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Assessing the Emotional Availability of Parents

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Parental emotional availability has been discussed extensively in the research literature, but has rarely been evaluated directly. This manuscript describes a series of four studies (two pilot studies and two formal studies) that culminated in the development of a psychometrically sound measure of parental emotional availability. The Lum Emotional Availability of Parents (LEAP) measure was developed initially with older adolescents and then was extended down to children as young as 9 years old in both clinical and nonclinical samples. Collateral parental reports were also collected. The LEAP assesses children's and adolescents' perceptions of their mother's and father's emotional availability separately. The measure shows good psychometric properties regarding both reliability and validity. Children in the clinical sample reported lower rates of parental emotional availability than did children in the nonclinical sample. The LEAP is a promising new measure that can be used to identify children who might be at risk for development of emotional/behavioral problems because of their perceptions of parental emotional unavailability.

KEY WORDS: emotional availability; fathers; mothers; behavior; functioning.

The connections between parental behaviors and children's emotional/behavioral functioning have been established for decades (e.g., Schaefer, 1965). There remains, however, a significant amount of variance that is left unaccounted by current measures of parenting (Kodl & Mermelstein, 2004; Lee & Gotlib, 1991; Phares, 1996). Although it is unrealistic to assume that all of the variance in children's emotional/behavioral functioning can be accounted for by known variables, it appears that parents' emotional connections to their children are worthy of exploration.

The construct of emotional availability represents a significant element in the quality of parent–child relations reflective of healthy parenting. Although there are somewhat different conceptualizations of emotional availability in the literature, the primary features of emotional availability focus on the level of parental responsiveness, sensitivity, and emotional involvement (Biringen & Robinson, 1991; Lee & Gotlib, 1991). The construct of emotional availability is consistent with theoretical and empirical evidence that highly involved parenting behaviors are related to a child's greater sense of security. Higher levels of parental emotional availability are strongly associated with secure infant–parent attachment (Bretherton, 2000) and infants' attention toward their parent (Volling, McElwain, Notaro, & Herrera, 2002).

Parental emotional availability can occur whether or not the child is distressed. Specifically, parental emotional availability is evident when parents provide support and acceptance of an array of child behaviors, both positive and negative (Easterbrooks & Biringen, 2000). Thus, parental emotional availability can occur in the context of a variety of children's emotions, not just distress.

Biringen and Robinson (1991) argued that emotional availability describes an interdependent quality of relation between a parent and child. The negative side of emotional availability is, of course, emotional unavailability. Specifically, emotional unavailability occurs when the mother remains unavailable to her infant despite her physical presence (Aviezera, Sagi-Schwartz, & Koren-Karie, 2003; Field, 1994). In a laboratory study where mothers were asked to simulate emotional unavailability

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by looking depressed and remaining still-faced, infants showed distress whether or not their mother was physically available to them. When the effects of maternal physical separation were compared with emotional unavailability in an experimental design with infants, maternal emotional unavailability was more distressing than physical absence (Field, 1986). A number of other studies have documented the negative ramifications of parental emotional unavailability with infants (Aviezer, Sagi, Joels, & Ziv, 1999), preschoolers (Robinson & Little, 1994), and older children (Lieberman, Doyle, & Markiewicz, 1999).

In a comprehensive review of children's maladjustment, Lee and Gotlib (1991) argued that emotional unavailability is at the core of a number of risk factors that are associated with maladaptive functioning in children. Specifically, parental emotional unavailability is evident during parental divorce, interparental conflict, and parental psychopathology. All three of these risk factors are associated with children's maladjustment, and emotional unavailability appears to be the common feature across all three situations (Lee & Gotlib, 1991). More recent reviews have confirmed that low levels of parental emotional availability permeate the experiences of youngsters who are at risk for emotional/behavioral problems due to parental divorce, interparental conflict, and parental psychopathology (Biringen, 2000; Easterbrooks, Biesecker, & Lyons-Ruth, 2000; Easterbrooks & Biringen, 2000). Although the importance of the construct of parental emotional availability is well-established, there are still limitations in the measurement of emotional availability.

Thus far, the construct of emotional availability has been assessed primarily with the use of global observational techniques that are prone to subjective bias (Biringen, Robinson, & Emde, 1994, 1998; Field, 1994). Empirical investigations of the behavioral components of emotional availability, however, have been sparse. As a result, many predictions derived from theory remain untested, especially in noninfant populations (Emde, 2000). Researchers have demonstrated that parental influence does not decline as young children mature into adolescents (Baumrind, 1991; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Thus, more research is needed in families with children, adolescents and young adult children.

Furthermore, the majority of parent–child research has emphasized the mother–child dyad, hence ignoring fathers' behaviors (Phares, 1999; Phares, Lopez, Fields, Kamboukos, & Duhig, in press; Silverstein, 2002). Although research has demonstrated differences between the degree of sensitive and responsive care by mothers and fathers, there is evidence that there are more similarities than differences between mothers' and fathers' interactions with their children (Pleck & Masciadrelli, 2004; Silverstein, 2002). It makes sense, however, to explore both mothers' and fathers' emotional availability in relation to children's functioning. Although emotional availability has not been studied extensively in fathers, related research on father–child attachment suggests that fathers and mothers show similar patterns of attachment to their infants (Fox, Kimmerly, & Schafer, 1991), older children (Kerns, Tomich, Aspelmeier, & Contreras, 2000; Lieberman et al., 1999), and adolescents (Ducharme, Doyle, & Markiewicz, 2002). Thus, it appears worthwhile to study emotional availability in both mothers and fathers.

In order to address the limitations of previous research that focused primarily on infants and mothers, studies were completed to develop and validate a measure of parental emotional availability. This investigation was meant to provide a reliable and readily usable measure that addresses emotional availability in both mothers and fathers. The pilot studies and Study 1 utilized older adolescent/young adult college student samples to develop and validate the measure and the second study utilized both clinical and nonclinical samples of children and adolescents to assess the downward extension of this measure. A total of 525 older adolescents/young adults participated in the pilot studies and Study 1 (with no overlap between studies). A total of 745 children and adolescents (ages 9–17) and 553 parents participated in Study 2 for the downward extension. Nunnally (1978) suggested that a sample size of 300 should be sufficient to acquire an adequate representation of responses from participants. All participants were included on a voluntary and confidential basis, with consent (in the case of participants over the age of 18), assent, and parental consent (in the case of participants younger than 18) provided. It was hypothesized that a reliable and valid measure of parental emotional availability could be developed. It was further hypothesized that higher rates of parental emotional availability would be associated with lower rates of psychological distress and maladjustment.

PILOT STUDIES: ITEM GENERATION AND SCALE DEVELOPMENT

Method

Participants

Two pilot studies were completed for item generation and scale development. A total of 220 older

adolescent/young adult college students participated in the item generation pilot study, and 155 older adolescent/young adult college students participated in the scale development pilot study. All participants attended psychology classes at a metropolitan university in the southeast and received extra credit for voluntary participation. Ages ranged from 18 to 25 years, with a mean age of 18.94 ($SD = 0.88$) in the item generation pilot study and a mean age of 21.91 ($SD = 2.08$) in the scale development pilot study. Somewhat more female (68.3%) than male students participated in both studies. Both samples were ethnically diverse (68.6% Caucasian, 8.7% African American, 13.9% Hispanic/Latino/Latina, 7.9% Asian American, and 0.9% Other).

Procedures

In the item generation pilot study, participants were asked to provide written responses to an open-ended question in relation to parents: "What is emotional availability?" A total of 153 items was generated during this phase of questionnaire development. A research panel (three PhD level faculty members and five MA level graduate students who study parent–child relationships) also generated items individually on the basis of the following definition: "Emotional availability is the level of parental responsiveness and refers to how the parent generally behaves toward the child."

