coefficients for the CPS scales were satisfactory ($\alpha > .82$). Given the moderate to strong interrelations among the CPS subscales (rs were .34–.61), each score was standardized and summed into a more parsimonious measure of destructive interparental conflict. Earlier research supports the psychometric properties of the CPS (Kerig, 1996, 1998). Parent and child reports of parental acceptance were moderately correlated ($r = .49$).

Parental acceptance. Parental and child reports on abbreviated versions of the Acceptance Scale of the Parental Acceptance and Rejection Questionnaire (PARQ) were used to assess parental acceptance (PARQ; Rohner, 1990). Children completed ten items from the Child-PARQ Acceptance Scale to assess mother and father acceptance. Children rated each statement (e.g., 'My mother [father] talks to me in a warm and loving way') describing acts of parental acceptance along a four-point scale, ranging from 1 (*almost always true*) to 4 (*almost always false*). Child reports of mother and father acceptance were summed to form a parsimonious index of parental acceptance ($\alpha = .95$). Parents completed comparable sets of 10 items from the parallel version of the Parent-PARQ Acceptance Scale to assess their reports of their own and their partners' acceptance. The items, which assess forms of acceptance that are identical to the child-report version, are rephrased from the parents' perspectives (i.e., 'I [my partner] talk to my child in a warm and loving way'). Parental self- and partner-reports of acceptance were summed to form a composite of parental acceptance ($\alpha = .89$). Parent and child reports of parental acceptance were minimally correlated ($r = .17$). The psychometric properties of the original PARQ Acceptance scales are well established (see Belsky & Isabella, 1985; Cassidy et al., 1996; Rohner, 1990).

Parental psychological control. As another measure of child-rearing experiences, parents and children reported on parental use of psychological control tactics or, more specifically, control strategies that negatively manipulate, distort, or limit children's psychological and emotional experiences. Children completed the Psychological Control Scale-Youth Self-Report Scale separately for mothers and fathers (PCS-YSR; Barber, 1996). Sample items from the eight-item scale include 'changes the subject whenever I have something to say' and 'would like to be able to tell me how to feel or think about things.' Children rate how well each statement describes their parents' child-rearing behaviors on a four-point scale ranging from 1 (*not like him/her*) to 4 (*a lot like him/her*). Child reports of maternal and paternal psychological control were combined into a single composite of parental psychological control ($\alpha = .89$). Evidence for the validity of the PCS-YSR is well documented in previous research (see Barber, 1996).

Parents completed a measure of psychological control to assess their own and their partners' use of psychological control. The eight-item measure specifically consisted of three items (e.g., 'I avoid talking to my child when s/he hurts my feelings') selected from the parent version of the CRPBI Psychological Control Scale (CRPBI; Schludermann & Schludermann, 1970; also see Margolies & Weintraub, 1977). The remaining five items, which were selected from the PCS-YSR, were modified slightly to correspond to the parent's frame of reference (e.g., 'I often try to change how my child feels or thinks about things'). Parents rated each statement on a four-point scale ranging from 1 (*not like me/my partner*) or 4 (*a lot like me/my partner*). Parents' reports of their own and their partners' psychological control were summed to form a single 16-item measure ($\alpha = .76$). A weak correlation ($r = .07$) was obtained between parent and child reports of psychological control.

Child psychological symptoms. Children and parents completed the Anxious/Depressed, Withdrawn, Delinquent Behavior, and Aggressive Behavior scales from parallel forms of the Youth Self-Report (YSR) and Child Behavior Checklist (CBCL) (Achenbach, 1991). For each informant, Anxious/Depressed and Withdrawn scales were summed into a measure of child internalizing symptoms, while Delinquency and Aggression scales were summed into a measure of child externalizing symptoms. Parent and child reports were moderately correlated for both externalizing ($r = .30$) and internalizing ($r = .29$) symptoms. The CBCL and YSR scales have adequate internal consistencies ($\alpha s > .87$ in the current study) and support for test–retest reliability and validity is evident in earlier research (Achenbach, 1991).

Teachers also reported on children's internalizing ($\alpha = .81$) and externalizing ($\alpha = .83$) symptoms by completing 10 items from the Teacher Report Form (TRF), an instrument designed to correspond to the YSR and CBCL (Achenbach, 1991). TRF data were included in this study if teachers completed items and reported knowing each child for at least 4 weeks. These criteria yielded a sample of 653 children.

Insecurity in the parent–child relationship. Adolescent reports of insecurity in parent–child relationships were obtained from the Child–Parent Attachment Security – Child Version (CPAS-C) scale (Davies, Harold, et al., 2002). In completing the CPAS-C, adolescents responded to each of the 15 items by rating how well each item described the relationships with each of the parents along response alternatives ranging from 1 (*not at all true of me*) to 4 (*very true of me*). Items (e.g., 'When I'm upset, I go to this person for comfort') were reverse scored so that higher scores on the scale reflect greater insecurity. Given their high correlation, $r (173) = .66$, $p < .001$, child reports of mother and father attachment insecurity were summed into a single 30-item measure of parent–child insecurity. The CPAS has excellent internal consistency ($\alpha = .89$ in this sample) and test–retest reliability over a two-week period, $r (92) = .83$. Support for the validity of the measure is reflected in its theoretically meaningful associations with measures of child–parent attachment security, parenting practices, and children's psychological adjustment across multiple informants (Davies, Harold, et al., 2002).

