Antecedents and concomitants of parenting stress in adolescent mothers in foster care

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Abstract

Objective: This study’s aim was to examine variables associated with different short-term trajectories in multiply disadvantaged adolescent mothers by investigating antecedents and concomitants of parenting stress.

Method: We followed 49 adolescent mothers (ages 14–18 at study outset) who were wards in Illinois foster care using a longitudinal correlational design. We examined whether parenting variables (childrearing beliefs, quality of parent-child interactions, and child abuse risk) and personal adjustment variables (emotional distress and social support) at initial assessment predicted parenting stress measured at follow-up (a mean of 22.5 months later). We also examined concurrent relationships between parenting stress and mothers’ adaptive functioning in educational, social support, and childbirth areas at follow-up.

Results: We found that parenting variables, but not personal adjustment variables, predicted later parenting stress. Results also showed that current adaptive functioning was significantly related to parenting stress. Specifically, educational status and social support predicted concurrent parenting stress, whereas number of childbirths did not.

Conclusions: These findings extend the small literature on the link between parenting difficulties and parenting stress to adolescent mothers in foster care. Parenting challenges, particularly as reflected in unrealistic childrearing expectations, appear to be markers for later parenting stress. Considering the longitudinal relationships observed, early and periodic assessment of adolescent mothers’ parenting knowledge, skills, and interactions is recommended. Also, given that this study found concurrent social support and educational status to covary with...
current parental stress, these variables, and others for which they may serve as proxy, are implicated for careful monitoring. © 2006 Elsevier Ltd. All rights reserved.

Keywords: Adolescent mothers; Parenting stress; Psychosocial functioning; Longitudinal study; Foster care

Adolescent motherhood has long been recognized as a societal concern (Alan Guttmacher Institute, 1994), due to the risks and disadvantages associated with early parenthood. Research reviews (e.g., Borkowski et al., 2002; Brooks-Gunn & Chase-Lansdale, 1995; Coley & Chase-Lansdale, 1998; Furstenberg, Brooks-Gunn, & Chase-Lansdale, 1989; Hayes, 1987; Hechtman, 1989; Rosenheim & Testa, 1992) indicate that adolescent mothers tend to have lower educational achievement, less stable job skills, poorer social and emotional adjustment, greater welfare use, higher rates of poverty, and slightly higher levels of health problems after childbearing than do adolescent peers who postpone childrearing. Adolescent mothers also have been found to be less prepared and effective as caregivers than are older mothers. For example, adolescent mothers have unrealistic expectations of children's development (Field, 1981; Karraker & Evans, 1996; Reis, 1989; Tamis-Lemonda, Shannon, & Spellmann, 2002), are less verbal, sensitive, and responsive in interactions with children (Culp, Culp, Osofsky, & Osofsky, 1991; McAnarney, Lawrence, Riccuiti, Polley, & Szilagyi, 1986; Panzarine, 1988), provide less stimulating home environments (Laster & Dubow, 1990), and experience greater parenting stress (Sommer et al., 1993) than older mothers. The risks of negative outcomes appear to extend to the children as well, particularly to children's cognitive and language functioning as they reach school years (e.g., Brooks-Gunn & Furstenberg, 1986; Keown, Woodward, & Field, 2001).

The current study concerns a group of adolescent mothers who, by virtue of their life circumstances and background, are at elevated risk of difficulties in both personal adjustment and parenting: These young mothers are wards of the state and reside in foster care due to abuse or neglect in their families of origin. The term foster care, as it is used here, includes a variety of out-of-home placements, such as relative or nonrelative homes, group homes, supervised living arrangements, and residential facilities. Although the prevalence of parenthood among adolescents in foster care is difficult to ascertain, research indicates that youth in foster care are at high risk of unintended pregnancy (Child Welfare League of America, 1997). Polit, Morton, and White (1989) reported that young women (aged 13–18) in foster care were twice as likely as their demographically matched peers not in care to have had sexual intercourse and to have been pregnant. These authors also found that the teenagers living in foster homes were nearly 2 years younger at their first intercourse than their matched comparison peers (12.4 vs. 14.1 years) and were less likely to have used birth control at their most recent intercourse (44% vs. 66%). A study of over 700 youth transitioning out of foster care in Illinois, Iowa, and Wisconsin found that 32% of the females and 14% of the males reported having at least one child by age 19, and nearly one-half of the girls had been pregnant by age 19 (Courtney et al., 2005).

Foster care was established to provide a “safety net” for youth in need of care; however, the experience of foster care can compound the problems that brought youth into care, leaving them at risk of educational failure, emotional disturbance, unemployment, and other negative outcomes (Courtney et al., 2005; National Research Council, 1993a). Many youth are unprepared to make the transition out of foster care to productive, independent adulthood (Barth, 1990; Cook, 1994). Studies report adverse outcomes for adolescents who are wards over those who are not wards (Oz & Fine, 1988; Yancey, 1992). Girls with a
history of foster care have been shown to be more likely to become adolescent mothers than those without foster care experience (Oz & Fine, 1988; Quinton, Rutter, & Liddle, 1985; Wolkind, 1977). Young mothers with prior experience in foster care are more likely than young mothers without this experience to demonstrate serious parenting problems (Quinton et al., 1985). In addition, adolescent girls in foster care who become parents have been shown to have worse educational and employment outcomes than other adolescent girls in foster care who do not become parents (Cook, 1994).