Any item that was either generated by nine or more older adolescents or was generated by both older adolescents and the research panel was included in the development scale. These criteria were adopted on the basis of an evaluation of frequencies obtained for all generated items. Most items were generated by one or two older adolescents, but a subset were identified by nine or more older adolescents. Eighty items were selected for inclusion in the development scale and were adapted from the two sources.

A total of 15 masters level graduate research assistants reviewed the items to detect ambiguous wording of items, to discern difficulty level of questions, to facilitate ease of readability, and to determine the feasibility of the response format and organization of the scale. No items were deleted at this stage. All responses were worded to enable the use of a 6-point Likert scale ranging from *Never* (like my mother/father) to *Always* (like my mother/father). The order of the items was randomized, and the same items were used in both mother and father forms. Some items in the scale were also reverse coded to control for possible response biases. The emotional availability development scale was finalized upon completion of these changes.

Based on this 80-item initial scale, a second pilot study was conducted to develop the scale more fully and to select useful items. Participants were asked to rate their mother's and father's behaviors when the participants were 16 years old. This procedure is common in the use of retrospective measures. To help participants recall their parents' behavior when they were 16 years old, a list of 10 memory enhancement questions such as, "What year was it when you were 16 years old?" and "Who were your friends at the time?" preceded the actual items of the emotional availability scale. Although a few participants had to recall events from nearly a decade earlier (e.g., participants who were 24 or 25 years old), no participants expressed difficulty in completing the task. Participants completed separate 80-item forms for their mother and their father, which were presented in counterbalanced fashion.

Results

Before statistical procedures were conducted, negatively worded items were reverse coded. All analyses were conducted for mothers and fathers separately. Item-total correlations on the mother form ranged from .01 to .91, with a mean of .69. For the father form, item-total correlations ranged from −.01 to .91, with a mean of .68.

Items were deleted according to a number of criteria. First, an indicator of reliability was computed by comparing the standardized item alpha for the scale with the alpha coefficient for each item. Any item for which the coefficient alpha increased significantly when it was deleted (i.e., if the value of alpha increased by .001), was dropped because it contributed little to the scale's internal consistency. Second, if the item-total correlations were low (i.e., lower than .70), the item was dropped (Nunnally, 1978). Third, the means and variances of the frequency distributions of each item were examined. Items that had a mean close to the extreme (i.e., 1 or 6) or that had a very small standard deviation (i.e., lower than 1.50) were dropped because they would not allow differentiation between participants. Fifty-six items were dropped because of a decrease in alpha when the item was deleted, skewed means, or low variance. Nine additional items were deleted because they were judged to be divergent from the remaining items by a research panel of two PhD level researchers and two MA level researchers (e.g., the majority of items reflected verbal exchange or nonverbal acknowledgment but the irrelevant items reflected specific parental behaviors).

Participants' responses to the remaining 15 items were submitted to a factor analysis (one for mothers and one for fathers), with a principal axis method of factor extraction using squared multiple correlations as estimates of communalities. The item-factor loadings provided by the SAS varimax procedures were evidence for the existence of one factor on each form (i.e., the mother form and the father form). In addition, the scree plots and parallel analyses gave further support for only one factor for each form. Item-factor loadings on the mother form ranged from .82 to .91. The range on the father form was .80–.92. Because all item-factor loadings from both forms were greater than .80, no items were dropped. The item with the highest factor loading on both the mother and the father form was "emotionally available to me." Item-scale correlations were examined to determine the proportion of item variance accounted for by the construct. The total percentage of variance accounted for by the 15-item mother form was 95% and by the 15-item father form was 94%. The 15 items along with the factor loadings are presented in Table I.

The resulting scale was labeled the Lum Emotional Availability of Parents (LEAP) Scale. As can be seen in Table I, all of the retained items were worded in the positive direction, so reverse scoring was not necessary. The internal consistency of the LEAP was computed for the total scale. Cronbach's alpha coefficients were computed to estimate reliabilities of the mother form (alpha = .98; item $M = 4.2$; $SD = .26$) and father form (alpha = .98; item $M = 4.10$; $SD = .30$). Internal consistencies of both forms of the LEAP are considered highly reliable because all item-total correlations were above .79. Analyses of order effects suggested that there were no differences when mothers were rated before (item $M = 4.71, SD = 1.00$) or after (item $M = 4.69, SD = 1.11$) fathers ($t[153] = 1.51$; $p > .05$). Analyses of order effects also suggested that there were no differences when fathers were rated before (item $M = 4.08$, $SD = 1.23$) or after (item $M = 4.48$, $SD = 1.16$) mothers ($t[151] = 1.44$; $p > .05$).

Table I. Factor Loadings for the Lum Emotional Availability of Parents (LEAP) Scale (Pilot Study; Older Adolescents/Young Adults)

Item	Form	
	Mother	Father
Supported me	.82	.80
Consoled me when I was upset	.85	.84
Showed she/he cared about me	.87	.89
Showed a genuine interest in me	.90	.91
Remembered things that were important to me	.89	.85
Was available to talk anytime	.88	.83
Asked questions in a caring manner	.88	.89
Spent extra time with me just because she/he wanted to	.86	.86
Was willing to talk about my troubles	.91	.88
Pursued talking with me about my interests	.87	.87
Valued my input	.90	.82
Was emotionally available to me	.91	.89
Made me feel wanted	.87	.85
Praised me	.87	.87
Was understanding	.90	.92

STUDY 1: VALIDATION

Method

Participants

The confirmatory sample consisted of 168 older adolescent college students from the same university as the pilot studies. No participants overlapped between any of the studies. There were more female (76.2%) than male (23.8%) students in this sample, which is consistent with the larger pool of participants. The mean age of participants was 20.87 years ($SD = 1.68$), with a range of 18–25 years old. The sample was ethnically diverse (64.9% Caucasian, 10.1% African American, 14.9% Hispanic/Latino/Latina, 8.3% Asian American, and 1.8% Other). The majority of participants rated their biological mother (93%) and their biological father (87%).

Measures

Demographics. Participants were asked to report basic demographic information (e.g., gender, race/ethnicity, contact with parents, parents' marital status).

Parenting Measures. Three measures of parenting were selected because they represent the most universally used and psychometrically sound indices of parenting behaviors (Gerlsma, Emmelkamp, & Arrindell, 1990). These measures were included to assess convergent validity of the LEAP.

The Children's Report of Parental Behavior Inventory—Revised (CRPBI-R; Schludermann & Schludermann, 1970) consists of 18 subscales, but only four relevant and widely-used subscales were included in the current study (Acceptance, Positive involvement, Control, and Withdrawal of relations). These subscales have strong psychometric properties, with median reliabilities ranging from .66 to .84 (Schaefer, 1965; Schludermann & Schludermann, 1970). Higher numbers on each subscale reflect higher levels of that characteristic.

The Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) measures the Care and Overprotection dimensions of parent–child bonding. The PBI has strong psychometric properties, with split-half reliabilities of .88 for the Care dimension and .79 for the Overprotection dimension. Higher numbers on each subscale reflect higher levels of that characteristic.

Two subscales from the measure known as My Memories of Upbringing (EMBU; Winefield, Goldney, Tiggemann, & Winefield, 1990) were used. Cronbach's alpha ranges from .93 to .94 on the Supportive/Emotional Warmth scale, and .76–.83 on the Overinvolved/Overprotection scale. Higher ratings on each subscale signify higher levels of that characteristic.

