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Parent Differentiation of Self and Child Competence in Low-Income Urban Families

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In this study, the author examined whether family system functioning was associated with resilience in children exposed to negative environmental stress. In a sample of 55 low-income, urban families, greater differentiation of self among mothers predicted child competence—that is, better verbal and math achievement scores and lower aggression—after considering the effects of neighborhood violence and family life stress. No relations were observed between parent functioning and child academic self-concept. Furthermore, mothers' differentiation-of-self scores predicted children's cognitive skills, even after controlling for parent level of education. Implications, limitations, and directions for further research are discussed.

Since counseling psychology's discovery of the family in the 1980s (Gelso & Fassinger, 1990), interest in children and their families has grown dramatically (e.g., Fitzgerald & Osipow, 1988; Schneider, Watkins, & Gelso, 1988; Walsh, Galassi, Murphy, & Park-Taylor, 2002). In the last decade, instruction in family therapy has become a standard component of doctoral training in counseling psychology programs (Murdock, Alcorn, Heesacker, & Stoltenberg, 1998). Articles focused on children and families appearing in the *Journal of Counseling Psychology* have more than tripled in the last 20+ years (i.e., only 7 articles with the keywords *child* or *family* were published from 1980 to 1989, whereas from 1990 to 1999, 40 articles appeared). Recent issues of *The Counseling Psychologist* on preventing childhood disorders (Romano & Hage, 2000) and promoting school partnerships (Kenny, Waldo, Warter, & Barton, 2002; Walsh et al., 2002) provide further evidence of the field's interest in and commitment to understanding and working effectively with children and families.

The broad purpose of this study was to better understand the relationship between family system functioning and resilience among urban, at-risk children. Urban environmental stress puts children at early risk for learning delays and emotional and behavioral problems (e.g., Attar, Guerra, & Tolan, 1994; Black & Krishnakumar, 1998; Garbarino, 1995; Margolin & Gordis, 2000; Rutter, 1981). Delayed acquisition of language and problem-solving skills bode poorly for school readiness and lead to a negative cascade in school adjustment and achievement (Blair, 2002; Greenberg et al., 2003). Likewise, conduct problems that begin at an early age appear particularly resistant to intervention (Patterson, Reid, & Dishion, 1992). Both proximal and distal environmental stressors play an important role in compromising child development. Proximal risks impact a child directly (e.g., family economic hardship, illness), whereas distal risks exert their influence through indirect means (e.g., community violence that erodes a sense of neighborhood safety and security; Harrison, Wilson, Pine, Chan, & Buriel, 1990; McLoyd, 1998). Yet children who live with these risks are considered resilient when they manage to achieve competence in three distinct domains: academic achievement, self-esteem, and/or prosocial behavior (Masten et al., 1995, 1999). In other words, children exposed to high levels of risk are considered resilient or "competent under stress," for example, when they manage to perform at grade level in school, maintain a positive view of self, and behave in prosocial ways (Masten & Coatsworth, 1998). Research indicates that protective factors in the family system, the child, and society each play a role in minimizing the development of problem behaviors and supporting such competence (Cicchetti, Rappaport, Sandler, & Weissberg, 2000; Durlak & Wells, 1997; Garmezy, 1991; Masten & Coatsworth, 1998; Weissberg, Kumpfer, & Seligman, 2003). This study focused on clarifying the role of family systems factors, specifically parent differentiation of self (Bowen, 1978), for predicting competence among urban, at-risk children.

Differentiation of self is the central construct in Bowen family systems theory (1978; Kerr & Bowen, 1988; Titelman, 1998) and is thought to be most critical to healthy individual development and family functioning. *Differentiation of self* is defined as the capacity of a system and its members to manage emotional reactivity, act thoughtfully under stress, and allow for both intimacy and autonomy in relationships. Parents with higher levels of differentiation of self are less emotionally reactive, better able to self-regulate, maintain a clear sense of self, and are thought to be more capable of intimacy and autonomy in relationships (Bowen,

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1978; Titelman, 1998). Differentiated parents are thought to be more flexible and adaptive, not because they are more intelligent but rather because they are more capable of modulating their emotional arousal and thinking clearly under stress. In contrast, less differentiated parents are less able to regulate their emotional responses, maintain a solid sense of self in relationships, are more emotionally reactive, and less comfortable with intimacy and/or autonomy in family relationships (Bowen, 1978; Kerr & Bowen, 1988). Less differentiated parents find it more difficult to remain calm and think clearly in the midst of stressful life experiences (Bowen, 1978; Kerr & Bowen, 1988). Therefore, it was expected that more differentiated parents would have children who learn to think clearly and regulate their emotions under stress and who would therefore be in a better position to engage in academic learning, achieve academic success, and show less aggressive behavior. Furthermore, because more differentiated parents are more capable of remaining connected with their children while also supporting their autonomy, it was expected that children's experiences with parent connection and support for autonomy would facilitate development of a positive self-concept, relative to children of less differentiated parents. Put another way, it was expected that because more differentiated parents are better able to modulate emotional arousal, think clearly under stress, and are comfortable with intimacy and autonomy in relationships, their children would show greater competence because they too would have learned how to self-regulate and experienced support in their development of a self. Furthermore, although Bowen theory (e.g., Kerr & Bowen, 1988; Titelman, 1998) suggests that relations between parent differentiation of self and child competence are expected in family systems across the socioeconomic spectrum, the focus in this study was on low-income, urban families in order to explore the relative importance of parent differentiation versus urban environmental stress for predicting competence in children.

