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Resilience Among African American Adolescent Mothers: Predictors of Positive Parenting in Early Infancy

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Objective: **To use Nath et al.'s (1991) conceptual model of adolescent parenting to examine the relationship between resiliency factors measured shortly after delivery and maternal parenting behavior at 6 months.**
Method: **We recruited 181 first-time, adolescent African American mothers at delivery. Data on resiliency factors (maturity, self-esteem, and mother-grandmother relationships) were collected when infants were 1–4 weeks of age. Data on parental nurturance and parenting satisfaction were examined through observations and self-report at 6 months.**
Results: **Multiple regression analyses were used to examine the longitudinal impact of resiliency factors on parental nurturance and parenting satisfaction. Maternal maturity, positive self-esteem, and positive adolescent mother-grandmother relationships (characterized by autonomy and mutuality) were associated with better parenting outcomes. Maternal parenting satisfaction was lowest when infants were temperamentally difficult and mothers and grandmothers had a confrontational relationship.**
Conclusions: **Longitudinal associations between mother-grandmother relationships at delivery and parental behavior and satisfaction 6 months later may suggest an intergenerational transmission of parenting style. Recommendations are provided for intervention programs to enhance mother-grandmother relationships in contexts where adolescents are required to live with a guardian to receive government assistance.**

Key words: *resilience; adolescent mothers; African American; parenting; mother-grandmother relationship; low-income.*

The rate of births to adolescent parents has declined steadily since 1991, yet the United States continues to have the highest adolescent birth rate in the industrialized world (Ventura, Matthews, & Curtin, 1999). In 1998, approximately 500,000 adolescents gave birth, representing 12.5% of the infants born in the United States (Guyer et al., 1998). Although the majority of adolescent births occur among white adolescents, African American adolescents are 2.5 times more likely to give birth than non-Hispanic white adolescents (Ventura et al., 1999).

Adolescent parenthood presents multiple challenges to mothers and their children. Young mothers are often unprepared for the tasks of parenting (Leadbeater, Bishop, & Raver, 1996; McHenry, Browne, Kotch, & Symons, 1990; Wasserman, Rauh, Brunelli, Garcia-Castro, & Necos, 1990), and their adaptation to the new parental role is complicated by their strug-

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gles to negotiate the developmental tasks of adolescence (Hurlbut & McDonald, 1997). Consequently, children of adolescent parents have an increased risk of experiencing behavioral and developmental problems (Coley & Chase-Lansdale, 1998; Furstenburg, Brooks-Gunn, & Morgan, 1987; Hubbs-Tait, Osofsky, Hann, & Culp, 1994; Lyons-Ruth & Block, 1996; Miller & Moore, 1990).

Comparisons of adult and adolescent mothers have shown that the home environments of adolescent mothers tend to be less stimulating than those of adult mothers (Luster & Dubow, 1990; Moore, Morrison, & Greene, 1997), and the quality of interactions between mothers and children differ, with adolescent mothers showing less positive parenting behavior (Barratt & Roach, 1995; Culp, Appelbaum, Osofsky, & Levy, 1988). Adolescent parenthood is also associated with higher rates of child abuse and neglect than adult parenthood (Haskett, Johnson, & Miller, 1994). However, there is often more variability among adolescent mothers than between adolescent and adult mothers, emphasizing the need to identify resiliency factors that contribute to positive parenting outcomes within low-income, adolescent African American mothers.