To obtain a comparable parent-report measure of parent–child insecurity, primary caregivers completed the Child–Parent Attachment Security – Parent Version (CPAS-P) scale (Davies, Harold, et al., 2002). Parents rated how well each of nine statements described their children's relationship with themselves and their partners on a five-point scale ranging from 1 (*not at all like my child*) to 5 (*a whole lot like my child*). Sample items included 'When my child is upset, he or she goes to me [my partner]' and 'My child appears comfortable sharing thoughts and feelings with me [my partner].' Caregiver reports of children's secure behaviors in the mother–child and father–child relationships were reverse scored and summed into a single measure of *insecurity in parent–child relations* in light of their correspondence, $r (173) = .57$, $p < .001$. The internal consistency of the 18 items (nine for each dyad) comprising the composite

was $\alpha = .89$. Support for the validity of this CPAS-P is shown by its hypothesized associations with measures of family and child functioning (see Davies, Harold, et al., 2002).

Insecurity in the interparental subsystem. To assess children's insecurity in the interparental relationship, children completed six scales from the Security in the Interparental Subsystem questionnaire (SIS; Davies, Forman, et al., 2002). The SIS scales consisted of: (a) Emotional Arousal, defined as the frequent experience of multiple forms of distress (4 items; $\alpha = .74$); (b) Emotional Dysregulation, characterized by the experience of prolonged, dysregulated distress (5 items, $\alpha = .84$); (c) Involvement, reflected in emotional and behavioral forms of involvement with interparental discord (6 items, $\alpha = .71$); (d) Avoidance, which is reflected in strategies used to escape or avoid interparental conflict (7 items, $\alpha = .79$); (e) Destructive Family Representations, defined as expectancies that conflict will have a negative impact on the family (4 items, $\alpha = .78$); and (f) Conflict Spillover Representations, characterized by child expectancies that conflict will spill over to affect their well-being (4 items, $\alpha = .82$). The six SIS scales were standardized and summed to form a composite of interparental insecurity ($\alpha = .85$). In addition to demonstrating internal and test–retest reliability, support for the validity of the SIS has been shown by its significant links with multi-method assessments of child reactivity to conflict and child experiences with psychological problems and interparental conflict (Davies, Forman, et al., 2002).

Parents also reported on behavioral indicators of children's insecurity in the interparental relationship by completing the Overt Distress and Behavioral Dysregulation scales from an adapted version of the Home Data Questionnaire – Adult Version (HDQ; Garcia O'Hearn, Margolin, & John, 1997). The revised Home Data Questionnaire (HDQ-R; Davies, Forman, et al., 2002; Davies, Harold, et al., 2002) prompts parents to rate how well each item describes their children's reactions to witnessing interparental arguments *over the past year* on a five-point scale ($1 = not\ at\ all\ like\ him/her$, $5 = a\ whole\ lot\ like\ him/her$). The Overt Distress scale of the HDQ-R consisted of five items tapping children's overt emotional arousal and dysregulation in the context of parental conflict (e.g., appears frightened, still seems upset after we argue, $\alpha = .78$). The Behavior Dysregulation scale of the HDQ-R consisted of three items assessing behavioral arousal and poor self-control during conflicts (e.g., causes trouble, yells or says unkind things to family members; $\alpha = .63$). The validity of the revised HDQ-R scales is supported by its meaningful relations with dimensions of children's conflict reactivity, adjustment, and exposure to interparental and family adversity (Davies, Forman, et al., 2002; Davies, Harold, et al., 2002). The two HDQ scales were standardized and summed to form a single, parsimonious measure of insecurity that corresponded well with the child report of insecurity ($r = .26$, $p < .001$ between the HDQ-R scales).

Children's reactions to simulated parental conflict. Children's interview responses to each of the six audiotaped simulations of interparental conflict were designed to assess four dimensions of child insecurity in the context of standardized interparental difficulties. First, to assess *emotional dysregulation,* children rated their tendencies to experience worry, shame, freezing, masking of affect, and avoidance after each of the vignettes along a six-point continuum ranging from 0 (not at all) to 5 (a whole lot). Child responses to the items were summed across the six vignettes to form a single index of emotion dysregulation ($\alpha = .92$). Second, to assess *Dysregulated Involvement,* children reported their proclivity to 'yell, or say unkind things to [their] parents' and 'end up taking sides with one of [their] parents' in response to each of the conflicts using the same six-point continuum. The two items were summed across the six vignettes to form a single composite ($\alpha = .79$). Third, *Negative Family Appraisals* was assessed after each vignette by ten questions reflecting child expectancies that the conflict would spill over to negatively affect family life (e.g., 'After they talked like that, how much would you expect that your mom [dad] would be upset with you?'; 'After they talked like that, how much would you worry about your family's future?'). After each vignette, children responded to the items by using the six-point continuum. The internal consistency of the Negative Family Appraisals assessment was $\alpha = .95$. Fourth, the *Security Concerns* measure was designed to assess the degree to which children were concerned and preoccupied with regulating emotions and protecting the self in the face of interparental difficulties. Consistent with earlier research (Davies, Forman, et al., 2002), children were asked to complete three interview questions after each vignette to assess concerns about their security and safety (e.g., 'Make myself feel better,' 'Protect myself from being hurt,' and 'Make sure they didn't get upset at me.'). Response alternatives ranged from *strongly disagree* (1) to *strongly agree* (5). The three items were summed across each of the six vignettes to form an 18-item composite ($\alpha = .92$).

Results

Analysis plan

Analyses are carried out in several steps. The first section of the results delineates the dimensional structure of the SIFS through the use of exploratory (EFA) and confirmatory (CFA) factor analyses. The second section addresses the internal and test–retest reliability of the SIFS. The final portion explores the construct validity of the SIFS by examining its associations with characteristics of family and child functioning (i.e., convergent and discriminant validity), and children's insecure responses in the context of parental conflict simulations six months later (i.e., predictive validity).