Psychological Symptoms. In order to explore the relationship between parents' emotional availability and psychological functioning, participants completed the Brief Symptom Inventory (BSI; Derogatis & Spencer, 1982) for themselves. The BSI yields a Global Severity Index of psychological symptoms, which has strong psychometric properties. Specifically, internal consistencies range from .71 to .85 and test–retest reliability of the Global Severity Index is .90. Higher ratings reflect higher levels of maladjustment.

Current Mood. A short version of the Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1992) was used to assess immediate effects of mood or affective states on responses to the LEAP. The POMS measures transient, fluctuating mood states, with internal consistencies above .90. The total mood disturbance score was used in this study, with higher ratings indicating higher levels of immediate psychological distress.

Social Desirability. In order to evaluate possible effects of socially desirable response bias on responses to the LEAP, a short version of the Marlowe-Crowne Social Desirability Scale (M-C SDS; Strahan & Gerbasi, 1972) was administered. Internal consistency for the scale is .88 (Strahan & Gerbasi, 1972), and higher scores reflect higher levels of social desirability.

Parental Emotional Availability. The 15-item LEAP scale was used to rate mothers' and fathers' behavior when the participants were 16 years old. On the basis of the findings in the pilot studies, psychometrics appear to be strong. Responses range from 1 (*Never*) to 6 (*Always*) and total scores can range from 15 to 90. Higher numbers on the LEAP reflect higher levels of parental emotional availability.

Procedures

Measures were administered in a counterbalanced fashion, but the mood measure (the POMS) was always completed first. Similar to the procedures in the pilot studies, participants completed the memory enhancement questions before completing the LEAP. Mother and father versions of the LEAP were not counterbalanced, because no order effects were found in previous analyses. After completing the questionnaires, participants were asked to return 1 week later to complete the LEAP measure again. A total of 116 participants completed the LEAP measure a second time to assess test–retest reliability.

Results

Test–Retest Reliability

The test–retest correlation coefficients for the entire LEAP scale were .92 ($p < .0001$) for the mother form and .85 ($p < .0001$) for the father form. Mean length of time for test–retest was 7 days, with a range of 4–16 days.

Validity

Means, standard deviations, and ranges for each scale are listed in Table II. Correlational analyses were performed to examine the construct validity of the LEAP scale. In order to control for the high number of statistical analyses, a Bonferroni correction was calculated (Larzelere & Mulaik, 1977). The corrected p-value is $p < .002$.

As can be seen in Table III, the LEAP performed well in relation to other established measures of parenting. The LEAP was associated positively with a number of conceptually consistent scales, including CRPBI-R Acceptance, CRPBI-R Positive involvement, CRPBI-R Withdrawal of affection (for mothers only), PBI Care, and EMBU Emotional warmth, and negatively with PBI Overprotection (mothers only). Neither maternal nor paternal control, as measured by the CRPBI-R, was related to parental emotional availability. Note that the EMBU Overprotection scale was not included in the correlational analyses because of the curvilinear nature of the scale (i.e., very high and very low levels of parental control are considered maladaptive and would not be tested adequately with a correlational analysis). Overall, there was sufficient evidence of the construct validity of the LEAP in relation to other measures of parenting.

The LEAP was also evaluated in relation to psychological functioning, mood, and social desirability. Although psychological maladjustment (as measured by the

Table II. Means, Standard Deviations, and Ranges (Study 1; Older Adolescents/Young Adults)

Scale	Mean	*SD*	Range
CRPBI-R			
Acceptance			
Mother	20.47	3.69	9–24
Father	17.94	4.99	8–24
Control			
Mother	9.48	2.65	5–15
Father	9.73	3.10	5–15
Positive involvement			
Mother	20.54	3.86	8–26
Father	18.14	5.11	8–24
Withdrawal of affection			
Mother	11.88	2.91	5–15
Father	8.11	2.91	5–15
PBI			
Care			
Mother	28.26	8.02	3–37
Father	23.38	9.47	0–37
Overprotection			
Mother	13.07	8.05	0–36
Father	11.27	7.02	0–31
EMBU			
Emotional warmth			
Mother	47.44	10.05	21–60
Father	41.62	12.59	15–60
Overprotection			
Mother	14.92	2.73	9–23
Father	13.68	3.43	6–24
LEAP			
Mother	70.01	16.09	27–91
Father	53.77	21.08	2–82
BSI	33.67	27.39	0–131
POMS	44.62	10.98	29–71
M-C SDS	4.23	1.68	0–9

Note. CRPBI-R = Children's Report of Parental Behavior Inventory—Revised; PBI = Parental Bonding Instrument; EMBU = My Memories of Upbringing; LEAP = Lum Emotional Availability of Parents; BSI = Brief Symptom Inventory; POMS = Profile of Mood States; M-C SDS = Marlowe-Crowne Social Desirability Scale.

Table III. Correlations Between the LEAP and Other Measures (Study 1; Older Adolescents/Young Adults)

Scale	LEAP mother	LEAP father
CRPBI-R		
Acceptance		
Mother	.74*	—
Father	—	.76*
Control		
Mother	−.00	—
Father	—	.19
Positive involvement		
Mother	.76*	—
Father	—	.77*
Withdrawal of affection		
Mother	.44*	—
Father	—	−.14
PBI		
Care		
Mother	.75*	—
Father	—	.73*
Overprotection		
Mother	−.24*	—
Father	—	−.06
EMBU		
Emotional warmth		
Mother	.81*	—
Father	—	.83*
BSI	−.23	−.23
POMS	−.13	−.10
M-C SDS	−.19	−.12

Note. CRPBI-R = Children's Report of Parental Behavior Inventory—Revised; PBI = Parental Bonding Instrument; EMBU = My Memories of Upbringing; LEAP = Lum Emotional Availability of Parents; BSI = Brief Symptom Inventory; POMS = Profile of Mood States; M-C SDS = Marlowe-Crowne Social Desirability Scale.
* $p < .002$ (Significant after Bonferroni correction; Larzelere & Mulaik, 1977).

BSI) was inversely related to both maternal ($p < .01$) and paternal ($p < .01$) emotional availability, this association was no longer significant after Bonferroni correction. Completion of the LEAP did not appear to be influenced by mood (as measured by the POMS) or by a socially desirable response set (as measured by the Marlowe-Crowne). The lack of association with social desirability suggests that the positively worded items on the LEAP were not influenced significantly by an acquiescence response bias.

Another test of the LEAP was completed by comparing the LEAP with other previously established measures of parenting behavior. It was expected that parental emotional availability would explain more variance in the prediction of psychological maladjustment than previously established measures of parenting. Two forced entry regression analyses were completed, one for mothers and one for fathers. With the Global Severity Index of the BSI as the criterion variable, scores from the POMS, CRPBI-R, PBI, and EMBU were forced into the regression equation first and then scores from the emotional availability measure were entered. The forced entry regression analyses revealed that the LEAP mother and father scales were not significant predictors of psychological maladjustment above and beyond the mood and parenting measures. With the BSI as the criterion variable, the POMS predicted 44% of the variance for mothers, $F(1, 167) = 114.44$, $p < .0001$, and 44% of the variance for fathers, $F(1, 164) = 121.71$, $p < .0001$. None of the

other parenting measures added significant levels of variance for predicting psychological maladjustment as measured by the BSI. These results suggest that current mood strongly predicted report of psychological maladjustment within the past week.