Social support, mother-grandmother relationships, maternal characteristics, and infant temperament may be particularly important factors influencing parenting for adolescents struggling with the emerging demands of parenthood and adolescence (Coley & Chase-Lansdale, 1998; Furstenburg et al., 1987; Hubbs-Tait et al., 1994; Lyons-Ruth & Block, 1996; Miller & Moore, 1990). Although Belsky (1984) identified social support as an important determinant of parenting, his model may have limited applicability to adolescent mothers since it focuses on the marital relationship. Adolescent mothers, particularly those from African American families, often remain single, live in their family of origin, and share caregiving with their mothers (baby's grandmother) (Pearson, Hunter, Ensminger, & Kellam, 1990; Taylor, Chatters, & Jackson, 1993). Nath, Borkowski, Whitman, and Schellenbach (1991; Schellenbach, Whitman, & Borkowski, 1992) have adapted Belsky's model to more appropriately explain parenting processes in the adolescent social environment by placing a strong emphasis on social support systems that incorporate the family of origin and peer groups and by giving social support systems a more central role in their model than does Belsky (1984). Both models also incorporate maternal and child characteristics, as well as mother-infant interactions, as determinants of parenting. Mother-infant interactions are characterized by transactional processes in which mothers may modify their behaviors in response to infant characteristics (e.g., infant temperament) (Sameroff, 1975; Sameroff & Chandler, 1975).

The importance of family support for adolescent mothers has captured the attention of policy makers, as illustrated in the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, which requires adolescent mothers to live with a guardian to receive financial assistance (U.S. House of Representatives, 1996). Indeed, grandmothers are often viewed as providing support, nurturance, and sociological, financial, and legal stability (Tolson & Wilson, 1990). Despite the enthusiasm of policy makers regarding three-generation households, the impact of multigenerational families on adolescent parents and their children varies (Black & Nitz, 1996; Chase-Lansdale, Brooks-Gunn, & Zamsky, 1994).

This investigation was undertaken to examine resiliency factors related to positive parenting among low-income, urban, adolescent African American mothers living in three-generational households. Our primary goal was to better understand how the adolescent's relationship with her mother affects the adolescent's parenting skills and abilities, above and beyond the impact of maternal and child characteristics. The longitudinal design of this study allowed an investigation of how factors measured at the time of the child's birth affected adolescent parenting 6 months after the child's birth.

In keeping with the model guiding this investigation (Nath et al., 1991), maternal characteristics were initially examined as predictors of positive parenting. Adolescent mothers' maturity levels and self-esteem were examined as important personal characteristics affecting parenting. Age and grade level served as proxies for maturity level. In a longitudinal investigation of predictors of resiliency in adolescent mothers, grade level was the strongest predictor of resiliency 5 years after the child's birth (Weed, Keogh, & Borkowski, 2000). Specifically, adolescents who had completed more schooling by the time they had their first child were more likely to be in school or to have graduated from high school and to have better psychosocial outcomes, including less depression, less anxiety, and higher self-esteem. In an empirical investigation of the relationship between self-esteem and parenting for adolescent mothers, Hurlbut and McDonald (1997) found that positive self-esteem was related to positive and appropriate parenting attitudes and beliefs for first-time adolescent mothers.

We hypothesized that mothers who were older and had completed more schooling at the time of the child's birth would have more positive parenting behaviors than younger mothers and mothers with less schooling. We also hypothesized that mothers with higher self-esteem would have more positive parenting behaviors than mothers with lower self-esteem. Thus, mothers who were more mature and had greater psychosocial resources were expected to have better parenting outcomes.

We next examined the impact of infant characteristics on parenting outcomes since this is an important determinant of parenting (Belsky, 1984; Nath et al., 1991). Interaction among parents and children is a reciprocal process (Sameroff, 1975), such that children's behavior can influence the quantity and quality of caregiving they receive. Thus, conceptualizations of parenting should take into account children's contributions. Infant temperament is the child characteristic that has received the most attention as a determinant of parental functioning. Children who are temperamentally fussy and difficult can undermine parenting abilities (Belsky, 1984). We hypothesized that mothers who regarded their infants as temperamentally easy would have more positive parenting behavior.

We then examined the impact of the adolescent's relationship with her mother on the adolescent's parenting skill and ability, above and beyond the effects of maternal maturity and self-esteem and infant temperament. Because the adolescent mothers in this study were new mothers who were living with the baby's grandmother during the child's infancy, we expected a positive relation between the adolescent-grandmother relationship and adolescent parenting behavior. Specifically, we hypothesized that adolescent mothers who had better relationships with their own mothers shortly after delivery would have more positive parenting behaviors after 6 months than adolescent mothers with poorer relationships with their mothers.