Although no research was located that directly tested the proposition that parent differentiation of self is associated with greater competence among children in urban families, several lines of research provide indirect support for this theoretical relationship. For example, parent provision of warmth, caring, connection, structure, family cohesion, and opportunities for psychological autonomy have all been linked with the development of cognitive, emotional, and behavioral competence in disadvantaged, high-risk children. In an early longitudinal investigation of stress resilience, Werner and her colleagues (Werner & Smith, 1982, 1992) observed that resilient children from Kauai (i.e., a small, rural, impoverished island in the Hawaiian chain) experienced greater parent support, respect for individuality, and clear rules in the home. Likewise, authoritative parenting styles, characterized by support for psychological autonomy and parent–child connections marked by acceptance, warmth, and behavioral control have been shown to facilitate academic success, socioemotional health, and behavioral control in children (Grolnick & Ryan, 1989) and adolescents (Dornbusch, Ritter, Liederman, Roberts, & Fraleigh, 1987; Steinberg, Elmen, & Mounts, 1989; Steinberg, Lamborn, Dornbusch, & Darling, 1992) from a variety of ethnic groups, socioeconomic classes, and diverse family structures. The longitudinal study of urban children indicates that disadvantaged elementary schoolchildren from more stable and cohesive families are more academically and socially competent and less disruptive under stress (Cowen et al., 1997; Garmezy, 1987). Furthermore, resilient adolescents from high-risk backgrounds score similarly over time to their low-risk, competent peers on dimensions of intelligence and psychological adjustment (Masten et al., 1995, 1999).

Research focusing specifically on resilient African American children living in poverty has also found the family serves a protective role in buffering children from the harsh effects of environmental stress. Specifically, African American children whose parents grant more psychological autonomy; maintain well-defined, age-appropriate parent and child roles; and provide warmth, support, and involvement, in turn, are more cognitively skilled, self-confident, higher achievers, better able to self-regulate, less aggressive, and more reflective problem solvers (Black & Krishnakumar, 1998; Brody, Murray, Kim, & Brown, 2002; Clark, 1983; Garmezy, 1991). Positive parent–child interactions, characterized by parent involvement and support, have been shown to buffer the relationship between neighborhood violence and aggression in urban children (Richters & Martinez, 1993).

In summary, this study tested the hypothesis that greater differentiation of self among parents in low-income, urban families would be associated with greater competence in their school-age children, over and above the effects of proximal and distal sources of stress. On the basis of Masten et al.'s (1995, 1999) research, child competence was operationalized using three dimensions: academic achievement (verbal and math achievement), self-esteem (academic self-concept), and prosocial behavior (lower aggression). Stress was operationalized using one distal stress factor—average rates of neighborhood violent crime during the last 4 years—and one proximal risk factor—extent of stressful life events experienced by the family within the past year.

Method

Participants

Participants were 55 biological mother–child dyads, with target children ranging in age from 6 to 13 years. Median family income was $14,400 ($M$ = 17,870, SD = 12,472) after taxes, which was statistically equivalent to the median inner-city income of $15,986 and represented 61% of the median citywide income of $23,627 in the year 2000. Of the participants, 17 families (30.9%) were referred from a community mental health agency, 37 families (67.3%) were referred from one of two public schools, and 1 family's (1.8%) referral source was unknown. All sites were located within a mile of one another within the central city. Study families reported an average of 4.81 (SD = 2.53) members in the household and averaged 1.25 (SD = 1.22) children under age 7 in the home. In terms of the stability of family living environments, 52.1% of families had lived in their current residence less than 1 year; residency status was 1–2 years for 16.7% of families, 2–3 years for 10.4% of families, 3–4 years for 8.4% of families, 4–5 years for 6.3% of families, and more than 5 years for 6.3% of families. Mothers ranged in age from 22 to 49 years (M = 32.65, SD = 5.74). In terms of marital status, 62.3% were single, 26.4% were married or in a committed relationship, and 11.3% were separated or divorced. Mothers averaged 12.2 years of education (SD = 1.74; range = 9–16 years). Two thirds (63.0%) of mothers were employed outside the home.

One child between the ages 6 and 13, blocked on gender, was randomly selected from each family for individual assessment. Child participants were 36 (65.5%) girls and 19 (34.5%) boys, averaging 8.69 years of age (SD = 2.08). Child ethnic/racial background was 98.0% African American/Black and 2.0% European American/White. In terms of birth order, 9.4%

were "only" children, 32.1% were first-born, 35.8% were second-born, 9.4% were third-born, and 13.2% were fourth-born children. A few (5.6%) children in the sample had been arrested prior to the interview, and 9.3% had been in foster care.

Instruments

Parent differentiation of self. The Differentiation of Self Inventory (DSI; Skowron & Friedlander, 1998) is a 43-item self-report instrument that focuses on individuals, their significant relationships, and their current relations with family of origin. The DSI assesses emotional reactivity (emotional flooding, emotional lability, or hypersensitivity), difficulties taking an "I" position (clearly defined sense of self and ability to thoughtfully adhere to one's convictions under outside pressure), emotional cutoff (discomfort with intimacy, feeling excessive vulnerability in relationships, defensive overfunctioning and distancing in close relationships), and fusion with others (emotional overinvolvement and overidentification with parents and significant others).