Post hoc analyses showed that when maternal emotional availability was entered as the second predictor after mood (based on the POMS), it explained 2% of the variance in the BSI, $F(2, 165) = 4.86$, $p < .05$. When paternal emotional availability was entered into the regression equation after mood (based on the POMS), it also explained 2% of the variance in the BSI, $F(2, 163) = 4.79$, $p < .05$. After Bonferroni correction, however, neither maternal nor paternal LEAP scores were significant predictors of psychological maladjustment.

Overall, it appears that the LEAP scale is a potentially useful measure of parental emotional availability. Because the retrospective nature of the measure may not have been an adequate test of the associations between parental emotional availability and current psychological maladjustment, younger samples of participants who still lived with their parents were recruited to test a downward extension of the LEAP.

STUDY 2: DOWNWARD EXTENSION

Method

Pilot Testing

Before beginning data collection, a pilot study was conducted to ensure that children as young as 9 could complete the measures. A sample of 15 children and 15 adolescents were recruited from two local after-school programs, one at a community center and another at a middle school. All items were changed from past to present tense, thus memory enhancement questions were not necessary. Five items on the LEAP scale were additionally supplemented with concrete behavioral examples that were generated by the pilot sample to simplify vocabulary and to aid with comprehension. The revision of the LEAP scale contained all original items along with behavioral examples in parentheses beneath their respective items. LEAP items were also revised for use with parents.

Participants

Three samples of participants were recruited for the downward extension of the LEAP—a nonclinical sample of children and adolescents, a clinical sample of children and adolescents, and a parent sample of participating children and adolescents. Children and adolescents ranged from 9 to 17 years of age. Because the reading level of the LEAP was at the fourth grade level (based on the Spache Primary Reading Formula), children younger than 9 years old were not recruited.

A community sample of children and adolescents in 4th through 12th grade was recruited from public elementary, middle, and high schools in a large metropolitan city in the southeast. Teachers distributed consent forms for children and adolescents to take home to their parents. After parental consent forms and student assent forms were collected, participating children and adolescents completed the measures in small groups (from 3 to 5 students) at their school. The researcher read the instructions aloud and participants were instructed to follow along and complete their measures privately. Participants were given a packet of questionnaires for their mother and father, which parents returned through the mail. All children and adolescents completed the LEAP at a second point in time (usually 2–3 weeks later, depending on the school's schedule) to assess test–retest reliability. As an incentive for participation, children and adolescents were entered into a raffle for gift certificates to local movie theaters and record stores.

Recruitment procedures and incentives were similar for the clinical sample, except that some children were administered the questionnaires individually (when reading limitations or behavioral difficulties necessitated individual administration). A total of 95.0% of the participants also completed the LEAP scale at a second point in time (usually 2–3 weeks later).

The nonclinical sample of children and adolescents consisted of 635 participants, with a mean age of 12.49 years ($SD = 3.07$). Somewhat more girls (55.0%) than boys (45.0%) participated in the study. The sample was ethnically diverse, with 54.0% Caucasian, 26.9% African American, 14.0% Hispanic/Latino/Latina, 3.0% Asian American, and 2.1% children of other races/ethnicities participating in the study. The majority of children rated their biological mother (93.0%) and their biological father (84.0%). Parental marital status varied considerably (40.0% married to each other, 23.9% divorced with one or both parents remarried, 23.0% separated or divorced and not remarried, 10.1% single and never married, and 3.0% widowed parents). A total of 55.0% of the children and adolescents who did not live with their biological mother still had contact with her and 33.0% of children and adolescents who did not live with their biological father still had contact with him. On the basis of Hollingshead's (1975) four factor index of social status, socioeconomic status was diverse (14.0% major business/professional, 39.1% minor

business/minor professional, 29.0% skilled worker, and 17.9% semiskilled worker). Mean maternal education was 11.55 years ($SD = 1.28$) and mean paternal education was 12.48 years ($SD = 1.36$). Twenty-seven participants were dropped from subsequent analyses because of incomplete protocols or significant missing data. The total nonclinical sample was 608 children and adolescents, which reflects a participation rate of 70.3% for the nonclinical sample.

The clinical sample consisted of 110 children and adolescents who received mental health services in a residential treatment facility (70.9%) or in a full-day treatment program for severely emotionally disturbed children in the public school (29.1%). A total of 93.5% of eligible children participated in the clinical sample. Ages ranged from 9 to 17 years, with a mean of 11.61 years ($SD = 2.10$). Consistent with most clinical samples of children (Phares & Lum, 1997), more boys (80.0%) than girls (20.0%) participated in the study. The sample was ethnically diverse (61.8% Caucasian, 30.0% African American, 7.3% Hispanic/Latino/Latina, and 0.9% Asian American). The majority of participants rated their biological mother (74.0%) and their biological father (66.0%). The majority of parents were single, never married (55.4%); with the remainder of parents married to each other (10.9%); divorced, with one or both parents remarried (7.3%), separated or divorced and not remarried (18.2%); or widowed (8.2%). A total of 9.0% of children who did not live with their mother had contact with her and a total of 10.0% of children who did not live with their father had contact with him. Socioeconomic status (Hollingshead, 1975) was diverse (0.9% major business/professional, 7.3% minor business/minor professional, 60.0% skilled worker, and 31.8% semiskilled worker). Mothers had a mean education level of 10.73 years ($SD = .93$) and fathers had a mean education of 12.04 years ($SD = 1.24$).

Regarding diagnostic status of the clinical sample, 55.5% of the children and adolescents were diagnosed with an externalizing disorder (e.g., attention-deficit/hyperactivity disorder, oppositional defiant disorder), 35.4% were diagnosed with an internalizing disorder (e.g., major depressive disorder, an anxiety disorder), and 9.1% were diagnosed with both an externalizing and an internalizing disorder. In addition, 58.2% of children and adolescents were also diagnosed with a specific learning disorder.

Parents of participating children and adolescents comprised the third sample in this study. Only parents about whom the child completed the LEAP measures were invited to participate (e.g., if a child completed the father form of the LEAP about her step-father, then her step-father was invited to participate in the study rather than her biological father). A total of 553 parents participated (98.0% from the nonclinical group and 2.0% from the clinical group). There were comparable numbers of mothers ($N = 285$) and fathers ($N = 268$). A total of 207 were parental dyads of the same child. The response rate for mothers and fathers was 49.0 and 44.0%, respectively. The average age of mothers was 35.62 ($SD = 1.98$ years, range = 22–63) and the average age of fathers was 39.44 ($SD = 2.23$ years, range = 24–66). Consistent with the samples of children and adolescents, the parental sample was ethnically diverse (53.0% Caucasian, 28.0% African American, 13.9% Hispanic/Latino/Latina, 3.1% Asian American, and 2.0% Other).

Measures

Age appropriate measures, which are comparable to those used in Study 1, were included in this study. Because most of the measures were discussed above, they are mentioned only briefly in this section. Given time limitations, parents were only asked to complete the LEAP for themselves and were not asked to complete any measures related to their child. Parents reported on their own behavior toward their child (e.g., "I support my child").

Demographics. A brief demographics measure was used to assess children's and adolescents' gender, age, grade level, race/ethnicity, parental marital status, contact with parents, and socioeconomic status.

Parenting Measures. Two parenting measures were included: the CRPBI-R (Schludermann & Schludermann, 1970) and the PBI (Parker et al., 1979). Five subscales from the CRPBI-R were included: Acceptance, Control, Positive involvement, Rejection, and Withdrawal of relations. Both of the subscales from the PBI were included: Care and Overprotection. These measures are often used with samples of children and adolescents.