Considering the combined vulnerabilities of early childbearing, a history of child abuse or neglect, and foster care experience itself, adolescent mothers in foster care are a high-risk group. In one of few studies of personal and parenting functioning in this population, Budd, Heilman, and Kane (2000) examined psychosocial correlates of child maltreatment risk in 75 adolescent mothers in foster care. They found that the mothers as a group evidenced multiple disadvantages in psychosocial functioning; however, individual adolescents displayed different levels of psychosocial functioning corresponding to different levels of child maltreatment risk. Other research with adolescent mothers (e.g., Haskett, Johnson, & Miller, 1994; McCullough & Scherman, 1998; Nitz, Ketterlinus, & Brandt 1995) confirms that, notwithstanding the prevalence of risk factors, adolescent mothers display wide diversity in functioning and outcomes.

In light of the individual variation among adolescent mothers, it is important to determine whether specific factors are associated with differential outcomes for mothers and their children over time. In their research review, Furstenberg et al. (1989) reported that adolescent mothers who avoided repeat childbirths as teens, completed high school, and entered into stable marriages were, by young adulthood, “indistinguishable” from their counterparts who were not adolescent parents. Coley and Chase-Lansdale’s (1998) review cited being at grade level when one became pregnant, coming from a smaller family not on public assistance, and having high expectations from both one’s family and oneself were all predictors of long-term success in young mothers. Although these reviews point to potentially relevant variables, the dearth of longitudinal research on adolescent mothers leaves many questions about variables that may account for differential outcomes. In addition, neither of these reviews focused specifically on adolescent mothers with a history of multiple disadvantages, such as those in foster care.

The present study was designed to examine variables associated with different short-term trajectories for multiply disadvantaged adolescent mothers by investigating antecedents and concomitants of parenting stress. Parenting stress, which Deater-Deckard (1998) defined as an aversive psychological reaction to the demands of being a parent, has been linked empirically to less adequate parenting and, in turn, to child adjustment problems (cf Deater-Deckard, 1998). Further, parenting stress is hypothesized as a central variable in several integrative models of child abuse and neglect (e.g., Belsky, 1984; Haskett, Smith Scott, Grant, Sabourin Ward, & Robinson, 2003; Milner, 1993; Wolfe, 1988). Abusive and high-risk parents have been shown to experience higher levels of parenting stress than nonabusive parents or those at low risk for abuse (Crouch & Behl, 2001; Rodriguez & Green, 1997; Whipple & Webster-Stratton, 1991). Considering that parenting stress has been identified as a marker variable for parenting difficulties, we examined the extent to which parenting stress in disadvantaged adolescent mothers related to other key indicators of teen mothers’ functioning.

Specifically, we tested two hypotheses: (a) that parenting variables (childrearing beliefs, quality of parent-child interactions, and child abuse risk) and personal adjustment variables (emotional distress and social support), which have been identified as risk indicators in the child maltreatment literature (e.g., Milner, 1994; National Research Council, 1993b), would predict later parenting stress, and (b) that current adaptive teen functioning (as measured by the domains of educational, childbirth, and social support status) would relate to current parenting stress. That is, we hypothesized that adolescent mothers
with more unrealistic attitudes about children’s abilities, lower quality of interactions with their child, and higher child abuse risk at initial assessment would report greater stress in the parenting role when assessed nearly 2 years later. Similarly, we hypothesized that mothers with higher educational achievement, fewer subsequent childbirths, and greater social support would report lower concurrent parenting stress. This study did not test a specific theoretical model of parenting stress, but rather we examined potentially relevant predictor variables based on availability of the data. By examining antecedents and concomitants of parenting stress, we sought to understand the factors associated with risk of child abuse in disadvantaged young mothers, which, in turn, could inform intervention efforts to prevent child abuse.

Method

Participants

The participants were 49 young women from among a total of 75 participants in an earlier study of psychosocial functioning of adolescent mothers in foster care (Budd et al., 2000). The mothers resided in Cook County, IL, which covers much of the metropolitan area of Chicago. Because no list of adolescent wards who were pregnant or had given birth existed, random selection of participants was not possible. Instead, participants were recruited through flyers, letters, face-to-face contacts, and telephone calls to caseworkers and private agency providers serving pregnant and parenting adolescent wards. To be eligible, wards needed to be under age 19 and have at least one child between 2 and 20 months of age living with the mother. At the time of the initial study (Time 1), the mothers were between 14 and 18 years ($M = 17.00, SD = 1.12$), and their children were between 2 and 20 months ($M = 8.17, SD = 4.97$).

At Time 2 (mean of 22.5 months later), the mothers ranged in age from 16 to 20 years ($M = 18.86, SD = 1.14$). As displayed in Table 1, the mothers were predominantly African-American. A minority had completed high school or obtained a Graduate Equivalency Degree (GED), some were still in high school, and nearly one-third had dropped out of school. Data are missing on a few cases in which school status was unclear, as when the mother was waiting to hear if she had passed the GED exam. Most mothers were still wards of the state. In Illinois, youth in foster care who are pregnant or parenting, or have special needs, are eligible for services until age 21 (Illinois Department of Children and Family Services, 1996).

As Table 1 shows, the mothers resided in several types of placements, most often supervised apartments or foster homes. All but one of the mothers in “other” placements (e.g., private apartment) were no longer wards. Most mothers had one or more children in their care, and 39% cared for 2 or more children. In most cases in which the mother had no children in her care, the children had been removed due to indicated abuse or neglect; however, in one case the mother voluntarily relinquished custody to a relative. Since Time 1, 59% of the mothers had given birth to one or more subsequent children or were currently pregnant.