DSI full-scale scores for mothers were used in the present study and are calculated by reversing select items, summing the items, and dividing by the total number so that scores range from 1 to 6. Higher scores reflect less emotional reactivity, emotional cutoff, fusion with others, and better ability to take an "I" position in relationships, or greater differentiation of self. Internal consistency reliability, calculated using Cronbach's alpha, has been estimated to be .88 (Skowron & Friedlander, 1998) and was .86 for DSI scores in the present sample. Theoretically based relationships between DSI scores and less chronic anxiety, psychopathology (Skowron & Friedlander, 1998), and better physical health and social problem-solving skills among persons of color (Skowron, 2004) provide evidence for the construct validity of the DSI. Furthermore, initial studies have shown no significant differences between the DSI scores of Caucasian and ethnic minority adolescents (Knauth & Skowron, 2004) or young adults (Skowron, 2004).

Proximal and Distal Stress

Family stress exposure. Proximal stress was operationalized as family exposure to stress, measured by the Family Inventory of Life Events and Changes (FILE; McCubbin & Patterson, 1987), which is a 71-item survey of normative and nonnormative life events experienced by a family in the past year (e.g., birth or death of family member, family marriage or divorce, hospitalization, job loss, legal problems, and the like). To score the FILE, affirmative responses to items are summed to arrive at a total score. Parents completed the FILE separately, and mothers' scores were used to represent family stress. The study families averaged significantly higher FILE scores than those of national norms based on 980 families (i.e., study family scores were $M = 14.67$, $SD = 9.17$; norm group families scores were $M = 8.80$, $SD = 5.87$). Cronbach's alpha has been reported as .81, and test–retest reliability was .80 (4–5 weeks; McCubbin & Patterson, 1987), whereas Cronbach's alpha was .89 in the present sample. Evidence for the construct validity of the FILE comes from studies showing greater numbers of family life stressors associated with family disorganization, conflict, and lower cohesion ratings on the Family Environment Scale (McCubbin & Patterson, 1987).

Neighborhood violence. Distal stress was operationalized using city police department records of the documented number of violent crimes committed within a families' census block tract from 1997 to 2000 (e.g., 3 years preceding and the 1 year during data collection). Thus, neighborhood violence represented the number of documented cases of murder, rape, armed robbery, or assault committed in the family's neighborhood averaged over 4 years. Scores ranged from 33 to 325 violent crimes committed per year ($M = 170.13$, $SD = 79.45$) in the neighborhoods of participating families.

Child Competence

Verbal skills. The Vocabulary subtest of the Wechsler Intelligence Scale for Children-III (WISC–III; Wechsler, 1991) was used to assess children's basic verbal skills. Raw scores are converted to standard scores ($M = 10$, $SD = 3$). Split-half reliabilities corrected using the Spearman-Brown formula have ranged from a low of .79 (age 7) to .89 (age 13), and test–retest reliability has been estimated at .80 (2–5 weeks) (Wechsler, 1991). Interrater agreement among raters for the 0, 1, and 2 point scoring is high, with an intraclass correlation of .92 (Wechsler, 1991). Evidence for predictive validity of the WISC–III Vocabulary subtest is based on significant correlations with the Picture Peabody Vocabulary Test—Revised and other measures of verbal achievement (Carvajal, Hayes, Miller, Wiebe, & Weaver, 1993; Slate & Jones, 1995).

Math problem-solving skills. The Arithmetic subtest of the Wide Range Achievement Test-3 (WRAT-3; Wilkinson, 1993), an individually administered test of academic achievement, was used to assess children's basic math skills. The Arithmetic subtest measures basic arithmetic coding skills, such as counting, reading numbers, solving problems, and performing written computations, and was selected for its ability to minimize the confounding effects of language comprehension on performance. Scores were standardized on a national sample stratified on age, gender, ethnicity, socioeconomic level, and region, based on 1990 U. S. Census data. Raw scores on the WRAT-3 Arithmetic subtest are standardized ($M = 100$, $SD = 15$). Coefficient alphas range from .85 to .92, alternate forms reliability estimates range from .82 to .99, and test–retest estimates ($M =$ 1 month) were .84–.89 for the Arithmetic subtest. Evidence for construct validity comes from studies demonstrating relationships between WRAT-Arithmetic scores and math scores on the Kaufman Functional Academic Skills Test (K-FAST; Klimczak, Bradford, Burnright, & Donovick, 2000), Woodcock-McGrew-Werder Mini-Battery of Achievement (Flanagan et al., 1997), Halstead-Reitan Neuropsychological Battery (Strom, Gray, Dean, Raymond, & Fischer, 1987), and with WISC–III scores among children in special education (Vance & Fuller, 1995).