Factor structure

To identify the factor structure, exploratory factor analyses were performed for the 252 children whose parents completed and returned survey forms (Sample 1), and confirmatory factor analyses were

subsequently performed for the 601 children whose parents failed to return the surveys (Sample 2). The exploratory factor analyses conducted on Sample 1 extracted factors with generalized least squares estimation. Previous research has identified significant interrelationships among dimensions of security in various family relationships (Armsden & Greenberg, 1987; Davies, Forman, et al., 2002; Kenny, Moilanen, Lomax, & Brabek, 1993). Therefore, an oblique rotation was applied to the solution in light of the expectation that factors would be correlated rather than orthogonal. The viability of solutions containing between one and five factors were examined based on analysis of the scree plots, Kaiser's criterion, item loading patterns, item complexity (i.e., similar loadings on multiple factors), and factor interpretability (Tabachnick & Fidell, 1996). One- and two-factor solutions were rejected because they yielded significantly poorer representations of the data than the three-factor solution, weak item loadings, and high item complexity. Likewise, four- and five-factor solutions contained a number of items that were high in complexity. By contrast, the three-factor solution was supported by analysis of the scree plot, eigenvalues, high item loadings, and the relatively low factor complexity. The three-factor solution was also judged to be high in theoretical interpretability. Thus, a three-factor model was accepted as the final factor structure. Prior to accepting the three-factor solution, two items in the original 24-item scale were dropped due to low loadings and high complexity (i.e., 'I can usually guess what my family members are going to do before they do it', 'I feel that there is no solution to the problems in my family'). The final three-factor model accounted for 55.4% of the variance and all eigenvalues were greater than 1.0; χ^2 (168) = 274.24, p < .01.

The rotated pattern matrix for the final EFA solution is presented in Table 1. The first factor, which is labeled *preoccupation,* contains eight items that index children's worries about the future well-being of themselves and their families (e.g., 'I feel like something could go very wrong in my family at any time'). The second factor, which is labeled *security,* comprises seven items that tap children's confidence in their family unit as a reliable source of support and protection even during times of family stress (e.g., 'I believe that family members will be around to help me in the future'). The third factor, termed *disengagement,* consists of seven items that reflect children's efforts to disengage from and minimize the

Table 1 Pattern matrix of exploratory and confirmatory (in parentheses) factor analyses of the Security in the Family System scale

SIFS items	SIFS factors		
	PRE	SEC	DIS
(14) I feel like something could go very wrong in my family at any time.	.80 (.70)		
(7) I have the feeling that my family will go through many changes that I won't expect.	.78 (.69)		
(22) Sometimes I feel that something very bad is going to happen in my family.	.76 (.74)		
(8) I feel that I won't be able to handle some family problems that come up in the future.	.69 (.72)		
(10) I don't know what to do about things that are happening in my family.	.59 (.65)		
(16) It's hard to know how people in my family will react to each other.	.57 (.58)		
(3) In the past few years, my family changed so much that I felt unsure about what was going to happen next.	.51 (.66)		
(15) When something I don't like happens in my family, I think about it over and over again.	.48 (.46)		
(21) I believe that family members will be around to help me in the future.		.74 (.77)	
(20) I am proud of my family.		.67 (.75)	
(13) It's worth caring about family members, even when things go wrong.		.66 (.63)	
(2) I'm glad to be a part of my family because there are more good things about it than bad things.		.59 (.73)	
(17) When I think about the problems in my family, I feel that things will work out in the end.		.59 (.66)	
(9) When things in my family upset me, I can do something to make myself feel better.		.56 (.52)	
(6) I feel I can count on my family to give me help and advice when I need it.		.49 (.65)	
(19) I don't care what goes on in my family.			.66 (.47)
(4) When something bad happens in my family, I wish I could live with a different family.			.60 (.72)
(24) When something bad happens in my family, I feel like running away.			.58 (.68)
(18) When I'm upset, there's no one in my family who can make me feel better.			.56 (.57)
(5) I don't know why I put up with all the times my family makes me upset.			.52 (.77)
(11) The things that go on in my family don't seem to make any sense.			.44 (.63)
(12) When I have disagreements with family members, it's not worth trying to understand their point of view.			.41 (.54)

Note: EFA loadings of less than .30 are not displayed; PRE = Preoccupation, SEC = Security, DIS = Disengagement.

significance of the family (e.g., 'When I have disagreements with family members, it's not worth trying to understand their point of view').

To test the replicability of the EFA factor structure, a CFA with maximum likelihood estimation was conducted on sample 2 ($n = 601$). The CFA was conducted by freeing each item on the factor specified in the three-factor solution while constraining all other loadings to zero. Overall, fit indices indicated that the model provided an adequate representation of the data, $\chi^2 = 793.15$, 206 df, $p < .01$, χ^2/df ratio = 3.85, $RMSEA = .07$, $TLI = .88$, $CFI = .89$. The χ^2/df ratio (values of 5 or less) and the RMSEA (< .08) exceeded the standards of good model fit (MacCallum, Browne, & Sugawara, 1996) and the TLI and CFI values approximated the .90 standard. All factor loadings of the items exceeded .46 suggesting that model misspecification cannot be attributed to the internal coherence of the factors.