Recruitment procedures

Beginning 18 months after Time 1, we recontacted all mothers and invited them to participate in a follow-up study (Time 2). The study had been reviewed and approved by the DePaul University Institutional Review Board and by the Illinois Department of Children and Family Services. We used information from case files, child welfare caseworkers, private agency staff, public aid records, and collateral sources
Table 1
Demographic characteristics of participants at Time 2 (N = 49)

<table>
<thead>
<tr>
<th>Variable</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>86</td>
</tr>
<tr>
<td>Latina</td>
<td>4</td>
</tr>
<tr>
<td>Mixed</td>
<td>10</td>
</tr>
<tr>
<td>Educational status</td>
<td></td>
</tr>
<tr>
<td>Graduated high school or GED</td>
<td>20</td>
</tr>
<tr>
<td>In high school</td>
<td>41</td>
</tr>
<tr>
<td>Dropped out of high school</td>
<td>31</td>
</tr>
<tr>
<td>Unknown</td>
<td>8</td>
</tr>
<tr>
<td>DCFS status</td>
<td></td>
</tr>
<tr>
<td>Ward</td>
<td>88</td>
</tr>
<tr>
<td>Emancipated or case closed</td>
<td>12</td>
</tr>
<tr>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td>Supervised apartment</td>
<td>39</td>
</tr>
<tr>
<td>Non-relative foster home</td>
<td>25</td>
</tr>
<tr>
<td>Residential or group home</td>
<td>12</td>
</tr>
<tr>
<td>Relative foster home</td>
<td>4</td>
</tr>
<tr>
<td>Emergency shelter</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
</tr>
<tr>
<td>Number of children in care</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Number of births (or current pregnancy) since Time 1</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>41</td>
</tr>
<tr>
<td>1</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

to determine the whereabouts of the mothers. We sent them a letter describing the study, followed by telephone calls to the mothers and their caseworkers. Those who chose to participate in a follow-up interview completed a written informed consent form and received $15 as remuneration. Due to frequent changes in mothers’ placements, program providers, and caseworkers, tracking the adolescents entailed numerous attempts over several months. Of the 75 mothers, 49 (65%) agreed to participate at Time 2, 5 declined, and the remaining 21 either could not be located or did not return calls, despite repeated efforts to contact them. The interval between Time 1 and Time 2 data collection ranged from 18 to 28 months (M = 22.5 months).

Assessment procedures and measures

Time 1. We assessed mothers’ psychosocial functioning in several areas via interview, standardized questionnaires, and observation of mother-child interactions. Female graduate students in clinical psychology
conducted assessments with the mothers and their children during two home visits of 1 to 2 hours each. Evaluators administered all measures orally to control for differences in mothers’ reading proficiency. We collected background information via a demographics questionnaire and clinical interview. Five measures relevant to this study are described below; more detail is provided in Budd et al. (2000).

Parent Opinion Questionnaire (POQ) (Azar, Robinson, Helimian, & Twentyman, 1984). An 80-item, forced-choice, agree-disagree measure of unrealistic parental expectations regarding appropriate child behavior. Azar and co-workers (Azar et al., 1984; Azar & Rohrbeck, 1986) found significantly higher total POQ scores indicating more unrealistic expectations in maltreating (mean of 16.44–17.10) than nonmaltreating (mean of 5.64–8.90) parents. Clinical cut-offs for the POQ have not been established; however, Azar (1987) views total POQ scores above 13 as clinically significant. Azar (1989) used the POQ with adolescent mothers and found support for the cognitive conceptual assumptions underlying the instrument. Test-retest reliability of the POQ was .85 over a 12-month period (Azar & Rohrbeck, 1986). Psychometric research by Hamilton and Orme (1990) supported the construct validity of the POQ as a measure of parenting knowledge; however, Haskett, Smith Scott, Willoughby, Ahern, and Nears (2006) reported mixed findings on the construct and criterion validity of the measure, with more positive findings for the total score than for the subscales.

Home Observation for the Measurement of the Environment (HOME) Inventory (Caldwell & Bradley, 1984). A combination observation and interview procedure that assesses the quality and quantity of social, emotional, and cognitive support available to a young child in the home. The infant version (0–36 months of age) contains 45 items scored in a yes-no format. Based on normative data with a racially mixed sample, scores are classified into the lowest quartile, middle one-half, and highest quartile. Caldwell and Bradley (1984) report that scores in the lowest quartile (i.e., a total score of 25 or less) are associated with greater at-risk status. Extensive research on the HOME Inventory (Bradley, 1993; Bradley & Caldwell, 1981; Caldwell & Bradley, 1984), including some with adolescent mothers (e.g., Luster & Rhoades, 1989; Wasserman, Brunelli, & Raah, 1990), supports its test-retest reliability, criterion validity, and usefulness in assessing the quality of young children’s home environments.