Questions exist regarding the cross-cultural validity of these two measures (e.g., Helms, 1992) because Black children consistently score roughly 10–20 points lower on standardized tests of mental ability than White children, though interpretations of the meaning and source of these discrepancies vary widely (e.g., Dolan & Hamaker, 2001; Flynn, 2003; Jenks & Phillips, 1998; Jensen, 2003). Rather than a risk factor or direct cause of variation in test scores, it was reasoned that race/ethnicity likely serves as a proxy for real indictors of academic achievement, including broader social, environmental, and economic forces that have been shown to covary with academic learning and achievement (e.g., Brooks-Gunn, Klebanov, Smith, Duncan, & Lee, 2003; Phillips, Brooks-Gunn, Duncan, Klebanov, & Crane, 1998). Therefore, the WISC–III and WRAT-3 were selected for use in this study because the sample was relatively homogeneous on socioeconomic status and because these measures represent widely used methods of assessing verbal and math achievement.

Aggression. The 33-item Externalizing scale of the Child Behavior Checklist/4–18 (CBCL; Achenbach, 1991) is a parent-report measure of child behavioral problems during the last 6 months and was used to assess aggressive and delinquent behaviors. Parents rate their child's behavior on a 3-point response scale where 0 = *not true of child*, 1 = *somewhat or sometimes true*, and 2 = *very true or often true*. Raw item scores are summed and standardized ($M = 50$, $SD = 10$) such that higher scores indicate greater aggression. Internal consistency for the Externalizing scale based on Cronbach's alpha was .93 (.92 in the present sample), and test–retest reliability estimates ranged from .91 to .95 (1 week) to .86 (1 year) (Achenbach, 1991). Evidence of construct validity is based on significant correlations between the CBCL Externalizing scale and the Conners Parent Questionnaire Anti-Social and Conduct Problems scales (Conners, 1990), and the Socialized Aggression and Conduct Disorder scales of the Revised-Behavioral Problem Checklist (Achenbach, 1991).

Furthermore, CBCL Externalizing scores significantly distinguish children referred for clinical services from nonclinical controls (Achenbach, 1991).

Academic self-concept. The Scholastic Competence scale of the Harter Self Perception Profile (SPP-SC; Harter, 1985) was used to assess children's self-perceptions of their competence within the realm of school/academic performance. Items are rated on a 1- to 4-point scale, with higher scores indicating self-appraisals of greater scholastic competence. No gender differences have been observed on the SPP-SC (Harter, 1985). Internal consistency has been reported at .85 (Cronbach's alpha) and was .77 in the present sample. Evidence for the construct validity of the SPP-SC is based on support for its factor structure (Worrell, 1997) and significant relations with measures of positive school attitudes and achievement (Hess & Petersen, 1996), intrinsic motivational orientation (Forzi & Not, 2000), and psychosocial adjustment among children with chronic physical disabilities (Aasland & Diseth, 1999). Lower SPP-SC scores have been linked with lower socioeconomic background, minority status (Muldoon & Trew, 2000), and greater parent verbal aggression (Solomon & Serres, 1999).

Demographic interview. Parents were asked to provide information regarding family structure and composition, living situation, age, gender, and relationship status of family members, ethnicity, education, and concerns about target child.

Procedure

Families were solicited for participation from a midwestern central city community mental health clinic and two neighborhood public schools. Flyers describing the research as a study of "how community stress impacts families" and "the effect of different environments on children, their parents, and families" were made available in the waiting room of the mental health clinic and were sent home to parents of children in Grades 1–6 in the two public schools. Low-income, inner-city families were solicited for participation, regardless of family ethnicity. Families were considered for inclusion in the study if they resided within the city limits, had at least one child between the ages of 6 and 13, and were willing to bring the family in for the interview. Non-English-speaking families were excluded because of limits of the instrumentation. Interested families contacted the principal investigator to clarify questions and schedule a family interview. During phone contact, parents were asked to provide their address (to obtain census data), family composition, and number of children in the target age range. When 2 or more children in the same family were identified in the target age range, 1 child was randomly selected and blocked on child gender. Interviews were scheduled and transportation assistance arranged if needed. Approximately 82 families scheduled interviews, and of those, 64 families attended and completed interviews. All families were paid $50 for their participation; however, 2 families were paid but dropped from the analyses because the target child was out of the age range of interest. Furthermore, all families not headed by a biological mother were deleted from the sample, specifically, families headed by foster parents ($n = 2$), maternal grandmothers ($n = 3$), and maternal aunts ($n = 2$), resulting in a final sample of 55 mother–child pairs.

Three-person research teams consisting of a child assessor, parent assessor, and assistant who provided child care and administrative backup conducted the family interviews. Parents and identified child were interviewed separately and simultaneously. Parents completed the DSI, FILE, CBCL, and demographic interview. The CBCL was administered using the interview format recommended by Achenbach (1991). In the case of the DSI, FILE, and other measures administered that were not the focus of this study, researchers read instructions aloud to parents then remained in the room to answer or clarify questions as needed. Children were administered the WISC–III Vocabulary subtest, WRAT-3 Arithmetic test, and the SPP by a trained interviewer blind to source of referral (i.e., school vs. clinic). Order of assessments within parent and child interviews was counterbalanced. In order to enhance participation rates, families were given $50 to complete the 2½-hour interview, snacks, child care for nontarget children during the interview process, and reimbursement for transportation costs (i.e., bus passes or cab fare).