Finally, infant temperament was examined as a moderator of the relation between the adolescent mother-grandmother relationship and adolescent parenting. This hypothesis is an extension of Crockenberg's (1981) finding that the relationship between social support and infants' attachment to their mothers varied according to the infants' temperament. Social support had a stronger effect on security of attachment in the context of irritable babies, such that when infants were temperamentally difficult, mothers who felt unsupported were more likely to have insecurely attached infants than mothers who felt supported. Similar moderating effects were expected in this study in the prediction of adolescent parenting.

Method

Participants

The participants included 181 adolescent mothers enrolled in a longitudinal randomized controlled trial of home intervention designed to promote parenting and adolescent development among low-income families. Because national policies require that eligibility for public services be restricted to adolescent mothers who are in the guardianship of an adult (U.S. House of Representatives, 1996), many adolescent mothers live with their mothers. Thus, we limited our sample to adolescent mothers who were living with their mother (grandmother of the baby). Eligibility for mothers included age less than 18 years at delivery, first-time delivery, African American ethnicity, low income (defined as eligible for WIC: family income under 185% of poverty level), and no chronic illnesses that would interfere with parenting or adolescent development. Eligibility for infants included full-term (≥37 weeks), birthweight appropriate for gestational age, and no congenital problems or chronic illnesses. None of the infants experienced complications following delivery that required neonatal intensive care services.

Procedures

Mothers were recruited from three urban hospitals in Baltimore. They were approached shortly after delivery and given a brochure explaining the longitudinal study, including the evaluation schedule and the randomization procedure used to determine intervention/control group assignment. Those who expressed interest in enrolling in the study were scheduled to receive a baseline home evaluation within three weeks. Over 83% of the eligible mothers agreed to participate and completed the baseline evaluation. The adolescent mothers and the baby's grandmother were each paid $25 at the baseline and 6-month evaluations. There were no differences in maternal age or education between those who completed the baseline evaluation and those who did not.

At the baseline evaluation, all mothers and grandmothers completed consent forms approved by the institutional review boards of the participating insti-

tutions. In keeping with the parenting theory guiding the research, the baseline evaluation included standardized questionnaires on family demographics, personal health and mental health, mother-grandmother relationships, access to services, and early adjustment to parenting. Mothers completed the questionnaires on a laptop computer in which questions were presented aurally through headphones and visually on the screen, and responses were recorded with a mouse. Mothers and grandmothers were videotaped as they completed two tasks together. In the first task, they sorted cards with descriptions of caregiving activities into piles depending on who assumed responsibility for them. In the second task, they discussed a recent conflict and how they reached resolution. The camera was positioned so both participants were in view, but an operator was not present.

At the conclusion of the baseline evaluation, mothers were randomized into either an intervention group or a control group. For families in the intervention group, home visits were scheduled every other week after the baseline assessment, beginning when the infants were 4 to 6 weeks old. The visits continued until the infants were 12 months old.

When the infants were 6 months old, the evaluation team returned to the homes to repeat many of the measures administered during the baseline interview. In addition, a videotape was made of the mother playing with the infant. The camera was positioned so the mother and infant were visible, but the operator did not remain in the room. The evaluation team was not aware of the participants' group assignments.

Complete data were available from 148 mothers (82% of the sample). The remaining mothers were not compliant with the 6-month follow-up evaluation. There were no differences in maternal age, maternal education, infant birthweight, infant gender, or intervention status between families who were included in this phase of the study and families who were not.

Measures

Outcome Variables. Adolescent parenting was measured when the infants were 6 months old by a self-report measure of parenting satisfaction and by an observational scale of parent-child interaction during play to reflect parental nurturance. The two variables were not significantly correlated ($r = .093$, $p = .26$), which justified using them as separate outcomes rather than as a composite variable.