Psychological Symptoms. The BSI, which was used as a measure of psychological symptoms in Study 1, is not normed for children and adolescents (Derogatis & Spencer, 1982). Other measures, therefore, were identified for use in this study. All children and adolescents completed the Children's Depression Inventory (CDI; Kovacs, 1992). The CDI measures self-reported affective, cognitive, and behavioral symptoms of depression and psychological distress in children aged 8–18. The CDI has strong psychometric properties, including test–retest reliability (ranging from .74 to .77), alpha coefficients (ranging from .84 to .87), and good concurrent validity. Standardized T scores are

computed, with higher values reflecting higher rates of depression.

The Youth Self-Report (YSR; Achenbach, 1991) was also completed by adolescents aged 11 years and older (i.e., children aged 9 and 10 did not complete the YSR because it was not normed for children that young). The YSR measures adolescents' perceptions of their own emotional and behavioral problems. The YSR has strong psychometric properties, including reliability, validity, and normative data. Higher values of standardized *T* scores reflect higher rates of overall emotional/behavioral problems, as well as internalizing and externalizing behavior problems.

Social Desirability. All children and adolescents completed the Lie Scale on the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985). The Lie Scale is intended to measure whether children are responding in a candid manner and has been used to assess social desirability. The RCMAS has good internal consistency, test–retest reliability, and concurrent and construct validity (Reynolds & Richmond, 1985). The Marlowe-Crowne Social Desirability Scale (M-C SDS; Strahan & Gerbasi, 1972) described in Study 1 was also used with adolescents between the ages of 11 and 17. The measure was not normed for children younger than 11. The M-C SDS has adequate psychometric properties.

Parental Emotional Availability. The15-item LEAP scale, which was modified slightly in the pilot study, was used to rate mothers' and fathers' behavior. On the basis of the findings in Study 1, psychometrics appear to be strong. The only changes were to clarify questions with behavioral examples. Responses range from 1 (*Never*) to 6 (*Always*) and total scores can range from 15 to 90. Higher numbers on the LEAP reflect higher levels of parental emotional availability.

Results

Data analytic strategies to examine the LEAP are comparable to those applied in Study 1. Although six samples were examined originally (elementary school students, middle school students, high school students, total nonclinical sample, clinical sample, and parent sample), results from only three samples will be presented here (total nonclinical, clinical, and parents). The results from the total nonclinical sample were comparable to those found in the three grade-based analyses, so only the total nonclinical sample results are presented here.

Table IV. Factor Loadings for the Lum Emotional Availability of Parents (LEAP) Scale (Study 2; Children, Adolescents, and Parents)

Item	Form	
	Mother*	Father*
Supports me	.75/.76/.70	.80/.84/.88
Consoles me when I am upset	.76/.80/.69	.86/.89/.89
Shows she/he cares about me	.80/.80/.77	.87/.87/.93
Shows a genuine interest in me	.82/.83/.78	.88/.88/.93
Remembers things that are important to me	.74/.80/.68	.83/.83/.87
Is available to talk anytime	.77/.81/.71	.81/.85/.84
Asks questions in a caring manner	.79/.83/.72	.85/.86/.89
Spends extra time with me just because she/he wants to	.81/.80/.75	.83/.87/.87
Is willing to talk about my troubles	.81/.84/.61	.81/.80/.88
Pursues talking with me about my interests	.76/.77/.76	.83/.87/.91
Values my input	.78/.71/.68	.86/.90/.89
Is emotionally available to me	.81/.76/.79	.85/.84/.91
Makes me feel wanted	.85/.82/.80	.88/.89/.92
Praises me	.80/.80/.75	.83/.82/.92
Is understanding	.80/.85/.73	.86/.87/.90
Eigenvalue	9.37/9.56/9.00	10.68/11.14/12.02
Variance accounted for	96/93/95%	97/94/97%

*Information given for nonclinical, clinical, and parent samples, respectively.

Factor Analysis

An iterated principal axis factor analysis (Rummel, 1970) was performed on the 15 items for mothers and fathers separately. One factor was again extracted (based on scree tests and evaluations of eigenvalues). As can be seen in Table IV, the factor loadings are quite strong for all three samples and the variances accounted for by each scale were quite high.

Reliability

In addition to the presentation of means, standard deviations, and ranges, Cronbach's alpha coefficients and average interitem correlations are presented in Table V. Cronbach's alpha coefficients were in the .90's for mothers and fathers in all three samples. Interitem correlations ranged from .68 to .80, with a mean of .71 regarding

Table V. Means, Standard Deviations, Ranges, Cronbach's Alphas, and Average Interitem Correlations for LEAP Mother and Father (Study 2; Children, Adolescents, and Parents)

	Average interitem				
Sample	Mean	*SD*	Range	Alpha	item *r*
Total nonclinical					
LEAP mother	72.83	17.28	15–90	.96	.73
LEAP father	66.06	21.45	15–90	.97	.73
Clinical					
LEAP mother	59.91	22.96	15–90	.92	.68
LEAP father	56.37	26.07	15–90	.93	.69
Parent					
Mother's report	80.44	12.85	36–90	.93	.73
Father's report	71.17	17.26	15–90	.95	.80

Note. LEAP = Lum Emotional Availability of Parents; *SD* = Standard Deviation.

mothers and .70 regarding fathers. These reliability estimates were comparable to or stronger than those found in the original samples of older adolescents.

Of the 713 children and adolescents who participated in the test–retest procedures, the majority (60.9%) completed the LEAP between 1 and 3 weeks after the first administration. The remaining children and adolescents completed the LEAP 1 month later (26.1%) or 3 months later (13.0%).

The LEAP was found to have strong stability over short periods of time. The test–retest reliability for the nonclinical sample was .81 ($p < .001$) for reports of both mothers and fathers. Test–retest reliability for the clinical sample was .77 ($p < .001$) for reports of mothers and .76 ($p < .001$) for reports of fathers. When time frame was considered, the LEAP remained reliable even at 3 months. Nonclinical reliabilities for reports of both mothers and fathers were .70 after 3 months ($p < .001$). Clinical reliabilities for reports of mothers were .70 ($p < .001$) and for reports of fathers were .69 ($p < .001$).

Children's and adolescents' reports about their mothers were correlated significantly with their reports about their fathers ($r = .60$; $p < .0001$). When parent and child reports were compared for the entire sample, strong relations emerged. Children's reports about their mothers correlated significantly with their mothers' reports about their own behavior ($r = .42$; $p < .0001$), and children's reports about their fathers correlated significantly with their fathers' reports about their own behavior ($r = .63$; $p < .0001$).

Validity

Convergent validity of the LEAP was examined by correlating emotional availability with other measures of parenting (the CRPBI-R and the PBI). As can be seen in Table VI, the LEAP was related to most of the subscales of parenting in the appropriate directions for both nonclinical and clinical samples (e.g., the LEAP was positively correlated with acceptance but negatively correlated with rejection for both mothers and fathers in the nonclinical and clinical samples). Divergent validity was established by showing that the LEAP did not correlate significantly with the unrelated construct of social desirability (as assessed by the RCMAS Lie Scale and the M-C SDS).

As expected, the LEAP correlated negatively with children's and adolescents' emotional/behavioral problems. In both the nonclinical and clinical samples, children's and adolescents' reports of higher maternal emotional availability were related to lower levels of depressive symptoms, internalizing, externalizing, and total behavior problems. The same pattern held true for reports of paternal emotional availability, except that the association between fathers' emotional availability and internalizing problems was not statistically significant after Bonferroni correction. Overall, higher rates of parental emotional availability were associated with lower levels of self-reported emotional/behavioral problems in children and adolescents.