To further test the adequacy of our three-factor solution, we compared its fit relative to the fit of the three-factor model in Sense of Coherence theory (i.e., comprehensibility, manageability, meaningfulness; Antonovsky, 1987) and the single-factor model identified in research on adult sense of coherence (Antonovsky, 1993; Frenz et al., 1993). The three-factor, $\chi^2 = 1782.52$, $p < .01$, $RMSEA = .11$, $TLI = .67$, $CFI = .70$, and one-factor, $\chi^2 = 1923.41$, 209 df, $p < .01$, $RMSEA = .12$, $TLI = .64$, $CFI = .68$, solutions specified in confirmatory factor analyses each yielded relatively poor representations of the data. Furthermore, the loadings of many of the items onto their respective scales were poor (<.30). Thus, our attachment-based three-factor solution provided a relatively good representation of the data.

Reliability, intercorrelations, and descriptives of the SIFS scales

Table 2 provides the descriptive statistics, reliability coefficients, and intercorrelations for the three SIFS scales. Internal consistency values exceeded the standard of acceptability (i.e., .70) in both samples (Nunnally, 1978). Test–retest reliability coefficients, calculated over a two-week period with a sample of 84 children, were also good (mean $r = .79$). Consistent with our hypothesis that the three dimensions of security would be distinct, but interrelated (Armsden

& Greenberg, 1987; Davies, Forman, et al., 2002; Kenny et al., 1993), moderate correlations were observed among the SIFS subscales (mean $r = .52$) (see Cohen, 1987, for guidelines on evaluating effect sizes).

Validity analyses I: Relations between the SIFS scales and measures of family functioning

The first set of analyses tested the validity of the SIFS by examining its associations with child ($n = 853$) and parent ($n = 209$) reports of family characteristics. Table 3 presents the correlations between the SIFS and family and parenting characteristics. In support of the convergent validity of the SIFS, family (i.e., family instability, family cohesion, interparental conflict) and parenting (parental acceptance, psychological control) factors were, on the whole, modestly to moderately correlated with SIFS scales (mean $r = .26$). As hypothesized, forms of family adversity (e.g., psychological control, parental conflict) specifically predicted lower levels of Security and higher levels of Preoccupation and Disengagement. Opposite patterns of correlations were found for forms of family harmony (e.g., family cohesion, parental acceptance). As expected in light of shared informant variance, children's reports of family functioning (mean $r = .41$) more strongly predicted the SIFS than did parent reports (mean $r = .17$). Patterns of relations among the each of the SIFS scales and the measures of family functioning were comparable.

Validity analyses II: Relations between the SIFS scales and child functioning

The validity of the SIFS was also examined by evaluating its associations with children's functioning. Table 4 shows the associations between the SIFS scales and parent, child, and teacher reports of child psychological symptoms. Child psychological difficulties were, as a whole, modestly to moderately associated with the SIFS (mean $r = .26$). With few exceptions, the three SIFS scales predicted significantly higher levels of internalizing and externalizing symptoms across all informants, including children, parents, and teachers. Consistent with the findings on family functioning, SIFS scales tended to more

Table 2 Internal consistency, test–retest reliability, intercorrelations, and descriptive statistics for the SIFS scales

SIFS scales	M	SD	Factor correlations		Internal consistency		Test–retest reliability
			1	2	Sample 1	Sample 2	
1. Preoccupation	20.33	6.92	–		.88*	.85*	.75*
2. Security	27.96	5.43	−.32*	–	.85*	.82*	.82*
3. Disengagement	14.62	5.62	.64*	−.60*	.85*	.85*	.80*

Note: N for means, standard deviations, factor correlations = 853. Ns for Sample 1 and Sample 2 were 252 and 601, respectively. N for test–retest reliability = 84. * = $p < .001$.

Table 3 Correlations between the SIFS scales and family characteristics

	SIFS scales		
Family functioning	Preoccupation	Security	Disengagement
Family factors			
Family instability (P)	.20**	–.14*	.19**
Family cohesion (P)	–.08	.19**	–.09
Interparental conflict (P)	.20**	–.26**	.12
Interparental conflict (C)	.54**	–.43**	.53**
Parenting			
Parental acceptance (P)	–.18**	.28**	–.23**
Parental acceptance (C)	–.23**	.42**	–.34**
Psychological control (P)	.13	–.12	.13
Psychological control (C)	.43**	–.34**	.47**

Note: (P) = Parent-report measure, $n = 209$; (C) = Child-report measure, $n = 853$; (T) = Teacher-report measure, n = 653. *$p \le .05$; **$p \le .01$.

Table 4 Correlations between the SIFS scales and child psychological problems

	SIFS scales		
Child adjustment	Preoccupation	Security	Disengagement
Externalizing symptomatology			
Externalizing symptoms (P)	.13	–.23**	.27**
Externalizing symptoms (C)	.35**	–.39**	.49**
Externalizing symptoms (T)	.10**	–.15**	.22**
Internalizing symptomatology			
Internalizing symptoms (P)	.22**	–.23**	.28**
Internalizing symptoms (C)	.51**	–.31**	.49**
Internalizing symptoms (T)	.08*	–.10**	.05

Note: (P) = Parent-report measure, $n = 209$; (C) = Child-report measure, $n = 853$; (T) = Teacher-report measure, $n = 653$. *$p \le .05$; **$p \le .01$.