Results

Preliminary Analyses

Means, standard deviations, and range of scores are presented in Table 1, and bivariate correlations among the stress, parent differentiation of self, and child competence variables are listed in Table 2. Scatterplots of the residuals were examined to determine that the data met assumptions underlying statistical tests. First, a multivariate analysis of variance was used to test relations between child gender and the four-child competence variables to determine whether gender should be included as a covariate in the major analyses. No gender effects were observed on the child competence variables (Wilks's $\Lambda = .97$), $F(4, 49) = 0.39$, $p = .81$; therefore, gender was not included as a covariate in the remaining analyses.

Major Analyses

Four hierarchical regression analyses were conducted to determine whether mothers' differentiation-of-self scores (i.e., DSI scores) would predict the four child competence scores (i.e., Vocabulary, Math, SPP-Scholastic Competence, and CBCL Externalizing scores) after controlling for distal and proximal stressors. In each analysis, distal and proximal stressors (violent crime and family stress exposure, respectively) were entered first as a set, followed by entry of parent DSI scores in the second step. These variables were used to predict the four-child competence criterion variables separately. A familywise alpha for the omnibus F tests was set to .0125 to control for Type I error. When the omnibus F

Table 1
Means, Standard Deviations, Range, and Range of Neighborhood Violence, Family Stress, Parent Differentiation of Self, and Child Competence Variables ($N = 55$)

Variable	*M*	*SD*	Range
Stress			
Neighborhood violence	170.13	79.45	33–325
FILE	14.67	9.17	0–32
Parent differentiation of self			
DSI total	3.69	0.69	2.30–5.16
Child competence			
Vocabulary	8.34	2.85	2–15
Arithmetic	90.42	15.48	46–132
SPP-Scholastic Competence	3.20	0.76	1.33–4.00
CBCL-Externalizing	58.31	11.05	37–86

Note. Higher scores on (a) neighborhood violence indicate more violent events in family's census block tract, (b) the Family Inventory of Life Events and Changes (FILE) indicate greater number of stressful family events, (c) the Differentiation of Self Inventory (DSI) total scale indicates greater differentiation of self in mothers, (d) the Vocabulary subtest indicates higher verbal comprehension skills, (e) the Arithmetic subtest indicates higher math problem-solving skills, (f) the Self Perception Profile (SPP)- Scholastic Competence scale indicates positive academic self concept, and (g) the Child Behavior Checklist (CBCL) Externalizing scale indicates parent perceptions of greater child aggression and behavioral dyscontrol.

Table 2
Intercorrelations Among Proximal and Distal Stressors, Parent Differentiation, and Child Competence Variables (N = 55)

Variable	1	2	3	4	5	6	7
1. Neighborhood violence	—						
2. FILE	.03	—					
3. DSI total	.16	−.26	—				
4. WISC–III Vocabulary	−.16	−.11	.38**	—			
5. WRAT-3 Arithmetic	−.13	−.25	.36**	.57***	—		
6. SPP-Scholastic Competence	.10	−.18	.10	.17	.34**	—	
7. CBCL-Externalizing	.12	.57***	−.52***	−.20	−.20	−.08	—

Note. FILE = Family Inventory of Life Events and Changes; DSI = Differentiation of Self Inventory full scale; WISC–III = Wechsler Intelligence Scale for Children-III; WRAT-3 = Wide Range Achievement Test-3; SPP-Scholastic Competence = Self Perception Profile-Scholastic Competence scale; CBCL-Externalizing = Child Behavior Checklist–Externalizing scale.
** $p < .01$. *** $p < .001$.

tests were significant, follow-up tests of regression coefficients were conducted using $\alpha = .05$. Results are presented in Table 3.

First, in predicting child Vocabulary scores, the proximal and distal stressors entered in Step 1 were not significant. As shown in Table 3, Step 2 regression of Vocabulary scores onto parent DSI scores, after controlling for proximal and distal stress, was significant, $\Delta F(1, 51) = 10.05$, $p < .01$, $\Delta R^2 = .16$. Interpretation of beta weights indicated that greater parent differentiation of self

Table 3
Hierarchical Multiple Regressions Testing the Effects of Neighborhood Violence, Stressful Family Events, and Parent Differentiation of Self on Child Competence Variables (N = 55)

Predictor variable	*B*	*SE*	β	R^2	ΔR^2	*F*	ΔF	*sr*
Verbal skills[a]								
Step 1				.03		0.90		
Neighborhood violence	−.01	.01	−.15					−.15
FILE	−.03	.05	−.10					−.10
Step 2					.16		10.05**	
DSI total	1.74	.55	.42**					.41**
Math skills[b]								
Step 1				.07		1.84		
Neighborhood violence	−.02	.03	−.12					−.12
FILE	−.40	.24	−.22					−.23
Step 2					.11		6.83**	
DSI total	7.86	3.61	.35**					.34**
Academic self-concept[c]								
Step 1				.04		1.08		
Neighborhood violence	.00	.00	.10					.10
FILE	−.02	.01	−.18					−.18
Step 2					.00		1.09	
DSI total	.05	.16	.04					.04
Child aggression[d]								
Step 1				.30		11.13**		
Neighborhood violence	.01	.02	.10					.11
FILE	.68	.15	.54***					.54***
Step 2					.15		7.96*	
DSI total	−6.70	.72	−.42**					−.48**