The Parenting Sense of Competence Scale (Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989) was used to assess parenting. This 17-item scale consists of two empirically derived subscales, Parenting Satisfaction (nine items) and Parenting Efficacy (eight items). The subscales were not significantly correlated ($r = .13$, $p = .13$) for our sample, which justified using them as independent subscales rather than as a full scale. Each item is answered on a 6-point scale ranging from strongly disagree (6) to strongly agree (1). Items were reverse scored so that higher scores indicated greater parenting satisfaction and efficacy. The subscale of parenting satisfaction was used in our study and was created by summing and averaging nine items that reflected the degree to which the parent felt comfortable, relaxed, and highly motivated in the parenting role. The internal consistency of the parenting satisfaction scale for our sample was alpha = .75. Correlations among and within scales for our sample were similar to those reported by Johnston and Mash (1989).

A modified version of the Parent Child Early Relational Assessment (Black, Hutcheson, Dubowitz, Starr, & Berenson-Howard, 1996; Clark, 1985) was used to measure parental nurturance based on videotaped observations of mothers playing with their infants. Black et al. (1996) assessed the psychometric properties of this scale for use with low-income African American samples, and this modified version was used in this study. Parental nurturance was organized on a theoretical basis and included four items (social initiative, involvement with child, cheerful mood, child-oriented language) and ranged from minimal (1) to optimal (5) nurturance. The videotapes were scored by two raters who were unaware of the family's history. Raters were trained until they reached > 90% agreement. Interrater reliability was reviewed through weekly checks. The internal consistency for parental nurturance was alpha = .80.

Predictor Variables. The predictor variables included maternal characteristics, infant temperament, and the supportive quality of the mother-grandmother relationship. All of the variables were measured at baseline, except infant temperament, which was measured when the infants were 6 months old. We chose to measure infant temperament at 6 months because at baseline the infants' temperamental characteristics may not have stabilized.

Maternal characteristics included demographic characteristics, such as age and grade level, as well as self-esteem. Age and grade level served as proxies for maturity.

Maternal self-esteem was measured by the Rosen-

berg Self Esteem Scale (Rosenberg, 1965). It is a 10-item questionnaire that uses a Likert scale, ranging from 1 (strongly agree) to 4 (strongly disagree); high scores represent higher self-esteem. This scale was developed for use with adolescents. Validity studies conducted with independent groups of adolescents indicated high internal consistency (αs = .77 and .88) and test-retest reliability over 1- and 2-week intervals (r = .82 and .85, respectively) (Blascovich & Tomaka, 1991). Additionally, the scale showed good convergent validity with other measures of self-esteem, for example, with self-confidence (r = .65), general self-regard (r = .78), and the Lerner Self-Esteem Scale (r = .72) (Blascovich & Tomaka, 1991). The internal consistency of the scale for our sample (α = .83) was comparable to those of the validity studies.

Infant characteristics were represented by infant temperament, measured by the Fussy-Difficult factor of the Infant Characteristics Questionnaire (ICQ), standardized for 6-month-old infants (Bates, Freeland, & Lounsbury, 1979). This factor is the most commonly used factor of the ICQ due to its strong psychometric properties. Validity studies indicated good internal consistency (α = .79) and test-retest reliability over 2- to 10-day intervals (r = .70) (Bates et al., 1979). This 6-item scale uses a 7-point Likert scale in which high scores represent more temperamental difficulties. The mean, standard deviation, and internal consistency of the scale (α = .75) for our sample were similar to values for the original sample of Bates et al. (1979).

The supportive quality of the mother-grandmother relationship was measured by both observational and self-report scales. The Scale of Intergenerational Relationship Quality (SIRQ) is a global observational coding system developed to assess the quality of the mother-grandmother relationship based on the videotaped interaction of the two (for details, see Wakschlag, Chase-Lansdale, & Brooks-Gunn, 1991, 1996). Each adolescent and grandmother were asked to independently choose topics on which they disagreed and to spend 10–15 minutes discussing and resolving them. The SIRQ was developed to provide a valid and reliable way of capturing meaningful dimensions of interaction among low-income, ethnic minority mothers and grandmothers. It was standardized among African American families in Baltimore. A member of Wakschlag's team trained the coders and established reliability with them for this study. Reliability was maintained through weekly reliability checks. Four factors were extracted including emotional closeness (connectedness), positive affect (upbeat tone), grandmother directness (demandingness and clarity), and individuation (balance of autonomy and mutuality). The internal consistencies of the factors among our sample were .78, .68, .85, and .74, respectively. The correlation among factors ranged from .20 (p < .05) to .70 (p < .01). The pattern of relations among factors was similar to those reported by Wakschlag et al. (1996).