Table 5 Correlations between the SIFS scales and children's reactivity to simulated parental conflict

	SIFS scales		
Security measures	Preoccupation	Security	Disengagement
Informant survey ratings			
Parent–child security (P)	–.14*	.33**	–.30**
Parent–child security (C)	–.29**	.70**	–.57**
Interparental security (P)	.23**	–.22**	.24**
Interparental security (C)	.56**	–.08*	.39**
Child reactions to conflict simulations			
Emotion Regulation	.27*	–.12	.25+
Enmeshment	.28*	–.31*	.43**
Negative Family Appraisals	.40**	–.40**	.44**
Security Concerns	.31*	–.20	.30*

Note: (P) = Parent-report measure, $n = 209$; (C) = Child-report measure, $n = 853$. N for conflict simulation = 58. +$p < .06$; *$p \le .05$; **$p \le .01$.

insecurity were, on the whole, more closely associated with the SIFS scales ($r = .43$) than parent reports ($r = .24$). Significant associations of modest to moderate magnitude were found between the SIFS scales and measures of parent–child (mean $r = .39$) and interparental (mean $r = .29$) insecurity. Thus, despite some hypothesized overlap, the family-level security assessments appeared to be empirically distinct from dyadic-level security measures.

The validity of the SIFS scales would also be bolstered if the scales were shown to predict subsequent assessments of children's insecurity in the face of difficult family circumstances across different methods and measurement occasions. Thus, to test their predictive validity, we examined whether the SIFS scales predicted children's emotional and cognitive responses to standardized simulations of parental conflict six months later. The correlations between the three SIFS scales and children's reactivity to the six audiotaped simulations of parental conflict are presented in the bottom half of Table 5. The results indicated that higher levels of Preoccupation and Disengagement predicted children's endorsement of emotion dysregulation, dysregulated involvement, negative family appraisals, and security concerns in the conflict simulation task. Likewise, although associations between Security and children's emotion dysregulation and security concerns were not significant, Security did predict child reports of dysregulated involvement and negative family appraisals in the conflict simulations.

Validity analyses IV: Specificity of associations between SIFS scales and child functioning

The specificity-linkage hypothesis postulates that disengagement is a stronger predictor of externalizing

strongly predict child reports of their adjustment (mean $r = .33$) than parent (mean $r = .23$) or teacher (mean $r = .12$) reports.

Validity analyses III: Relations between the SIFS scales and children's security in family relationships

Relations among the SIFS and measures of children's security in the parent–child and interparental relationships were also examined as another test of concurrent validity. As shown in Table 5, parent and child reports of parent–child and interparental insecurity were consistently associated with higher levels of Disengagement and Preoccupation and lower levels of Security. As expected, child reports of

symptoms than the other dimensions of family security. Conversely, preoccupation is hypothesized to be a stronger predictor of internalizing symptoms than the other dimensions of family security (Finnegan et al., 1996). These hypotheses are especially pertinent to testing the convergent and discriminant validity of the SIFS. Although each pattern of security shares some overlap, the specific-linkage hypothesis postulates that the distinct components of each dimension uniquely predict specific forms of maladjustment. Thus, to provide a stringent and direct test of the unique predictive power of each of the security scales, we conducted six multiple regression models in which the three forms of family insecurity were entered simultaneously in a single step as predictors of child, parent, and teacher reports of child maladjustment. Table 6 provides results comparing the power of each of the family security dimensions in predicting the six child maladjustment measures. Although Preoccupation failed to predict teacher and parent reports of child internalizing symptoms when the two other SIFS scales were entered in the regression models, the findings did indicate that it remained a significant predictor in the model predicting child reports of internalizing symptoms. Follow-up comparisons of the magnitude of the partial correlations using Cohen's formula for comparing dependent correlations (see far right column in Table 6) revealed that Preoccupation was a significantly stronger predictor of child reports of their internalizing symptoms than Disengagement and Security (Cohen & Cohen, 1983). Likewise, Disengagement was a significant predictor of parent, teacher, and child reports of externalizing symptoms even while taking into account the effects of Preoccupation and Security. Comparisons of differences in the magnitude of partial correlations in these models indicated that Disengagement was generally a stronger predictor of child, teacher,

and parent reports of child externalizing problems than Security or Preoccupation.

Validity analyses V: The unique effects of the SIFS scales in models of family security

Consistent with the family systems principle of holism, it was also hypothesized that the sum of assessments of insecurity in dyadic family subsystems cannot fully capture the developmental significance of children's insecurity in the whole family unit. Therefore, as a further test of the validity of the SIFS, we examined whether family-level insecurity remained a significant predictor of children's psychological maladjustment even after controlling for the sum of the effects of insecurity in the primary dyadic relationships in the family (i.e., interparental, parent–child). To test this hypothesis, six hierarchical multiple regression models were conducted for specifications predicting child, parent, and teacher reports of internalizing and externalizing symptoms, respectively. To control for the additive effects of dyadic-level assessments of insecurity, child reports of parent–child insecurity and interparental insecurity were entered simultaneously with a SIFS composite variable consisting of the sum of standardized scores on Disengagement, Preoccupation, and Security (reverse-scored) scales. The single composite of family insecurity was used in the analyses to increase conceptual correspondence with the single measures of parent–child and interparental insecurity and improve the statistical power and parsimony of the statistical models. Internal consistency among the three scales of the composite was .75.