Note. FILE = Family Inventory of Life Events and Changes; DSI = Differentiation of Self Inventory full scale.
[a] $F(3, 51) = 4.05$, $p < .01$, $R = .44$, $R^2 = .19$. [b] $F(3, 51) = 3.64$, $p < .01$, $R = .42$, $R^2 = .18$. [c] $F(3, 51) = 0.74$, $p = .54$, $R = .20$, $R^2 = .04$. [d] $F(3, 51) = 14.49$, $p < .0001$, $R = .68$, $R^2 = .46$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

predicted higher child Vocabulary scores over and above neighborhood violence and family life stress. In the full model, only higher parent DSI scores uniquely predicted child verbal skills, $t(54) = 3.17$, $p < .01$, $sr = .41$. That is, interpretation of the semipartial correlations (*sr*s) indicates that after controlling for variance in vocabulary scores associated with all other predictors in the model, parent differentiation scores predicted 16% of the variability in children's vocabulary scores.

A second hierarchical regression predicting Arithmetic scores yielded a significant increment only in Step 2 with entry of DSI scores, $\Delta F(1, 51) = 6.83$, $p < .01$, $\Delta R^2 = .11$. Higher child math problem-solving scores were associated with greater parent DSI scores, after accounting for neighborhood violence and family stress. Follow-up analyses of regression coefficients shown in Table 3 indicated that only parent DSI scores were a significant unique predictor of child math skills, $t(54) = 2.61$, $p < .01$, $sr = .34$, and accounted for 11% of the unique variance.

Likewise, with respect to child scholastic competence, entry of the proximal (FILE scores) and distal (neighborhood violence) stress variables was not significant. Step 2 entry of the family DSI scores also failed to reach significance in Step 1, $F(2, 52) = 1.08$, $p = .35$, $R^2 = .04$; and in Step 2, $\Delta F(1, 51) = 0.89$, $p = .77$, $\Delta R^2 = .002$.

Finally, in predicting child aggression, Step 1 stressors were significant, $F(2, 52) = 11.13$, $p < .0001$, $R^2 = .30$, indicating that greater neighborhood violent crime and higher family stress exposure predicted higher CBCL externalizing scores. Next, Step 2 regression of CBCL scores onto parent DSI scores also was significant, $\Delta F(1, 51) = 15.15$, $p < .0001$, $\Delta R^2 = .16$. Both family stress exposure and parent DSI scores were significant unique predictors of child aggression, $t(54) = 4.62$, $p < .0001$, $sr = .54$; and $t(54) = -3.89$, $p < .0001$, $sr = -.48$, respectively, with greater family stress exposure and lower parent differentiation associated with greater child aggression. Family stress exposure explained 29% and parent differentiation of self explained 16% of the unique variance in child aggression.

Next, in order to test the robustness of these findings in light of documented relations between child academic achievement and parent education (e.g., Mullis, Rathge, & Mullis, 2003), post hoc analyses were conducted to test whether parent levels of education would better account for the variations in child cognitive competence that were explained by parent differentiation. Two hierarchical regression analyses were conducted to determine whether parent differentiation of self would continue to predict child verbal and math achievement scores, even after considering relations between verbal or math scores and parent education. Mother's level of education was entered in Step 1, followed by her DSI scores in Step 2. Results for Vocabulary scores yielded a significant relationship between parent education and child verbal skills, $F(1, 51) = 4.21$, $p < .05$, $R^2 = .08$. In Step 2, parent DSI scores also significantly predicted child Vocabulary scores over and above the contribution of parent education, $\Delta F(1, 50) = 6.80$, $p < .01$, $\Delta R^2 = .19$. Both level of education and parent DSI scores were significant unique predictors of child verbal skills, $t(52) = 2.05$, $p < .05$, $sr = .28$; $t(54) = 2.61$, $p < .01$, $sr = .35$, respectively.

By contrast, the relationship between parent education and child math skills was not significant, $F(1, 51) = 3.72$, $p = .40$, but the addition of DSI total scores yielded a significant increment in the prediction of Arithmetic scores, $\Delta F(1, 50) = 6.42$, $p < .01$, $\Delta R^2 = .13$. Greater parent differentiation, as measured by higher DSI scores, predicted greater child math skills. Only parent DSI scores emerged as a significant unique predictor of math skills, $t(52) = 2.53$, $p < .01$, $sr = .34$.

Discussion

This study examined whether parent differentiation of self would account for variation in child competence among low-income, urban families after accounting for extent of neighborhood violence and family life stress. Results provided empirical evidence for a link between mother's level of differentiation and the level of functioning of at least 1 child in the family on several dimensions. Specifically, among this sample of urban families exposed to substantial rates of neighborhood violence and stressful family life events, those mothers who were better at modulating emotion and capable of both intimacy and autonomy had children who demonstrated higher verbal and math achievement scores and were less aggressive. These findings lend initial empirical support to Bowen's (1978; Kerr & Bowen, 1988) theoretical proposition that level of adaptive functioning in family members (i.e., children) reflects the level of differentiation in the family system (i.e., biological mothers).