Child Abuse Potential (CAP) Inventory (Milner, 1986). A 160-item, forced-choice, agree-disagree questionnaire to screen characteristics and attitudes associated with physical child abuse. The CAP Inventory is a widely used risk assessment tool that correlates positively with self-reported history of maltreatment (Miller, Handal, Gilner, & Cross, 1991), high levels of personal distress (Haskett, Smith Scott, & Fann, 1995; Milner, Charlesworth, Gold, Gold, & Friesen, 1988), and an authoritarian parenting style as observed in direct parent-child interactions (Haskett et al., 1995). The measure yields a primary clinical scale, the 77-item abuse scale, in which an elevated score (at or above 215) indicates that the respondent has characteristics similar to known, active physical child abusers, as distinguished from a valid, normal abuse scale score. Validity scales are used to produce three response distortion indexes (faking good, faking bad, and random response) indicating that the profile is invalid (due to intentional responding to appear socially desirable or socially undesirable, or due to inconsistent responding, respectively). Generally, invalid profiles cannot be interpreted; however, Milner (1986) advises that, if both the faking good index and the abuse score are elevated, then the abuse score may still be used, based on an assumption
that the abuse score might have been even higher if the examinee were not attempting to respond to items in a socially desirable manner. We followed Milner's (1986) recommendation by classifying respondents as elevated when both the elevated and faking good scales were above clinical cut-offs. Considerable psychometric research supports the measure's reliability (internal consistency and test-retest) as well as its concurrent and criterion validity (Milner, 1986, 1990, 1994). However, Blinn-Pike and Mingus (2000) reported somewhat lower internal consistency reliabilities on the CAP abuse scale (65) and subscales (59–74) in their study with adolescent mothers.

**Symptom Checklist 90-Revised (SCL-90-R)** (Derogatis, 1983). A 90-item, self-report inventory designed to reflect emotional distress and psychological symptom patterns. Respondents rate whether or not they have experienced each of the symptoms (e.g., hunger, dizziness, mood shifts) within the past week on a 5-point scale from "not at all" (0) to "extremely" (4). The SCL-90-R yields a Global Severity Index (GSI) composite score that reflects both the number of symptoms and the magnitude of perceived disturbance. Nonpatient adolescent female norms were used to derive GSI T-scores. GSI T-scores of 63 or above indicate clinically significant distress (Derogatis, 1983). The SCL-90-R has been used with normative and high-risk parents in studies of child maltreatment risk (e.g., Ammerman & Patz, 1996; Haskett et al., 1995). Derogatis (1983) reported strong internal consistency coefficients and test-retest reliability for the measure.

**Arizona Social Support Interview Schedule (ASSIS)** (Barrera, 1981). A structured instrument for assessing the quantity and quality of an individual's social contacts in various functional areas over the past month. We used a slightly modified version of the ASSIS (cf Mitchell, 1989), which asks the respondent to list persons who provided support in each of four functional areas (positive feedback, material aid, private feelings, and social participation), as well as persons who were sources of interpersonal conflict. Respondents also rate their satisfaction with the support received in each of the four functional areas on a 3-point scale (“1” indicates desire for a lot more support, “2” indicates desire for a little more support, and “3” indicates that the amount received is about right). We derived two summary measures of social support: total positive support (the total number of people listed in one or more of the three categories of positive feedback, material aid, and private feelings) and support satisfaction (the mean rating of satisfaction with support received across the same three areas). We omitted the area of social participation from our calculation of social support, based on research with African-American adolescent mothers indicating that social activity with friends does not lead to more positive emotional adjustment (Thompson & Peebles-Wilkins, 1992). Barrera (1981) initially used the ASSIS with pregnant adolescents and found adequate reliability on most indices, with somewhat lower reliability on the support satisfaction index. Using the ASSIS with teenage mothers, Nitz et al. (1995) found that teens who identified more individuals as a source of conflict had less positive parenting behaviors. No norms or clinical cut-offs have been developed for the ASSIS; rather, it is used to provide descriptive and comparative information on social support.

**Time 2.** At follow-up, we obtained information on mothers’ functioning through structured telephone interviews by female clinical psychology graduate students lasting 45–60 minutes. To avoid possible biasing effects of prior contact with participants, different interviewers were used at Time 1 and Time 2. Although in-person interviews would have been optimal, Lyon (1989) gives many advantages to the use
of telephone interviews in community research. He reports that telephone interviews are equally reliable, less costly, and often less threatening than face-to-face interviews. According to Judd, Smith, and Kidder (1991), telephone interviews permit a high response rate, on average just five percentage points lower than personal interviews; however, telephone interviews impose some limits on the types of questions asked and preclude the use of visual aids.

In order to reduce the disadvantages associated with telephone interviews, we took several steps. To refine the interview process, we conducted a pilot study with six teen mothers who were not participants in the study, and we made minor changes to the wording of certain interview questions based on the pilot study. To maximize the likelihood that mothers without telephones would participate, we offered them the option of completing the interview in person or at a location where they could call us or be called at a specific time.

Two research assistants collaborated in 19 (39%) interviews in order to control for standardization of administration and check the accuracy of information obtained. Interviewers introduced themselves at the beginning of the phone call; one research assistant took primary responsibility for interviewing while the other mainly listened on a connecting line, and both independently recorded responses on a standardized interview form. Interrater agreement was calculated by comparing, question by question, the responses of interviewers from eight randomly selected interviews. Interrater reliability on interviews ranged from 95 to 100%, indicating high agreement. As one measure of the validity of the interview, interviewers rated their confidence in the information obtained. At the end of the interview, the interviewer rated how accurate she believed the information to be on a 5-point scale, based on the teen’s consistency and style of responding across the interview. Of the 41 interviews on which interviewers completed this rating, 68% of interviewers rated the information as “very accurate,” 27% as “somewhat accurate,” 2% as “couldn’t tell,” 2% as “somewhat inaccurate,” and 0% as “very inaccurate.”