The results of the regression analyses are presented in Table 7. With the exception of the model predicting teacher reports of internalizing symptoms,

Table 6 Regression analyses testing the relative power of the three family security dimensions in predicting child maladjustment

Criterion variable	Predictor variable	β	Unique r^2	F	t-test: difference in prs
Internalizing (Child)	Investment (I)	−.06	.003	2.48	$pr_P > pr_D$, $t = 3.46$**
	Preoccupation (P)	.33	.086	79.92**	$pr_P > pr_I$, $t = 4.91$**
	Disengagement (D)	.25	.036	31.37**	
Internalizing (Parent)	Investment (I)	−.10	.007	1.39	pr_P was not significant
	Preoccupation (P)	.05	.002	.35	
	Disengagement (D)	.19	.016	3.20	
Internalizing (Teacher)	Investment (I)	−.12	.009	5.66*	pr_P was not significant
	Preoccupation (P)	.09	.005	3.20	
	Disengagement (D)	−.08	.003	1.87	
Externalizing (Child)	Investment (I)	−.15	.020	17.06**	$pr_D > pr_P$, $t = 7.06$**
	Preoccupation (P)	.07	.004	3.51	$pr_D > pr_I$, $t = 2.42$*
	Disengagement (D)	.36	.067	60.93**	
Externalizing (Parent)	Investment (I)	−.09	.006	1.28	$pr_D > pr_P$, $t = 4.72$**
	Preoccupation (P)	−.10	.005	1.08	$pr_D > pr_I$, $t = 1.13$, n.s.
	Disengagement (D)	.28	.033	6.96**	
Externalizing (Teacher)	Investment (I)	−.02	.000	.14	$pr_D > pr_P$, $t = 6.26$**
	Preoccupation (P)	−.07	.002	1.70	$pr_D > pr_I$, $t = 3.75$**
	Disengagement (D)	.25	.027	17.88**	

Note. Child-report measure, $n = 853$; Parent-report measure, $n = 209$; Teacher-report measure, $n = 653$. *$p \leq .05$; **$p \leq .01$.

Table 7 Unique effects of dyadic-level and family-level security as predictors of children's maladjustment

	β	Unique R	Unique R²	t	p
Internalizing (Child)					
Parent–child insecurity	.06	.04	.002	1.69	.091
Interparental insecurity	.39	.34	.114	12.72	.000
Family-level insecurity	.33	.22	.048	8.26	.000
Internalizing (Parent)					
Parent–child insecurity	.09	.06	.004	.96	.339
Interparental insecurity	.07	.06	.003	.87	.384
Family-level insecurity	.20	.13	.016	1.92	.056
Internalizing (Teacher)					
Parent–child insecurity	−.06	−.05	.002	−1.22	.221
Interparental insecurity	.02	.02	.000	.54	.590
Family-level insecurity	.12	.08	.006	2.04	.042
Externalizing (Child)					
Parent–child insecurity	.19	.14	.019	4.64	.000
Interparental insecurity	.10	.09	.008	2.96	.003
Family-level insecurity	.34	.23	.051	7.69	.000
Externalizing (Parent)					
Parent–child	.09	.07	.004	.97	.335
Interparental insecurity	−.04	−.03	.001	−.46	.645
Family-level insecurity	.21	.13	.018	1.96	.051
Externalizing (Teacher)					
Parent–child insecurity	.10	.07	.005	1.87	.062
Interparental insecurity	.04	.03	.001	.77	.439
Family-level insecurity	.11	.08	.006	1.98	.048

Note: Child-report measure, $n = 853$; Parent-report measure, $n = 209$; Teacher-report measure, $n = 653$.

the summative effects of dyadic-level insecurity measures significantly predicted children's maladjustment across each of the three informants. However, even after statistically controlling for the robust effects of the dyadic-level assessments of security, the SIFS composite variable continued to be a significant (i.e., 5 of 6) or marginal (i.e., 1 of 6) predictor of children's maladjustment in all six regression models. The unique variances accounted for by the SIFS composite were small to moderate in size depending on the identity of the informant (r^2 ranged from .006 to .051, with mean $r^2 = .024$).

Discussion

The goal of this study was to develop and test the psychometric properties of a new self-report scale (SIFS) designed to tap children's collective perceptions of the family as a source of security, stability, and threat. Although research has shown that successful adjustment by children depends, in large part, on their collective histories of family experiences (Ackerman, Izard, et al., 1999; Dickstein et al., 1998; Forehand et al., 1991; McHale & Rasmussen, 1998; Sandler et al., 1991), advances in the study of holistic family relations have significantly outpaced progress in understanding child coping in the whole family context. As a result, little is known about the processes set in motion within children by the family unit that increase their risk for maladjustment.

Accordingly, this study introduced the SIFS scale as a measure of children's perceived security within the whole family context.

Guided by family-wide models of emotional security and attachment (Davies & Forman, 2002; Davies, Harold, et al., 2002; Rothbaum et al., 2002), we hypothesized that the SIFS would yield distinct (i.e., distinguishable, but not orthogonal) measures of security, preoccupation, and disengagement. Consistent with hypotheses, factor solutions derived from the exploratory and confirmatory factor analyses were remarkably consistent in identifying three theoretically meaningful factors that reflect secure, disengaged (or dismissing), and preoccupied appraisals of the family as a source of security. The relative fit of this three-factor solution identified in the confirmatory factor analysis was substantially better than two other plausible models derived from sense of coherence theory (Frenz et al., 1993). Finally, the SIFS scales demonstrated adequate internal consistency and test–retest reliabilities.

The identification of Security, Preoccupation, and Disengagement scales from the SIFS bears similarity to children's strategies of obtaining security in other family relationships. For example, evaluations of security, disengagement, and preoccupation within adolescent–parent attachment relations have been useful in testing and advancing attachment theory (Colin, 1996; Finnegan et al., 1996; Kobak et al., 1993). Research has also identified secure, dismissing, and preoccupied strategies as primary strategies children use to preserve security in the face of interparental difficulties (Davies & Forman, 2002). Thus, the comparability among the three dimensions of security in the family unit and profiles of security identified in specific family relationships raises the possibility that children may adapt to the family unit in ways that resemble their patterns of adaptation in dyadic family relationships. Although still speculative, these findings raise the possibility that there may be a small set of fundamental patterns of security that are common across different types and levels of family relationships.