Parent Differentiation of Self and Child Resilience

Research on competence in childhood has consistently demonstrated that one component of differentiation—emotion regulation—is an important *intrapersonal* predictor of cognitive and socioemotional competence in school-age children (Blair, 2002; Eisenberg et al., 1997; Hinshaw, 1992; Rothbart & Jones, 1998). The present results expand these findings outward into the child's immediate family context by documenting that the extent of emotion regulation *in the child's family system*, namely, the mother's capacity to regulate emotionality, was also significantly associated with child academic achievement and prosocial behavior. Likewise, the links observed here between parent differentiation and children's cognitive skills and prosocial behavior are also consistent with other studies documenting the role of autonomy support in early childhood cognitive development (Assel, Landry, Swank, Smith, & Steelman, 2003) and academic achievement in school-age children (Brody et al., 2002; Dornbusch et al., 1987; Grolnick & Ryan, 1989). Furthermore, family closeness or intimacy that is protective but neither coercive nor characterized by blurring of psychological boundaries (i.e., fusion) has also been linked in other studies with greater academic success (Miliotis, Sesma, & Masten, 1999) and the development of prosocial behavior (Coie & Dodge, 1998).

In his theory of family system functioning, Bowen (1978) described that undifferentiation in the family is typically expressed in one of three ways: (a) as marital conflict, (b) through problems in one or more children, or (c) via dysfunction in a spouse. Previous research has documented evidence for (a) relations between severity of marital discord and undifferentiation in couples (e.g., Kosek, 1998; Skowron, 2000), whereas the results of this study demonstrated initial support for (b) significant associations between child functioning and parent level of differentiation in low-income, urban family systems. Taken together, these findings provide

empirical evidence that is consistent with Bowen's (1978) notion that level of differentiation of self in a family may be "expressed" through the level of functioning of its members. Nonetheless, the use of a cross-sectional design in this study prevents one from drawing causal conclusions about the present findings. Do more differentiated parents promote greater child competence, as Bowen (1978) proposed, or do more competent children influence and enhance the level of functioning in their parents or the family system?

These findings provide some initial support for the cross-cultural validity of Bowen theory and are consistent with other research (e.g., E. Campbell, Adams, & Dobson, 1984; Tuason & Friedlander, 2000) documenting that the ability to maintain connections with others and maintain an autonomous self (i.e., differentiation of self) is important for healthy functioning among individuals from diverse backgrounds. Although these findings lend preliminary support for the cross-cultural relevance of Bowen theory, given the modest sample size and heterogeneity along dimensions of family composition, children's birth order, and parent racial/ethnic identity, generalizability of these results is limited. However, the cross-cultural implications of these findings should be considered preliminary and will hopefully fuel further work in this area. Though preliminary, these findings may pave the way for future research clarifying the role and function of differentiation of self in diverse ethnic minority family systems.

Furthermore, given Bowen's indications that parents together establish the level of differentiation of self in a family system, follow-up work is needed to empirically test Bowen's (1978) assertion that differentiation of self is in fact a characteristic of family systems. Do parents establish the level of differentiation in a family system on the basis of their own levels of functioning, and do children's levels mirror those of their parents? Methods for testing these ideas may require use of observational measures of differentiated behavioral/communication patterns in family systems (e.g., the structural analysis of social behavior; Benjamin & Cushing, 2000; or the Structural Family Systems Rating Scales; Szapocznik et al., 1991) and examination of whether they converge in theoretically expected ways with self-reported levels of parent differentiation.

Proximal and Distal Environmental Stress

In addition to relations observed between mother differentiation of self and child competence, greater family stress was associated with higher child aggression. Some studies suggest that family stress may operate on child aggression indirectly through its negative effects on quality of parenting behavior (e.g., S. B. Campbell, Breaux, Ewing, & Szumowski, 1986; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000). For example, the longitudinal study of stress among lower socioeconomic status families indicated that greater family stress was associated with more negative, coercive parenting of children at age 3, which then predicted later child aggression at ages 4–6 (S. B. Campbell et al., 1986). In summary, after accounting for relations between environmental stress (i.e., neighborhood violence and stressful family life events) and child outcomes, parent differentiation still predicted significant variations in academic and psychosocial competence in children. These findings provide partial support for a compensatory model of resilience (Masten et al., 1988) in low-income, urban children, whereby the presence of protective factors is associated with greater competence at all levels of stress exposure, whereas the presence of risk factors is linked with lower competence in a similar manner. In other words, whereas greater risk exposure was linked with lower competence (i.e., higher aggression), exposure to greater parent differentiation was associated with greater child academic and socioemotional competence (i.e., higher verbal and math problem-solving skills and lower aggression). Contrary to the idea that resilient children are invulnerable—that they possess some innate qualities that magically shield them from adversity—our findings provide additional, albeit preliminary, support for Masten's (2001) conclusion about the "ordinariness of resilience" (p. 227). That is, family systems factors, such as a parent's capacity to regulate emotion, think clearly under stress, and promote both intimacy and autonomy in family relationships, that would theoretically be associated with positive development in lower risk children, likewise in this study, were empirically linked with greater competence in at-risk children.