The Network of Relationship Inventory (NRI; Furman & Buhrmester, 1985) is a self-report measure of the adolescent mothers' perceptions of supportive and negative interactions with their mothers. The adapted version of the NRI consists of 24 items measured on a 5-point Likert scale, with responses ranging from 1 (little or none) to 5 (the most). The measure consists of eight three-item scales that load on two factors: (1) support (affection, admiration, reliable alliance, intimacy, companionship, and instrumental help) and (2) negative interactions (conflict and antagonism). Cronbach's alphas of the factors on our sample were .82 and .88, respectively. The correlation between factors was r = –.24 (p < .01).

Data Analysis

The hypotheses were evaluated by multiple regression analyses using ordinary least squares. There were two outcome variables representing adolescent parenting when the infants were six months old: parent satisfaction and parental nurturance. For the first hypothesis, we examined the effects of maternal characteristics (maturity and self-esteem) on parenting. For the second hypothesis, we examined the effect of infant characteristics (infant temperament) on parenting. For the third hypothesis, we examined whether the mother-grandmother relationship, measured both by self-report and videotaped interaction, improved the prediction. For the final hypothesis, we examined whether the link between the mother-grandmother relationship and adolescent parenting was moderated by infant temperament.

For the regression analysis involving each dependent variable, we entered intervention status as a covariate on step 1. We controlled for intervention status by defining a dummy variable for all regression analyses (0 = control and 1 = intervention). Maternal maturity was entered on step 2. Since maternal age and grade level were highly correlated (r = .63, p < .001), we entered grade level as a proxy for maturity. Maternal self-esteem was entered on step 3. Infant temperament was entered on step 4. The quality of the adolescent mother-grandmother relationship, measured by adolescent report (two factors from NRI) and observations of mother-grandmother inter-

Table I. Baseline Sample Characteristics ($N = 148$)

	M	*SD*	(Min, Max)
Demographics			
WIC (%)	96.6%		
Grandmother's age	38.6	4.8	30.1, 54.3
Maternal age	16.3	1.0	13.5, 17.9
Maternal education	10.2	1.1	7, 12
Maternal self-esteem	15.5	4.4	10, 26
Child characteristics			
Child gender (% male)	51%		
Infant temperament z-score	.02	0.9	–2.0, 2.9
Mother-grandmother relationship			
Social support (NRI)	3.6	0.7	1.6, 5
Negative interchange (NRI)	1.8	0.7	1, 4.8
Emotional closeness (SIRQ)	23.0	4.5	3, 35
Positive affect (SIRQ)	13.3	2.7	3, 19
Grandmother directiveness (SIRQ)	7.8	2.5	3, 15
Individuation (SIRQ)	7.5	2.4	3, 14
Parenting measures			
Parental nurturance	2.9	0.7	1.3, 4.8
Parent satisfaction	4.0	0.8	1.6, 5.9

action (four factors from SIRQ), was entered on step 5 in a stepwise fashion. In the final step, the six interaction terms (between infant temperament and the six measures of adolescent mother-grandmother relationship) were forwarded after ensuring a saturated model. Significant interaction terms were plotted using procedures recommended by Cohen and Cohen (1983) to compare differences in the relation between infant temperament and adolescent mother-grandmother relationship in the prediction of parenting.

Results

Sample characteristics are displayed in Table I. The age of the adolescent mothers ranged from 13.5 to 17.9 years, with a mean of 16.3 years ($SD = 1.0$). None of the mothers was married, 97% received public assistance, and their grade levels ranged from 7th to 12th grade, with a mean of 10.2 ($SD = 1.1$).