If children's sense of security in the family unit is a primary mechanism that accounts for the link between forms of family adversity and children's psychological adjustment as conceptual models postulate (e.g., Ackerman, Izard, et al., 1999; Cummings & Davies, 1996), then the SIFS should be associated with family risk factors and children's psychological difficulties. In support of the convergent validity of the SIFS, indices of family functioning were related to the SIFS in theoretically meaningful ways. Measures of support, cohesiveness, and availability in the family predicted higher levels of Security and lower levels of Disengagement and Preoccupation, whereas family characteristics that were theorized to threaten the stability and welfare of the family were positively associated with Disengagement and Preoccupation and negatively

associated with Security. The SIFS scales, in turn, predicted children's internalizing and externalizing symptoms across different informants (i.e., child, parent, teacher).

The modest to moderate strength of associations between the SIFS and histories of family adversity and child psychological problems merits some discussion. The particularly modest magnitude of associations for parent and teacher reports on validity measures suggests that relying solely on data from a single informant may inflate estimates of relations among family characteristics, the SIFS, and child adjustment. By the same token, the robustness of the relations between the SIFS and reports of family and child functioning across different informants provided evidence for its validity. Predictions of modest to moderate associations are also consistent with the theoretical assumptions underlying the development of the SIFS. For example, principles of holism assume that no single family characteristic or relationship should strongly predict the SIFS because children's appraisals of security in the family unit are thought to be products of collective experiences across multiple family relationships (Ackerman, Izard, et al., 1999). Likewise, although the goal of preserving a sense of security may play a pivotal role in the development of child psychopathology, it is only one goal in a multidimensional hierarchy of human goal systems that guide children's development (Davies & Forman, 2002). Thus, children's success at achieving any single goal can be expected to explain a modest portion of the variance in their psychological maladjustment.

Further evidence for the convergent validity of the SIFS is reflected in its relations with children's sense of security in dyadic family relationships across different informants (i.e., parent, child) and methods (i.e., questionnaire, analogue). Given that children's sense of security in the family unit is derived, in part, from their appraisals of support and threat in specific family relationships, we also predicted that the SIFS would be associated with children's sense of security in parent–child and interparental relations. However, because family systems theory assumes that whole family functioning is distinct from functioning within specific family subsystems, we expected that the strength of these associations would generally be moderate in magnitude. Consistent with predictions, the SIFS scales were, on average, modestly to moderately correlated with concurrent parent and child reports of insecurity in parent–child and interparental relations.

Support for the predictive validity of the SIFS was further evidenced by its ability to predict children's reactivity to simulated interparental conflict six months later. According to the emotional security hypothesis (Davies & Cummings, 1994), children's insecurity in the interparental relationship is characterized by relatively high levels of emotional dysregulation, overinvolvement in adult problems, negative internal representations of family functioning, and endorsement of goals reflecting protection and promotion of well-being in response to interparental difficulties. Thus, we hypothesized that these forms of reactivity to parental conflict, which are postulated to be indicators of threat in the family, would be predicted by earlier reports on the SIFS. In support of this hypothesis, each SIFS scale was a consistent predictor of indicators of children's insecurity in the conflict simulations six months later.

Analysis of the discriminant validity of the SIFS was also afforded by tests of the 'specificity-linkage hypothesis' which postulates that patterns of coping or insecurity in family relationships differentially predict children's vulnerability to internalizing and externalizing symptoms (Finnegan, 1996; also see Davies & Forman, 2002). Disengaged patterns of coping with family difficulties were specifically hypothesized to increase children's externalizing symptoms by fueling alienation, negative appraisals of the social world, and excessive self-concerns and self-reliance. Conversely, high levels of preoccupation were expected to increase internalizing symptoms of helplessness, anxiety, and perceived inefficacy by interfering with abilities to develop emotion regulation skills and explore and master the social and physical worlds. Supporting the former hypothesis, regression analyses indicated that Disengagement was, in general, a significantly stronger predictor of teacher, child, and parent reports of externalizing symptoms than Security or Preoccupation. Partial support was also found for the hypothesis that internalizing symptoms are specifically predicted by Preoccupation. Thus, while Preoccupation was a significantly stronger predictor of child reports of internalizing symptoms than the other SIFS scales, it failed to predict parent or teacher reports of internalizing symptoms. Although these null findings may raise some questions about the discriminant validity of the SIFS, they may also be reflections of the difficulties outside observers experience in accurately reporting on internalizing symptoms. Because child reports are commonly perceived to be better assessments of internalizing symptoms than parent or teacher reports (e.g., Achenbach, McConaughy, & Howell, 1987; Grych et al., 1992), it may be best to more heavily weight the results of the child reports in evaluating the discriminant validity of the SIFS.

Another litmus test of the value of the SIFS lies in its ability to predict children's adjustment even after considering the additive effects of children's sense of security in key, dyadic family relationships. A primary assumption of family systems theory is that holistic assessments of the family unit capture more psychological meaning than can be derived by the sum of specific family relationships considered singly. Accordingly, the significance of the SIFS as a research tool is bolstered to the extent that it significantly predicts children's psychological problems even after

partialling out the additive effects of children's reports of insecurity in the parent–child and interparental relationships. Lending further support to its discriminant validity, the results indicated that the SIFS remained a significant predictor of children's internalizing and externalizing symptoms even after estimating the effects of insecurity in the parent–child and interparental relations. Moreover, these findings were robust across different informants (i.e., children, parents, teacher) and contexts (e.g., school).