These associations were tested further to explore whether the LEAP was associated with emotional/behavioral functioning after taking other reports of parenting behavior into account. Regression analyses, with forced simultaneous entry, were completed to test the LEAP against the CRPBI-R and the PBI. The CRPBI-R and PBI scores were entered before the LEAP scores when predicting depressive symptoms (based on the CDI) and total emotional/behavioral problems (based on the YSR). The change in $R^2(\Delta R^2)$ was calculated, and F tests were performed to determine if a significant amount of variance was accounted for by the LEAP scores.

Table VI. Correlations Between the LEAP and Other Measures (Study 2; Children and Adolescents)

	LEAP mother		LEAP father	
Scale	Nonclinical	Clinical	Nonclinical	Clinical
CRPBI-R				
Acceptance				
Mother	.79*	.89*	—	—
Father	—	—	.83*	.86*
Control				
Mother	.17*	.48*	—	—
Father	—	—	.31*	.44*
Positive involvement				
Mother	.78*	.88*	—	—
Father	—	—	.81*	.83*
Rejection				
Mother	−.62*	−.77*	—	—
Father	—	—	−.61*	−.72*
Withdrawal				
Mother	−.42*	−.54*	—	—
Father	—	—	−.37*	−.50*
PBI				
Care				
Mother	.76*	.83*	—	—
Father	—	—	.79*	.81*
Overprotection				
Mother	−.16	.09	—	—
Father	—	—	−.12*	.13
RCMAS—Lie Scale	.16	.20	.16	.27
M-C SDS	.03	.19	.05	.24
CDI	−.43*	−.35*	−.35*	−.29*
YSR				
Internalizing	−.25*	−.29*	−.24*	−.30
Externalizing	−.32*	−.34*	−.28*	−.33*
Total	−.30*	−.30*	−.28*	−.35*

Note. LEAP = Lum Emotional Availability of Parents; CRPBI-R=Children's Report of Parental Behavior Inventory—Revised; PBI = Parental Bonding Instrument; RCMAS = Revised Children's Manifest Anxiety Scale; M-C SDS = Marlowe-Crowne Social Desirability Scale; CDI = Children's Depression Inventory; YSR = Youth Self-Report.
*$p < .007$ (Significant after Bonferroni correction; Larzelere & Mulaik, 1977).

Table VII. Hierarchical Regressions for LEAP Mother and LEAP Father on the CDI and the YSR (Study 2; Children, Adolescents, and Parents)

		CDI			YSR: Total behavior problems		
Variable entered		NC	Clinical	Parent	NC	Clinical	Parent
Mother							
I. CRPBI-R	R^2	.1489*	.1237*	.1787*	.2549*	.1237*	.1289*
PBI	R^2	.1834*	.1480*	.1826	.2737	.1480*	.1321
II. LEAP mother	ΔR^2	.0345*	.0243*	.0039	.0188	.0243*	.0032
Father							
I. CRPBI-R	R^2	.1454*	.1063*	.1693*	.2501*	.1063*	.1124*
PBI	R^2	.1830*	.1115	.1723	.2684	.1115	.1148
II. LEAP father	ΔR^2	.0376*	.0052	.0030	.0183	.0052	.0024

Note. LEAP = Lum Emotional Availability of Parents; CDI = Children's Depression Inventory; YSR = Youth Self-Report; NC = Nonclinical; CRPBI-R=Children's Report of Parental Behavior Inventory—Revised; PBI = Parental Bonding Instrument; ΔR^2 is the value at the point the variable was entered into the regression equation. *$p < .0001$ (Significant after Bonferroni correction; Larzelere & Mulaik, 1977).

As can be seen in Table VII, emotional availability of mothers added a significant amount of variance to scores of depressive symptoms in the nonclinical group and the clinical group, but not when mothers rated themselves. When predicting total emotional/behavioral problems, maternal emotional availability only added significantly more variance in the clinical sample, but not in the nonclinical sample or the sample of mothers. For reports of fathers' emotional availability in the prediction of depressive symptoms, only the nonclinical sample, and not the clinical sample or the sample of fathers, showed significant changes in variance accounted for by the LEAP. None of the three samples showed significant changes in variance when using the LEAP father to predict total emotional/behavioral problems. Overall, there was partial support for the idea that the LEAP helps to explain variance in functioning above and beyond previously established measures of parenting.

Group Differences

One final set of analyses was completed to test for possible differences between the nonclinical and clinical groups on the LEAP as well as other measures. Children in the clinical group were found to have higher CDI scores ($M = 58.42$, $SD = 11.45$) than children in the nonclinical group ($M = 47.57$, $SD = 11.04$; $t(607) = 14.77$, $p < .01$). The same pattern was found with total behavior problem ratings on the YSR ($t[365] = 10.24$, $p < .01$), with children in the clinical group ($M = 66.70$, $SD = 13.05$) experiencing more problems than children in the nonclinical group ($M = 50.55$, $SD = 12.72$).

Children's and adolescents' reports of maternal and paternal emotional availability were compared for the nonclinical and clinical groups. On the basis of an overall MANOVA, the centroids from each group were significantly different, Wilk's $\Delta = .88$, $F(2, 593) = 42.57$, $p < .001$. Univariate tests showed that the nonclinical and clinical groups differed for both the LEAP mother, $F(1, 594) = 83.44$, $p < .001$ and the LEAP father, $F(1, 594) = 27.96$, $p < .001$. Specifically, children and adolescents in the nonclinical group reported higher emotional availability of their mothers ($M = 75.62$) than did children and adolescents in the clinical group ($M = 59.91$). The same pattern was true for children's and adolescents' reports of their fathers when comparing the nonclinical ($M = 68.15$) and clinical groups ($M = 56.37$). Similar patterns were also found with the other measures of parenting, where children in the clinical group reported less adequate parenting on the CRPBI-R, $F(2, 593) = 38.44$, $p < .001$, and the PBI, $F(2, 593) = 33.56$, $p < .001$.

DISCUSSION

These series of studies suggest that the LEAP is a reliable and valid measure of parental emotional availability, which can be used with children, adolescents, and college students. The measure distinguishes between clinical and nonclinical samples and is related to other measures of parenting and emotional/behavioral functioning in meaningful ways. Overall, it is a promising new measure that is easy to administer and yields important information.

The LEAP was designed to measure children's and adolescents' perceptions of parental emotional availability. Much of the theoretical relevance was derived from previous research on the effects of emotional availability on mother–infant interactions (Field, 1994). The current series of studies suggest that parental emotional availability can be measured in older children and adolescents regarding both their mothers and their fathers. The extension from infancy into childhood, adolescence, and early adulthood is important for possible long-term prospective studies. The LEAP adds to the understanding of parental emotional availability in the older age ranges. Interestingly, the patterns of findings in this study were relatively comparable across a wide range of ages (from 9 years old to college-aged). The similar patterns found here are consistent with reviews of research that have found relatively stable patterns of parent–child relationships across the developmental life span (Phares, 1996).

These results further the research on parental emotional availability by exploring the father–child relationship in addition to the mother–child relationship. The positive correlation between reports of mothers' and fathers' emotional availability suggest that the quality of parental emotional availability remains relatively stable across caregivers. As is evident in the attachment literature (Fox et al., 1991; Kerns et al., 2000; Lieberman et al., 1999), mothers and fathers appear to have many similarities in the types of emotional bonds they have with their offspring.