An additional check on the veracity of the Time 2 data involved comparing the mothers’ responses during the interview to independent information on selected items obtained from telephone interviews with the caseworker, which we conducted for other research purposes within a few weeks of the interview with the mother. We found that caseworkers and mothers agreed 95% of the time on the number of childbirths since Time 1, 93% of the time on whether or not the mother had been pregnant since Time 1, and 95% of the time on the mother’s educational status at Time 2. Based on these findings, we determined that the interviews were credible enough to include in the study, and we retained all interviews from Time 2.

The measures relevant to this study administered at Time 2 were as follows:

Structured Client Interview. A format developed by the authors for inquiring about a wide range of topics, including questions about the teen’s living arrangements, health care, educational and vocational status, pregnancies and childbirths, parenting practices, and the availability and use of child welfare services.

Parenting Stress Index-Short Form (PSI-SF) (Abidin, 1995). A 36-item measure of stress associated with parenting, developed through factor analysis from the longer and well-researched Parenting Stress Index (Abidin, 1995). Respondents indicate their level of agreement on a 5-point scale from “strongly agree” to “strongly disagree.” The PSI-SF yields a total stress composite and subscale scores on three general areas related to parenting stress. Items that constitute the parental distress subscale relate to depression, social isolation, restriction of role, and relationship with mate. Items on the parent-child dysfunctional interaction subscale relate to parental attachment, acceptability of the child’s behavior, and the degree to which the parent-child interaction results in a positive emotional response for the parent. Items relating
to the difficult child subscale include the child’s adaptability to situations, demandingness, mood, and level of distractibility and activity. Individuals who score at or above the 90th percentile, which is a raw score above 90 on the total stress score, are considered to have clinically significant levels of parenting stress. Test-retest reliability of the PSI-SF over a 6-month interval is .84 for the total score and .68–.85 for the three subscales (Abidin, 1995). A few studies (e.g., Felix, Kelly, Poindexter, & Budd, 2003; Hutcheson & Black, 1996; Sommer et al., 1993) have used the PSI or PSI-SF with adolescent mothers. Although norms have not been developed specific to adolescents and/or minority populations, Hutcheson and Black (1996) found that the PSI is a psychometrically strong measure of parenting stress for low-income, urban African-American mothers of young children. Additionally, Reitman, Currier, and Stickle (2002) reported high internal consistencies for the total scale (.95) and the three subscales (.88–.89) of the PSI-SF with a low-income, predominantly minority population of mothers of Head Start children.

Arizona Social Support Interview Schedule (ASSIS) (Barrera, 1981). A structured instrument, also administered at Time 1, for assessing the quantity and quality of an individual’s social contacts in various functional areas over the past month. Except for the fact that it was administered by telephone rather than in person, the format was the same as at Time 1 for items relevant to this study.

Data analysis

Data were entered into SPSS and rechecked for accuracy prior to descriptive and statistical analyses. T tests were used to compare participants and nonparticipants at follow-up from the original sample. Pearson correlations were computed to examine relationships among variables, and multiple regression analysis was used to test hypothesized relationships.

Results

To examine the representativeness of our follow-up sample, we compared participants (n=49) to nonparticipants (n=26) at Time 2 from the original group of 75 mothers on key demographic (e.g., age, number of children), parenting (childrearing beliefs, quality of parent-child interactions, and child abuse risk), and personal adjustment (emotional distress and social support) variables at Time 1. No significant differences emerged, except on GSI T-scores, t(73)=2.37, p<.05, which were higher for the participants. However, the mean GSI T-score for both groups was well within the normal range.

Descriptive findings

Adolescent functioning at Time 1 for follow-up participants is displayed in Table 2. As a group, the mothers evidenced several disadvantages in parenting functioning, as indicated by high mean levels of unrealistic parenting beliefs (POQ) and child abuse risk (CAP Inventory), and correspondingly low scores on quality of parent-child interactions (HOME Inventory). Forty-five percent of mothers had elevated scores (above 13) on the POQ; 67% had elevated Abuse scale scores on the CAP Inventory (83% of the 40 mothers with valid CAP scores); and 22% were in the bottom quartile on the HOME Inventory. By contrast, mean GSI T-scores (on the SCL-90-R) for the mothers were in the normal range, with only 10% of the mothers reporting clinically elevated levels of emotional distress. The mean number of persons
Table 2
Parenting and psychosocial functioning at Time 1 (N=49)

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrealistic parenting beliefs (POQ total score)</td>
<td>13.61</td>
<td>8.42</td>
<td>2–39</td>
</tr>
<tr>
<td>Child abuse risk (CAP abuse score)</td>
<td>268.85</td>
<td>84.74</td>
<td>60–403</td>
</tr>
<tr>
<td>Quality of infant stimulation (HOME total score)</td>
<td>29.22</td>
<td>5.19</td>
<td>10–40</td>
</tr>
<tr>
<td>Emotional distress (SCL-90-R GSI T-score)</td>
<td>51.69</td>
<td>9.77</td>
<td>29–76</td>
</tr>
<tr>
<td>Social support (ASSIS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total positive support network</td>
<td>4.82</td>
<td>2.36</td>
<td>1–11</td>
</tr>
<tr>
<td>Support satisfaction</td>
<td>2.56</td>
<td>0.43</td>
<td>1–3</td>
</tr>
</tbody>
</table>

* N=40 (includes only participants with valid CAP Inventory profiles).

b N=48.

in mothers’ positive support network (ASSIS) was relatively small (cf Barrera, 1981; Mitchell, 1989); however, mothers reported being relatively well satisfied with their support networks.