Parenting Outcomes

For the first hypothesis, we examined whether adolescent maturity and self-esteem were related to adolescent parenting. Grade level was related to both parenting satisfaction and parental nurturance. Mothers who had completed more schooling were more likely to report higher levels of parenting satisfaction and were more nurturant caregivers in play interactions with their children (see Tables II and III). Self-esteem was related only to parenting satisfaction, such that mothers with higher levels of self-esteem at baseline felt more satisfied as parents at 6 months.

For the second hypothesis, we examined whether infant characteristics were related to parenting. Specifically, we examined whether mothers who reported that their infants were temperamentally easy to care for had better parenting skills. There were no direct associations between infant temperament and parenting.

For the third hypothesis, we examined how the

Table II. Summary of Multiple Hierarchical Regression Analyses Predicting Parent Satisfaction at 6 Months

Variables	B[a]	*SE*	β[a]	R^2	R^2_Δ
Step 1				.02	.02
Intervention status	.24	.14	.14		
Step 2				.07*	.05*
Grade level	.17	.06	.22*		
Step 3				.13**	.06*
Maternal self-esteem	.46	.15	.24*		
Step 4				.13**	.00
Infant temperament	.01	.08	.01		
Step 5				.15**	.02
Grandmother directiveness	–.05	.03	–.13		
Step 6[b]				.20**	.05*
Grandmother directiveness × infant temperament	.09	.03	.75*		

[a]Regression weights at entry into the model.
[b]Only the significant interactions were included in the final model.
*$p < .01$.
**$p < .001$.

Table III. Summary of Multiple Hierarchical Regression Analyses Predicting Parental Nurturance at 6 Months

Variables	B[a]	*SE*	β[a]	R^2	R^2_Δ
Step 1				.02	.02
Intervention status	.18	.12	.13		
Step 2				.06*	.04*
Grade level	.13	.05	.20*		
Step 3				.08**	.02
Maternal self-esteem	–.25	.13	–.15		
Step 4				.08*	.00
Infant temperament	.004	.07	.01		
Step 5				.16***	.08***
Individuation	.09	.02	.29***		
Step 6				.19***	.03*
Positive affect	.05	.02	.18*		

There were no significant interactions in the final model.
[a] Regression weights at entry into the model.
*$p < .05$.
**$p < .01$.
***$p < .001$.

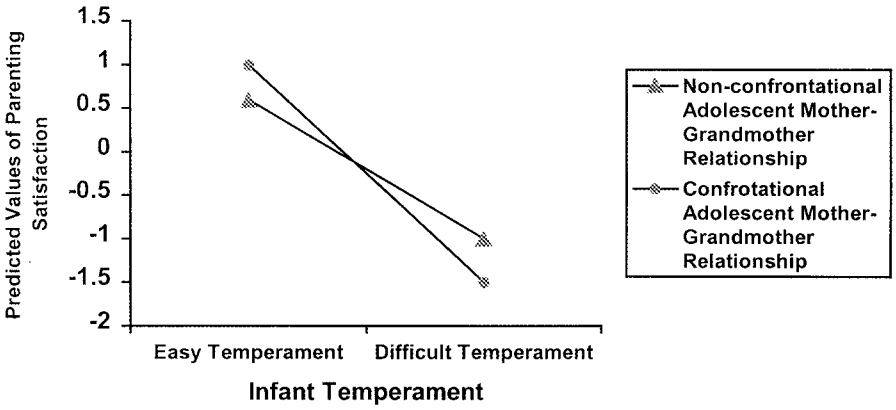

Figure 1. Interaction between grandmother directiveness and infant temperament in the prediction of parent satisfaction.

mother-grandmother relationship shortly after delivery was related to adolescent parenting at 6 months, over and above the effects of maternal maturity, maternal self-esteem, and infant temperament. Two aspects of the mother-grandmother relationship measured with the SIRQ—namely, individuation and positive affect—were related to parental nurturance. Mothers who displayed a more balanced, autonomous relationship and were positive and animated in interactions with their mothers during the baseline videotaped observation were more nurturant with their infants during a play observation at six months (see Table III). Neither factor from the NRI predicted parental nurturance. None of the variables from the SIRQ or NRI measuring the adolescent mother-grandmother relationship was related to parenting satisfaction at 6 months.