There were, however, different relations between perceptions of mothers' and fathers' emotional availability and other variables. As with a number of other studies (Kerns et al., 2000; Lieberman et al., 1999; Phares & Renk, 1998), mother–child relationships often appear to have more of an association with child functioning than do father–child relationships. For

example, Phares and Renk (1998) found that adolescents' perceptions of their mothers were more consistently related to their emotional/behavioral functioning than perceptions of their fathers. Although adolescents' positive and negative feelings toward their fathers were related to some indicators of emotional/behavioral functioning, adolescents' positive and negative feelings toward their mothers were related to nearly all of the indicators of emotional/behavioral functioning. In the current study, there were somewhat stronger patterns between maternal emotional availability and offsprings' functioning than there were between paternal emotional availability and offsprings' functioning. This pattern, however, may be reflective of parental involvement rather than maternal versus paternal differences (Pleck & Masciadrelli, 2004). Specifically, it may be that the child's relationship with the primary parent (in most, but not all cases, the mother) has more of a connection to emotional/behavioral functioning than does the relationship with the less involved parent. This issue could be explored further by recruiting samples of children whose fathers are the primary parent and comparing their perceptions of emotional availability with children whose mothers are the primary parent.

Regardless of the parent, however, parental emotional availability was relatively consistently associated with offspring's functioning. In the sample of children and adolescents, there were clear connections between lower levels of parental emotional availability and higher levels of emotional/behavioral problems. These findings are consistent with the vast amount of research on parental emotional availability in infants and younger children (Biringen, 2000; Easterbrooks & Biringen, 2000). The current studies add to the knowledge that parental emotional availability is linked to the well-being of children and adolescents. Because these studies were not based on experimental designs, the causality of these relationships cannot be established. Longitudinal research has suggested that strong parent–infant attachments are related to better child functioning up to 7 years later (Easterbrooks et al., 2000). Although the current studies cannot comment on directionality, it appears plausible that parental emotional availability is linked to children's and adolescents' emotional/behavioral functioning.

One intriguing aspect of the current research is the information that is culled from different informants on parents' emotional availability. Children's and adolescents' reports of parental emotional availability were correlated strongly with their mothers' and fathers' reports of their own emotional availability. These correlations are much stronger than other characteristics that have been compared between youth and their parents (Achenbach, McConaughy, & Howell, 1987). Thus, the current findings of strong and significant correspondence between children's and parents' reports of parental emotional availability provide support for the importance and usefulness of the LEAP measure. The parent-version of the LEAP also distinguishes the LEAP from other measures of parenting, such as the CRPBI-R and the PBI.

As with any series of studies, there are limitations. This research did not utilize observations of parent–offspring interactions, therefore, reliance on a questionnaire may limit the validity of the findings. Because parent and child reports were both gathered in Study 2, this limitation is mitigated to a small extent. Nevertheless, one direction for future research is to compare the LEAP scale with direct observations of parental emotional availability that are more standard in this area of research (Biringen, 2000; Emde, 2000).

Some characteristics of the LEAP measure itself may be problematic. The definition of emotional availability used for the development of the LEAP focused on parental responsiveness and parental behavior. Given that other researchers have conceptualized emotional availability in a more broad manner with the inclusion of parental responsiveness, sensitivity, and emotional involvement (Biringen & Robinson, 1991; Lee & Gotlib, 1991), the current findings of a one-factor solution may be explained by the somewhat more narrow definition. Another possible concern about the LEAP is that the measure was developed with a downward extension technique for the use with children and adolescents. Although downward extensions are common in the development of measures for children (e.g., the Children's Depression Inventory; Kovacs, 1992), the technique can limit content validity and can call into question any items that were modified for children or adolescents. In addition, the reliance on positively-worded items could influence children's responses and create demand characteristics. In addition, many children, especially anxious children, might try to "fake good" on this type of measure (Kendall & Chansky, 1991). It is noted, however, that social desirability was not correlated significantly with children's and adolescents' responses on the LEAP. Further research on this issue is warranted.

In the current series of studies, potentially important familial and contextual variables were not explored, such as family composition, number of siblings, socioeconomic status, parental functioning, interparental conflict, role models outside of the family, and community support. These variables could influence children's and adolescents' well-being as well as the parent–child relationship

itself (Masten & Coatsworth, 1998; McLoyd, 1998). Additional research with the LEAP could explore these types of familial and contextual characteristics to ascertain the reciprocal relations with parental emotional availability.

This research highlights future directions for the study of parental emotional availability. The LEAP scale may provide ample opportunities to explore parental emotional availability in different samples of children and adolescents. Given the centrality of parental emotional availability to parental divorce, interparental conflict, and parental psychopathology (Lee & Gotlib, 1991), a logical next step would be to use the LEAP to compare samples of children and adolescents exposed to these risk factors. On the basis of the importance of parental emotional availability for children's adjustment, preventive intervention programs appear warranted for families in which there are low levels of emotional availability (Biringen, 2000). Emotional availability appears malleable through educational and clinical interventions, so preventive interventions may be helpful in reducing the risk for the development of children's emotional/behavioral problems (Biringen, 2000; Emde, 2000). Because parents remain influential in their children's lives throughout childhood, adolescence, and early adulthood (Baumrind, 1991; Steinberg et al., 1994), longitudinal studies that explore the developmental changes in parental and child emotional availability are needed (Biringen, 2000; Reese, Kieffer, & Briggs, 2002).

Overall, the LEAP scale provides a reliable, valid, and useful measure to assess parental emotional availability. Given the importance of this construct, it is worthwhile to study parental emotional availability even more extensively with the eventual goal of enhancing parent–child relationships and decreasing children's risk for maladjustment.

APPENDIX: LEAP SCALE

Instructions

In this questionnaire, you will read statements about your parents. You will be asked to rate your *Mother's* and *Father's* behavior. For all questions, answer the statement as to how each parent acts toward you and circle your answer. If you are not living with your biological parents now, please rate the behavior of whomever you consider to be your mother or father (e.g., adoptive parent, stepparent, etc.).

Never	Rarely	Sometimes	Often	Very often	Always
1	2	3	4	5	6

Please rate your *Mother's* and *Father's* behavior by circling your answer.

	My mother	My father
1. Supports me	1 2 3 4 5 6	1 2 3 4 5 6
2. Consoles me when I am upset (Example: Makes me feel better when I am upset)	1 2 3 4 5 6	1 2 3 4 5 6
3. Shows she/he cares about me	1 2 3 4 5 6	1 2 3 4 5 6
4. Shows a genuine interest in me (Example: Pays attention and is curious about me)	1 2 3 4 5 6	1 2 3 4 5 6
5. Remembers things that are important to me	1 2 3 4 5 6	1 2 3 4 5 6
6. Is available to talk at any time	1 2 3 4 5 6	1 2 3 4 5 6
7. Asks questions in a caring manner	1 2 3 4 5 6	1 2 3 4 5 6
8. Spends extra time with me just because she/he wants to	1 2 3 4 5 6	1 2 3 4 5 6
9. Is willing to talk about my troubles	1 2 3 4 5 6	1 2 3 4 5 6
10. Pursues talking with me about my interests (Example: Tries to talk to me about what I like)	1 2 3 4 5 6	1 2 3 4 5 6
11. Values my input (Example: Cares about my ideas)	1 2 3 4 5 6	1 2 3 4 5 6
12. Is emotionally available to me	1 2 3 4 5 6	1 2 3 4 5 6
13. Makes me feel wanted	1 2 3 4 5 6	1 2 3 4 5 6
14. Praises me (Example: Tells me good things about myself)	1 2 3 4 5 6	1 2 3 4 5 6
15. Is understanding	1 2 3 4 5 6	1 2 3 4 5 6

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REFERENCES

Achenbach, T. M. (1991). *Manual for the youth self-report and 1991 profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, *101,* 213–232.

Aviezer, O., Sagi, A., Joels, T., & Ziv, Y. (1999). Emotional availability and attachment representations in Kibbutz infants and their mothers. *Developmental Psychology*, *35,* 811–821.