Implications for Research and Practice

Although support was observed for Bowen's (1978) proposition that greater parent differentiation is associated with positive child outcomes, parent differentiation of self also predicted children's verbal and math achievement scores even after partialing out the effects of parent education. Future longitudinal research modeling developmental change is needed in order to elucidate possible causal processes at work by first determining the temporal sequencing of differentiation of self in the family and the emergence of resilience in children. If parent differentiation precedes the development of child competence, then shifts in environmental stressors, along with associated changes in family environment and child functioning, should be tracked over time in order to examine whether parent differentiation functions as a *stress buffer* or protective mechanism in the lives of urban children. Also, although the present data support a compensatory model in which parent differentiation predicted greater child resilience under stress, relatively high (homogeneous) levels of proximal and distal environmental stress in this sample precluded meaningful comparisons between families experiencing higher and lower stress. Such comparative research is needed to determine whether differentiation of self in parents is more important, for example, for children living in environments characterized by higher levels of stress. Are children living in lower stress environments less affected by level of differentiation in the family system? Finally, follow-up work is planned in order to test the role of child self-regulation as the theorized mediator of relations between parent differentiation of self and behavioral competence. This research will include multisource measures of child self-regulation, including self-report (e.g., Children's Behavior Questionnaire; Rothbart, Ahadi, Hersey, & Fisher, 2001) and neurobiological indices (e.g., vagal tone, hypothalamic-pituitary-adrenal axis regulation) of regulation, to evaluate its role as a mediator of the link between parent differentiation and child competence in both parents and children.

Given the correspondence between parent differentiation of self and resilience among children in low-income, urban families, there may be some therapeutic benefit to teaching parents about the principles of differentiation of self and assisting them in learning to better regulate emotional reactivity in an effort to enhance

cognitive and socioemotional competence in their children. For example, researchers could test the effectiveness of Bowen therapy, designed to increase differentiation in a family system through efforts to help parents decrease their emotional reactivity, foster conditions for family intimacy and member autonomy, and become more aware of the emotional forces operating in their extended family systems (Meyer, 1998). Interventions based in Bowen theory are designed to stimulate parents' interest in their own families of origin, particularly in the nature of their relationships with their own caregivers, to teach parents about family emotional systems, and to help parents maintain regular contact with their own parents and siblings by establishing person-to-person relationships (Kerr & Bowen, 1988; Titelman, 1998). Bowen family systems interventions are thought to help parents learn to remain calm and thoughtful under stress, in turn enabling them to clarify their own life principles that may have been neglected in response to high anxiety and to accept greater personal responsibility for their own feelings, beliefs, and actions (Meyer, 1998). Bowen (1978) espoused working with individual members of a family, asserting that when an individual raises his or her level of differentiation and remains in contact with family, the level of differentiation in the family system, in turn, increases as well. Although results of the present correlational study support a compensatory model of resilience (e.g., Masten et al., 1988), longitudinal research is sorely needed to test the causal assumptions underlying Bowen family systems therapy and ascertain whether parent-focused preventive or traditional therapy interventions would be capable of enhancing cognitive and/or socioemotional competence in at-risk children.

Limitations

Several limitations of this study should be noted as well. First, though an interview format was used to administer parent assessments in order to reduce error associated with variations in reading comprehension in this low-income sample, there is the possibility that social desirability bias may have increased as a result. The present findings should be considered preliminary and require further replication with larger samples of families from different socioeconomic levels and racial/ethnic groups, using alternative, culturally sensitive measures of child competence. For example, although the standardized measures of academic achievement used to assess academic functioning are considered among the most commonly used child achievement tests, limited cultural validity exists for these instruments (Helms, 1992). Consistent with this study's findings, other recent research has demonstrated that broader indices of family environment (i.e., parent education and income, household size, high school quality, parenting practices, grandparent educational attainment, and so forth) accounted for significantly more of the gap observed in the cognitive test scores of Black and White children than did race/ethnicity (Brooks-Gunn et al., 2003; Phillips et al., 1998). Independent follow-up studies are needed to determine whether differentiation of self in the family predicts academic and socioemotional competence in children from different racial/ethnic groups, socioeconomic levels, and varying levels of environmental stress. Likewise, the impact of other potentially important environmental stressors (i.e., variation in family poverty, family experience of racism, and quality and amount of social support) was not explored in this study. In addition, only 1 child from each family was assessed, which precluded evaluation of potentially significant variation in competence among children within each family.

Furthermore, parent differentiation failed to predict children's academic self-confidence scores. Although Bowen (1978) did not posit a specific relationship between differentiation and this particular dimension of child adjustment, it was hypothesized that school-related self-confidence would be among the dimensions of child competence predicted by parent differentiation. However, it may be that academic success, attentional control, and other intra-individual qualities are more central to children's academic self-esteem than their family experiences around closeness, autonomy, and emotion regulation. In spite of these important limitations, this work represents an initial effort to understand the relationship between parent emotional functioning and competence in urban children, using a family systems framework.

Conclusion

The primary developmental tasks of middle childhood involve learning to self-regulate, adjusting to school and the demands of learning, and developing a prosocial behavioral repertoire (Greenberg et al., 2003). The results of this study indicate that low-income, urban families with mothers who are more differentiated—that is, better at modulating emotion, capable of both intimacy and autonomy—in turn, had children who demonstrated stronger verbal and math problem-solving skills and were less aggressive. Moreover, parent differentiation was associated with child academic achievement even after controlling for parent education. The results lend preliminary support for Bowen (1978; Kerr & Bowen, 1988) theory and indicate a need for continued research on family systems theory and the role of differentiation of self in facilitating the development of competence among children living with adversity.

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