In the final hypothesis, we examined whether the association between the mother-grandmother relationship and adolescent parenting was moderated by infant temperament. When parenting satisfaction was examined as an index of adolescent parenting, there was a significant interaction between infant temperament and the grandmother directiveness subscale of the SIRQ. The relation between infant temperament and parenting satisfaction varied by the quality of grandmother directiveness. Among adolescent mothers who had a confrontational relationship with their own mothers, parenting satisfaction was closely tied to infant temperament, such that mothers of infants with difficult temperaments reported low levels of satisfaction. Among adolescent mothers who had nonconfrontational relationships with their own mothers, the association between infant temperament and parenting satisfaction was less strong (see Figure 1). None of the other interactions was significant.

Discussion

Findings demonstrated that adolescent mothers' personal characteristics and positive, supportive relationships with their mothers were resiliency factors that enabled adolescents to be nurturant and satisfied mothers to their own children, supporting Nath et al.'s (1991) model of parenting. First, adolescent mothers who were more mature and had positive self-esteem reported being more satisfied in the parenting role. More mature mothers also demonstrated greater behavioral competence in play interactions with their infants since they were more nurturant than were less mature mothers. Consistent with Hurlbut and McDonald's (1997) findings, adolescent mothers who were more mature were better prepared for the transition to parenting compared with less mature mothers.

Second, the quality of the adolescent mother-grandmother relationship measured shortly after the child's birth predicted positive parenting over and above maternal maturity and self-esteem. Adolescents who had relationships with their mothers characterized by autonomy, mutuality, and the ability to deal with conflict nondefensively (individuation), and whose interactions with their mothers were positive and animated (positive affect) soon after the baby was born, exhibited more nurturant behavior with their own children 6 months after the child's birth. This longitudinal finding may suggest an intergenerational transmission of parenting. However, this study focused on the supportive quality of the teenage mother-grandmother relationship, rather than on grandmothers' parenting styles. Additional studies would need to examine the grandmother's parenting style with her children to see if she and her daughter use similar styles of parenting.

Findings were similar to those of Wakschlag et al. (1996), who found that high adolescent individuation was associated with more competent parenting and less problem parenting in a structured parent-toddler play interaction. Of the four SIRQ factors, Wakschlag et al. found that individuation was the only independent predictor of parenting behavior in their cross-sectional study. We confirmed and extended their study by examining relations longitudinally and found that both individuation and positive affect measured shortly after birth predicted nurturant parenting behavior 6 months later.

Neither of the subscales of relationship quality measured by adolescent report shortly after the child's birth predicted parenting at 6 months. The lack of findings between adolescent report of relationship quality and parenting outcomes may be because the adolescent's parenting role and the grandmother's role are still evolving shortly after the child's birth so that parenting satisfaction at 6 months is not affected by their early relationship. If this is the case, it provides an ideal opportunity for intervening in the lives of adolescents and grandmothers while roles are evolving to help them develop positive, supportive relationships that can help foster positive parenting.

Support from the family of origin and from peers is particularly important in the context of adolescent parenting, since these support figures tend to be more consistently available than the baby's father. Not only are marital rates low among adolescent parents but marriages among adolescents are less stable than adult marriages. African American adolescents report that support from their mother is the most important source of support during their transition to parenthood (Nitz, Ketterlinus, & Brandt, 1995). As evidenced by this study, positive, supportive, mutual relationships with their mothers that emphasized adolescent autonomy, mutuality, and positive affect helped these adolescents to be nurturing parents with their own infants. This was consistent with Nath et al.'s (1991) conceptual model of adolescent parenting, in which social support systems play a central role in predicting parenting outcomes among adolescent parents.