Several limitations and recommendations should be considered in using and interpreting the SIFS scales. First, given that the majority of the measures used in the validity analyses were based on survey reports, analyses of the validity of the SIFS scales in this study hinge on the accuracy and trustworthiness of informant reports. Although our use of analogue methods and multiple informants may allay some of these concerns, this study should be considered the first step in the process of testing the construct validity of the SIFS. Future psychometric tests would benefit from the development of a more comprehensive multi-method battery of validity measures. Further improving methodology through the use of longitudinal designs would also provide more rigorous tests of validity and theoretical assumptions about directionality of pathways than our largely cross-sectional design. In addition, despite the existence of some diversity in social and demographic characteristics of participants for some analyses, the samples, as a whole, were circumscribed in terms of their ages (i.e., young adolescents), socioeconomic status (i.e., primarily middle-class), and ethnicity (i.e., predominantly White). Determining whether the psychometric properties of the SIFS scales generalize to other populations (e.g., low SES, clinical samples, older adolescents) requires further study. In further advancing the study of family security beyond the stages of psychometric testing, understanding children's collective appraisals within the broader constellation of biopsychosocial processes (e.g., parental psychopathology, child puberty and physiological functioning, family violence) is a potentially fruitful step for future research.

Although our goal of developing a self-report measure may be a viable, cost-effective strategy for capturing children's appraisals of the family unit as a source of threat, security and support, it was not designed to comprehensively assess all key dimensions of children's representational systems. For example, our survey assessment cannot accurately capture the unconscious or semi-conscious processes (e.g., defensive mechanisms) that many attachment theorists consider to be central components of dismissing, secure, and preoccupied representational systems (Kobak et al., 1993). Likewise, the SIFS, by itself, cannot be used to identify children who still have confidence in their ability to gain security from the family despite facing considerable family adversity. Nevertheless, evaluating the SIFS

in the context of indices of family risk might be useful in identifying profiles of resilient children. Finally, other conceptual accounts inspired by stress and coping theory may more broadly interpret the SIFS as a measure of coping with family difficulties. For example, within some developmental-contextual models (Fuhrman & Holmbeck, 1995), the Disengagement scale may serve as a useful measure of emotional disengagement from family members.

Broader questions can also be raised about the boundaries between patterns of security and child maladjustment. Our conceptualization of appraisals of security as mediators of family functioning that increase children's risk for maladjustment was guided by process models within developmental psychopathology (Cummings et al., 2000). The primary goal of these models is to identify processes that underlie associations between risk and individual differences that are relatively stable across time and context. A conceptual distinction is drawn between process variables (i.e., security in the family) and outcome variables (e.g., general adjustment across contexts) based on theory and the specificity and level of assessment. Thus, the emotional security hypothesis postulates that security within specific family contexts, while being conceptually distinct from patterns of child adjustment and traits, has implications for child adjustment (Davies & Cummings, 1998). Nevertheless, systematically disentangling process and outcome measures over time within longitudinal designs is an important step for future research.

Finally, although research on the specificity of associations between emotional security and child adjustment (i.e., specific-linkage hypothesis) provided bases for testing the discriminant validity of the SIFS (Davies & Forman, 2002; Finnegan et al., 1996), the early stage of research precluded tests of discriminant validity for associations between family functioning and security. For example, recent conceptualizations of emotional security in the broader family system have yet to develop hypotheses about the relative roles of specific family factors in predicting child security in the family. As theory and research in this area progresses, a key task will be to develop more specific hypotheses that permit more tests of discriminant validity in linkages between family functioning and child appraisals of security.

Despite these limitations, the present findings suggest that the SIFS is a psychometrically sound survey assessment of children's security in the family unit. Not only did the SIFS scales demonstrate adequate internal and test–retest reliability, but considerable evidence also supported the convergent, predictive, and discriminant validity. Thus, results support using the three scales (i.e., Disengagement, Preoccupation, Security) separately, if warranted. In light of the moderate links among the SIFS scales and the results of earlier exploratory research (Forman & Davies, 2003), it might also be

useful to form a single, multi-indicator composite of family security, though caution should be exercised in assuming the existence of a valid higher-order construct of family instability. Overall, our recommendation is to utilize the SIFS scales in a way that best meets the specific goals of the study. Thus, retaining the three SIFS scales in analyses may be especially valuable when the empirical goal is to disentangle the specific correlates, precursors, or sequelae of each type of appraisal. Alternatively, if the SIFS measures are part of a multivariate model of family processes, developing a single aggregate of family security may be the more parsimonious and powerful research strategy.

In sum, the SIFS scales provide a valuable tool for advancing family process models. A central aim of process-oriented family models is to articulate the dynamic patterns of children's responding that underlie relations between their exposure to family risk factors and their subsequent psychological adjustment. However, because assessments that capture children's responding in the family unit are scarce, many process questions await the development of measures. As a measure of children's responses to the family unit as a whole, the SIFS increases the feasibility of testing a number of hypotheses derived from family process models. It may be especially useful in delineating how children's patterns of responding in the family unit as a whole may serve as mechanisms that account for the links between family-level functioning (i.e., family instability, family conflict) and child functioning (e.g., Forman & Davies, 2003). Thus, as progress in developing family-level process measures continues, the current findings suggest that the SIFS serves as a valid single self-report assessment of family insecurity and, ultimately, as part of a battery of multiple measures (e.g., clinical interviews) of family insecurity.

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