Aviezera, O., Sagi-Schwartz, A., & Koren-Karie, N. (2003). Ecological constraints on the formation of infant–mother attachment relations: When maternal sensitivity becomes ineffective. *Infant Behavior and Development*, *26,* 285–299.

Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance abuse. *Journal of Early Adolescence*, *11,* 56–95.

Biringen, Z. (2000). Emotional availability: Conceptualization and research findings. *American Journal of Orthopsychiatry*, *70,* 104–114.

Biringen, Z., & Robinson, J. (1991). Emotional availability in mother–child interactions: A reconceptualization for research. *American Journal of Orthopsychiatry*, *61,* 258–271.

Biringen, Z., Robinson, J., & Emde, R. N. (1994). Maternal sensitivity in the second year: Gender-based relations in the dyadic balance of control. *American Journal of Orthopsychiatry*, *64,* 78–90.

Biringen, Z., Robinson, J., & Emde, R. N. (1998). *The Emotional Availability Scale* (3rd ed.). Fort Collins, CO: Colorado State University, Department of Human Development and Family Studies.

Bretherton, I. (2000). Emotional availability: An attachment perspective. *Attachment and Human Development*, *2,* 233–241.

Derogatis, L. R., & Spencer, P. M. (1982). *The brief symptom inventory manual*. Towson, MD: Clinical Psychometric Research.

Ducharme, J., Doyle, A. B., & Markiewicz, D. (2002). Attachment security with mother and father: Associations with adolescents' reports of interpersonal behavior with parents and peers. *Journal of Social and Personal Relationships*, *19,* 203–231.

Easterbrooks, M. A., Biesecker, G., & Lyons-Ruth, K. (2000). Infancy predictors of emotional availability in middle childhood: The roles of attachment security and maternal depressive symptomatology. *Attachment and Human Development*, *2,* 170–187.

Easterbrooks, M. A., & Biringen, Z. (2000). Mapping the terrain of emotional availability and attachment. *Attachment and Human Development*, *2,* 123–129.

Emde, R. N. (2000). Next steps in emotional availability research. *Attachment and Human Development*, *2,* 242–248.

Field, T. (1986). Affective responses to separation. In T. B. Brazelton & M. W. Yogman (Eds.), *Affective development in infancy* (pp. 125–143). Norwood, NJ: Ablex.

Field, T. (1994). The effects of mother's physical and emotional unavailability on emotion regulation. *Monographs of the Society for Research in Child Development*, *59,* 208–227.

Fox, N. A., Kimmerly, N. L., & Schafer, W. D. (1991). Attachment to mother/attachment to father: A meta-analysis. *Child Development*, *62,* 210–225.

Frankel, K. A., Lindahl, K., & Harmon, R. J. (1992). Preschoolers' response to maternal sadness: Relationships with maternal depression and emotional availability. *Infant Mental Health Journal*, *13,* 132–146.unlinked

Gerlsma, C., Emmelkamp, P. M. G., & Arrindell, W. A. (1990). Anxiety, depression, and perception of early parenting: A meta-analysis. *Clinical Psychology Review*, *10,* 251–277.

Hollingshead, A. B. (1975). *Four factor index of social status*. Unpublished manuscript, Yale University, New Haven, CT.

Kendall, P. C., & Chansky, T. E. (1991). Considering cognition in anxiety-disordered children. *Journal of Anxiety Disorders*, *5,* 167–185.

Kerns, K. A., Tomich, P. L., Aspelmeier, J. E., & Contreras, J. M. (2000). Attachment-based assessments of parent–child relationships in middle childhood. *Developmental Psychology*, *36,* 614–626.

Kodl, M. M., & Mermelstein, R. (2004). Beyond modeling: Parenting practices, parental smoking history, and adolescent cigarette smoking. *Addictive Behaviors*, *29,* 17–32.unlinked

Kovacs, M. (1992). *Children's depression inventory manual*. North Tonawanda, NY: Multi-Health Systems.

Larzelere, R. E., & Mulaik, S. A. (1977). Single-sample tests for many correlations. *Psychological Bulletin*, *84,* 557–569.

Lee, C. M., & Gotlib, I. H. (1991). Family disruption, parental availability and child adjustment. *Advances in Behavioral Assessment of Children and Families*, *5,* 171–199.

Lieberman, M., Doyle, A. B., & Markiewicz, D. (1999). Developmental patterns in security of attachment to mother and father in late childhood and early adolescence: Associations with peer relations. *Child Development*, *70,* 202–213.

Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, *53,* 205–220.

McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, *53,* 185–204.

McNair, D., Lorr, M., & Droppleman, L. (1992). *Manual for the profile of mood states*. San Diego, CA: Educational and Industrial Testing Service.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw Hill.

Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, *52,* 1–10.

Phares, V. (1996). *Fathers and developmental psychopathology*. New York: Wiley.

Phares, V. (1999). *Poppa psychology: The role of fathers in children's mental well-being*. Westport, CT: Praeger.

Phares, V., Lopez, E., Fields, S., Kamboukos, D., & Duhig, A. M. (in press). Are fathers involved in pediatric psychology research and treatment? *Journal of Pediatric Psychology*.

Phares, V., & Lum, J. J. (1997). Clinically referred children and adolescents: Fathers, family constellations, and other demographic factors. *Journal of Clinical Child Psychology*, *26,* 216–223.

Phares, V., & Renk, K. (1998). Perceptions of parents: A measure of adolescents' feelings about their parents. *Journal of Marriage and the Family*, *60,* 646–659.

Pleck, J. H., & Masciadrelli, B. P. (2004). Paternal involvement by U.S. residential fathers: Levels, sources, and consequences. In M. E. Lamb (Ed.), *The role of the father in child development* (4th ed., pp. 222–271). New York: Wiley.

Reese, R. J., Kieffer, K. M., & Briggs, B. K. (2002). A reliability generalization study of select measures of adult attachment style. *Educational and Psychological Measurement*, *62,* 619–646.

Reynolds, C. R., & Richmond, B. O. (1985).*Revised Children's Manifest Anxiety Scale (RCMAS)*. Los Angeles: Western Psychological Services.

Robinson, J., & Little, C. (1994). Emotional availability in mother-twin dyads: Effects on the organization of relationships. *Psychiatry: Interpersonal and Biological Processes*, *57,* 222–231.

Rummel, R. J. (1970). *Applied factor analysis*. Evanston, IL: Northwestern University Press.

Schaefer, E. S. (1965). Children's reports of parental behavior: An inventory. *Child Development*, *36,* 413–424.

Schludermann, E., & Schludermann, S. (1970). Replicability of factors in children's report of parent behavior (CRPBI). *Journal of Psychology*, *76,* 239–249.

Silverstein, L. B. (2002). Fathers and families. In J. P. McHale & W. S. Grolnick (Eds.), *Retrospect and prospect in the psychological study of families* (pp. 35–64). Mahwah, NJ: Erlbaum.

Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S., & Dornbusch, S. M. (1994). Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, *65,* 754–770.

Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, *28,* 191–193.

Volling, B. L., McElwain, N. L., Notaro, P. C., & Herrera, C. (2002). Parents' emotional availability and infant emotional competence: Predictors of parent–infant attachment and emerging self-regulation. *Journal of Family Psychology*, *16,* 447–465.

Winefield, H. R., Goldney, R. D., Tiggemann, M., & Winefield, A. H. (1990). Parental rearing behaviors: Stability of reports over time and relation to adult interpersonal skills. *Journal of Genetic Psychology*,*151,* 211–219.