Although infant temperament was expected to predict parenting when measured concurrently at 6 months, no such relations were found. Thus, adolescent mothers do not appear to modify their parenting based on their child's temperamental characteristics. It may be that adolescent parents possess specific beliefs and strategies for parenting their infants and do not deviate from their approaches, regardless of how their infants behave. An alternate explanation for lack of relations between infant temperament and parenting may be that adolescent mothers are poor reporters of their child's temperament. This explanation seems unlikely, however, since the internal consistency and variability in temperament ratings made by the adolescents were consistent with those reported in the ICQ manual (Bates et al., 1979). Another explanation may be that adolescent mothers attend to infant temperament only in certain contexts. The significant interaction between infant temperament and grandmother directiveness in predicting parenting satisfaction lends support to this view. Infant temperament was an important predictor of adolescent parenting satisfaction in the context of a confrontational mother-grandmother relationship. Adolescent mothers who have a confrontational relationship with their mothers may experience limited support in their parenting role and therefore may be particularly dependent on their infants' temperaments as a marker of their parenting satisfaction. Thus, their satisfaction may be threatened when they see their infant as temperamentally difficult. By contrast, adolescent mothers who have a less confrontational relationship may experience more support from their mothers in their parenting role; therefore, their parenting satisfaction may be less dependent on their infants' temperaments. Similarly, Crockenberg (1981) found that mothers with difficult infants and low support were more likely to have insecurely attached infants than mothers with difficult infants who had high support.

Another alternate explanation is that adolescents who had relationships with the baby's grandmother that were characterized by grandmother demandingness and high confrontation may be more depressed than mothers with more positive relationships with the baby's grandmother. If this is the case, these mothers may view their infants as more difficult and report less parenting satisfaction. In fact, several studies have found that mothers who are depressed tend to view their children as more temperamentally difficult than do nondepressed mothers (Beck, 1996; Cutrona & Troutman, 1986; Ventura & Stevenson, 1986; Whiffen & Gotlib, 1989).

Resiliency Among African American Adolescent Mothers

Adolescent parents represent a group at risk for problems in parenting because of the multiple challenges and demands they face in negotiating both adoles-

cent and parental roles simultaneously. Resiliency factors offer protection from negative outcomes despite the existence of risk factors. In early resiliency research, the search was for general, broadly applicable factors that could protect individuals in all contexts. More recently, however, resiliency factors have been conceptualized as more context dependent, emphasizing the need to identify specific, rather than global, resiliency factors that protect individuals faced with specific risks in specific life contexts (Grossman et al., 1992). In the context of three-generation, adolescent African American parent families, maternal maturity, maternal self-esteem, and mother-grandmother relationships characterized by autonomy, mutuality, and positive affect served as important resiliency factors protecting adolescents from poor and inadequate parenting outcomes during the infancy period. The ability to be part of a positive reciprocal relationship with their mothers enabled the adolescents to develop nurturing relationships with their own infants.

Recommendations

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (U.S. House of Representatives, 1996) requires that adolescent mothers live with a guardian to receive financial assistance. As seen in this study, adolescents who had positive, mutual relationships with their mothers exhibited better relationships with their own children. Since the majority of African American adolescent mothers live with their own mothers after the child's birth, interventions designed to promote positive parenting should include the goal of enhancing adolescent mother-grandmother relationships. One means of enhancing this relationship is to help adolescents and their mothers develop effective strategies for communicating openly and effectively, in a nonconfrontational manner, to reduce conflict that may develop when both share responsibility for child rearing. For example, we found that an intervention that included adolescent mother-grandmother negotiating skills, along with strategies to interpret infants' cues, was effective in promoting adherence to the feeding guidelines recommended by the American Academy of Pediatrics (delaying the onset of complementary feeding until infants are 4–6 months old) (Black, Siegel, Abel, & Bentley, 2001). Additionally, interventions should provide adolescents with opportunities to develop positive self-esteem since positive self-esteem was associated with better parenting outcomes in this study.

As with most investigations that use self-report, our data on infant temperament and parenting satisfaction may reflect inaccuracies based on the mothers' ability and willingness to report. We attempted to minimize this problem by including observations of mother-grandmother relationships and maternal parenting style. Much more work is needed to understand the parenting behavior of adolescent mothers, so we can develop intervention programs to promote their development and to prevent behavioral and developmental problems among their children.

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