Table 3 displays mothers’ functioning at Time 2. The mean total stress score on the PSI-SF was within the normal range (i.e., ≤90); 35% of mothers reported clinically elevated levels of total stress. Consistent with Time 1, the mean size of mothers’ positive support network was small, yet they reported a relatively high level of satisfaction with the support received.

Longitudinal findings

We tested relationships between parenting and psychosocial variables at Time 1 and parenting stress at Time 2 through two multiple regression analyses. As shown in Table 4, the three parenting variables (childrearing beliefs, child abuse risk, and parent-child interactions) together were significantly associated with later parenting stress and accounted for 28% of the variance (adjusted R² = .22) in total stress. Only the POQ contributed significantly to the model, whereas CAP scores were marginally significant (p = .059).

A regression analysis using mothers’ personal adjustment variables, that is emotional distress and social support (support satisfaction and total positive support network) at Time 1, as predictors of subsequent parenting stress was not significant. Follow-up tests of interaction effects of the predictors on the models were not significant. Intercorrelations among the predictors and parenting stress are displayed in Table 5.

Table 3
Parenting and psychosocial functioning at Time 2 (N=49)

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenting stress (PSI-SF)</td>
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</tr>
<tr>
<td>Total stress</td>
<td>84.29</td>
<td>21.32</td>
<td>45–135</td>
</tr>
<tr>
<td>Parental distress</td>
<td>30.95</td>
<td>9.32</td>
<td>15–55</td>
</tr>
<tr>
<td>Parent-child dysfunctional interaction</td>
<td>22.81</td>
<td>7.74</td>
<td>12–45</td>
</tr>
<tr>
<td>Difficult child</td>
<td>30.53</td>
<td>7.19</td>
<td>14–47</td>
</tr>
<tr>
<td>Social support (ASSIS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total positive support network</td>
<td>3.06</td>
<td>1.82</td>
<td>0–8</td>
</tr>
<tr>
<td>Support satisfaction</td>
<td>2.50</td>
<td>0.56</td>
<td>1–3</td>
</tr>
</tbody>
</table>

* N=48.

Table 4
Summary of simultaneous regression analysis for parenting variables predicting later parenting stress (N=40)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrealistic parenting beliefs (POQ total score)</td>
<td>.79</td>
<td>.38</td>
<td>.31*</td>
</tr>
<tr>
<td>Child abuse risk (CAP abuse score)</td>
<td>7.45E-02</td>
<td>.04</td>
<td>.31</td>
</tr>
<tr>
<td>Quality of infant stimulation (HOME total score)</td>
<td>-.30</td>
<td>.68</td>
<td>-.07</td>
</tr>
<tr>
<td>(Constant)</td>
<td>63.98</td>
<td>26.10</td>
<td></td>
</tr>
</tbody>
</table>

Note. Only subjects with valid CAP Inventory profiles included. R² = .28, adjusted R² = .22, F(3,39) = 4.733 (p < .01).  
* p < .05.

To determine whether the observed relationship between parenting variables at Time 1 and parenting stress at Time 2 could be explained by other variables, we computed correlations between various demographic (mother’s age at assessment, age at birth of first child, number of children, number of pregnancies) and psychosocial (academic achievement in reading and arithmetic) indices at Time 1 and parenting stress at Time 2. The only significant relationship (r = -.31, p < .05) was between mothers’ arithmetic achievement on the Wide Range Achievement Test-Revised (Jastak & Wilkinson, 1984) and total parenting stress, indicating that mothers with higher arithmetic achievement had lower parenting stress.

Concurrent findings

We examined the concurrent relationship between mothers’ adaptive functioning in educational, social support, and childbirth domains at Time 2 and parenting stress using a multiple regression analysis. We included educational status (2 = graduated high school or obtained GED, 1 = still in high school, and 0 = dropped out of high school), support satisfaction on the ASSIS, and number of childbirths (or current pregnancy) since Time 1 as predictor variables. As shown in Table 6, this model accounted for 43% of the variance (adjusted R² = .39) in total stress on the PSI-SF. Both educational status and social support were significant predictors of parenting stress.

Table 5
Correlation matrix of predictor variables at Time 1 and parenting stress at Time 2 (N=49)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3a</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PSI-SF total stress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. POQ total score</td>
<td>.416*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. CAP abuse score</td>
<td>.438**</td>
<td>.321*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HOME total score</td>
<td>-.196</td>
<td>-.274</td>
<td>-.394*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. SCL-90-R GSI T</td>
<td>.193</td>
<td>.130</td>
<td>.368*</td>
<td>-.029</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ASSIS total positive support network</td>
<td>-.179</td>
<td>.065</td>
<td>-.421**</td>
<td>.010</td>
<td>.047</td>
<td></td>
</tr>
<tr>
<td>7. ASSIS support satisfaction</td>
<td>-.267</td>
<td>-.385**</td>
<td>-.411**</td>
<td>.172</td>
<td>-.227</td>
<td>-.113</td>
</tr>
</tbody>
</table>

* N=40 (includes only participants with valid CAP Inventory profiles).

a N=48.
* p < .05.
** p < .01.
*** p < .005.
Table 6
Summary of simultaneous regression analysis for educational, social support, and childbirth variables at Time 2 predicting parenting stress (N=44)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational status</td>
<td>−13.50</td>
<td>4.04</td>
<td>−.49***</td>
</tr>
<tr>
<td>Social support (ASSIS support satisfaction)</td>
<td>−15.45</td>
<td>4.40</td>
<td>−.42***</td>
</tr>
<tr>
<td>Subsequent childbirths (number since Time 1)</td>
<td>−89</td>
<td>5.20</td>
<td>−.25</td>
</tr>
</tbody>
</table>

(Constant) 133.86 12.41

Note. $R^2 = .43$, adjusted $R^2 = .39$, $F(3,43) = 10.11$ ($p < .001$).

*** $p < .005$.

Table 7
Correlation matrix of predictor variables at Time 2 and parenting stress at Time 2 (N=49)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2*</th>
<th>3*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PSI-SF total stress</td>
<td></td>
<td>- .528****</td>
<td></td>
</tr>
<tr>
<td>2. Educational status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ASSIS support satisfaction</td>
<td></td>
<td>- .472*** 0.075</td>
<td></td>
</tr>
<tr>
<td>4. Subsequent childbirths (number since Time 1)</td>
<td>0.206</td>
<td>- .524***</td>
<td>- .085</td>
</tr>
</tbody>
</table>

* N = 45.
* b N = 48.
*** p < .005.
**** p < .001.

support satisfaction were strongly related to parenting stress, whereas number of childbirths did not contribute significantly, and no interaction effects among the predictors were observed. Nevertheless, the intercorrelation matrix of predictors and parenting stress, displayed in Table 7, shows a strong negative relationship between educational status and subsequent childbirths. Supplemental analyses showed that parenting stress at Time 2 was not related to the mothers’ age at Time 2 or to the total number of children then in the mothers’ care.

Discussion

This research examined patterns of parenting and psychosocial functioning of adolescent mothers in foster care. We found evidence for both continuity and discontinuity in mother’s functioning over time, in that initial levels of parenting variables, but not personal adjustment variables, predicted later parenting stress. This research also investigated concurrent relationships between mothers’ educational achievement, social support satisfaction, and number of subsequent childbirths and parenting stress at follow-up. The results indicated that educational and social support variables, but not childbirth status, predicted current parenting stress. Overall, the mothers in this sample reported high levels of parenting stress, with 35% of their scores exceeding the cut-off for clinically significant distress. In light of the hypothesized connection between parenting stress and child abuse and neglect (e.g., Belsky, 1984; Haskett
et al., 2003; Milner, 1993; Wolfe, 1988), the findings are pertinent in suggesting variables that may place mothers at higher risk of child maltreatment.

The current research adds to a small empirical literature (e.g., Crouch & Behl, 2001; Deater-Deckard, 1998; Rodriguez & Green, 1997; Whipple & Webster-Stratton, 1991) demonstrating a link between parenting difficulties and perceived parenting stress. The present research extends prior findings by focusing on the population of adolescent mothers in foster care and by employing a longitudinal design. Of the three parenting variables (unrealistic expectations for children, elevated child abuse risk potential, and low quality of parent-child interactions) that together predicted later parenting stress, only unrealistic expectations contributed significantly to the model, although child abuse potential contributed marginally. These findings suggest that a poor understanding of normative child development is related to mothers' vulnerability to parenting stress. Although the current study design does not permit causal conclusions, the results did rule out several demographic variables (e.g., maternal age, age at first childbirth, number of children, and number of pregnancies) as explanations for the relationship between parenting variables and parenting stress.

Whereas parenting variables were associated with parenting stress nearly 2 years later, personal adjustment variables (i.e., global emotional distress and social support) at initial assessment were not. One explanation for the failure to find this hypothesized relationship is that adolescents' emotional adjustment and social support are open to change over time, such that they may not predict later functioning. Alternatively, perhaps an adolescent mother's psychological reaction to the demands of being a parent is influenced largely by factors other than global emotional adjustment and social support. However, when measured concurrently, support satisfaction was strongly related to parenting stress, as was educational status. Borkowski et al. (2002) have proposed that the developmental period of adolescence is characterized by greater "oscillations" in functioning than is typical of adulthood. According to these authors, rapid variations in a teen's social support, stress, or other aspects of functioning, which are characteristic of adolescence, have a direct effect on parenting patterns. Such a view, if confirmed by further research, could help to explain the impact of early parenting on mother and child adjustment.

It is important to acknowledge this study’s limitations, including nonrandom subject selection, small sample size, lack of a normative comparison group of mothers, use of predominantly self-report measures, and lack of measures of infant adjustment. The small sample size \((n = 40 \text{ and } 44)\) for the regression analyses reduced power to detect significant differences. According to Cohen (1992), a sample size of 76 is required to detect a medium effect at the .05 level in a regression analysis with three predictor variables. The lack of power may explain the failure to find some hypothesized relationships. Further, the validity of most of the instruments has not been established with adolescent mothers, so findings are subject to possible population and method biases. Small sample size and relatively untested measures also precluded our examination of subscales on the instruments that might have elucidated relationships between the predictors and parenting stress.

Despite the above limitations, this study contributes new information on the course of parenting and psychosocial functioning in adolescent mothers in foster care—a high-risk group about which little is known. The findings are consistent with one conclusion of both Furstenberg et al. (1989) and Coley and Chase-Lansdale’s (1998) reviews of research on factors associated with differential outcomes for adolescent mothers. These reviewers found that educational achievement, represented by completing high school or being at grade level when one became pregnant, was predictive of long-term success in adolescent mothers. The current research found that higher educational status, as well as social support satisfaction, was predictive of lower concurrent parenting stress. However, whereas Furstenberg et al.
(1989) found that mothers with fewer repeat childbirths had more favorable outcomes, the present study showed no relationship between subsequent childbirths and parenting stress, although it did find a negative correlation at follow-up between subsequent childbirths and educational status. The discrepant findings could relate to the differing timeframes of the studies, the small current sample size, differing outcome variables, or other factors. Most importantly, this research reveals continuity over time between measures of parenting risk and later parenting stress in multiply disadvantaged adolescent mothers.

Three implications flow from the findings. First, and most important, considering the longitudinal relationship between parenting variables and parenting stress, early and periodic assessment of adolescent mothers’ parenting beliefs, childrearing skills, and interactions with their children is important to identify particularly at-risk teens (cf Budd, 2004). Parenting difficulties, particularly as reflected in unrealistic childrearing expectations, appear to be markers for later parenting stress. Additionally, it is important to monitor young mothers’ adaptive skills and adjustment, as reflected in variables such as progress toward completing high school and satisfaction with their social support network. Not only are these variables indicative of teens’ personal development, but in the current study they were inversely associated with current parenting stress.

Second, the findings suggest that global emotional distress is not necessarily predictive of parenting-specific distress, at least when examined in a longitudinal design. Methodological research is needed on measures of general and parenting-specific distress with adolescent mothers, in order to clarify the relationship between these variables.

Third, considering that many adolescent mothers in the current sample displayed parenting difficulties at initial assessment, comprehensive intervention programs often will be needed to assist adolescent mothers in developing appropriate parenting skills and expectations of their children’s development, while at the same time helping them to negotiate their own development as adolescents (cf Stockman & Budd, 1997). The current research did not assess interventions offered to the mothers between Time 1 and Time 2, so the impact of interventions on mothers’ functioning at Time 2 is unknown. Given that educational status and support satisfaction predicted lower parenting stress at follow-up, it may be that educational achievement and social networks served as protective strategies against parenting stress. However, it is also possible that educational achievement and social networks are proxy variables for other factors, such as stability of placements or access to interventions, which serve to protect youth mothers against parenting stress. Research reviews (Budd, Stockman, & Miller, 1998; Chase-Lansdale, Brooks-Gunn, & Paikoff, 1992) of interventions for adolescent mothers have found that, while positive impacts are hard to achieve, teens who participate more actively in services show greater benefits.

In conclusion, this study found that parenting challenges, particularly as reflected in unrealistic childrearing expectations, appear to be markers for later parenting stress in adolescent mothers in foster care. Concurrent social support and educational status covaried with mothers’ current parental stress. These findings underscore the need for continued monitoring and support to prepare adolescent mothers for independence and parenthood in spite of the challenges.

Acknowledgement

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References


**Objectif** : Le but de cette étude fut d’examiner les variables qui accompagnent divers trajectoires à court terme chez des mères adolescentes désavantagées à plusieurs niveaux, en observant les facteurs antécédents et concomitants du stress qu’elles éprouvent en tant que parents.

**Méthode** : Au moyen d’un design longitudinal capable de mesurer des corrélations, nous avons suivi 49 mères adolescentes (âgées de 14 à 18 ans au début de l’étude) qui étaient à la charge de la tutelle publique et qui vivaient en foyer d’accueil dans l’État de l’Illinois. Nous avons cherché à connaître si des variables reliées à leur tâche de parent (leurs croyances sur l’éducation, la qualité des interactions parent-enfant et le risque de maltraitance) et les variables touchant leur ajustement personnel (la détresse émotionnelle et les appuis sociaux) étaient capables de prédire – au début de l’étude – le stress parental qu’on allait mesurer 22,5 mois plus tard. Nous avons également observé les relations entre le stress des mères et leur fonctionnement au niveau de leur scolarité, leurs appuis sociaux et les facteurs relatifs à l’accouchement.

**Résultats** : Nous avons constaté que les variables concernant leur rôle parental, mais non celles touchant leur ajustement personnel, ont pu prédire le stress parental éventuel. Les résultats ont aussi démontré que leur fonctionnement courant était considérablement relié au stress parental. Plus précisément, la scolarité et les appuis sociaux prédisent le stress actuel tandis que le nombre d’accouchements ne joue aucun rôle.

**Conclusions** : Ces constats ajoutent à la littérature minime sur les liens entre les difficultés et le stress en tant que parents que vivent des mères adolescentes en foyer d’accueil. Les défis qu’ils envisagent ces parents, surtout en ce qui touche leurs attentes irréalistes devant la tâche d’élever leurs enfants, sont des signes avant-coureurs du stress parental qu’elles connaîtront. Pour ce qui est des relations longitudinales observées, nous recommandons que des évaluations sur les connaissances des mères vis-à-vis de l’éducation de leur enfant, sur leurs compétences et sur leurs interactions soient menées tôt et de façon intermittente. De plus, étant donné que cette étude a constaté un lien entre une part des appuis sociaux et la scolarité, et le stress parental actuel, ces variables et d’autres qui sont apparentées, devraient faire l’objet d’un suivi attentif chez ces mères.