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Family Economic Stress, Quality of Paternal Relationship, and Depressive Symptoms Among African American Adolescent Fathers

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Abstract This study examined the association between perceived family economic stress, quality of father–son relationships, and depressive symptoms among African American adolescent fathers. Data were collected during pregnancy from 65 African American adolescents who were first-time fathers, ages 14–19. Results from multiple regression analyses indicated that higher paternal relationship satisfaction was associated with fewer depressive symptoms among adolescent fathers. Additionally, depressive symptoms were higher among adolescent fathers who reported experiencing higher levels of conflict with their fathers. Further, paternal conflict moderated the effect of perceived family economic stress on depressive symptoms. That is, among adolescent fathers experiencing low levels of conflict with their fathers, high perceived family economic stress was associated with more depressive symptoms. Study findings suggest that the risk for depressive symptoms is highest among adolescent fathers experiencing low family economic stress and highly conflictual relations with their fathers. These results highlight the complexities of paternal relationships and perceived economic stressors on depressive symptoms during pregnancy for African American adolescent fathers. The importance of expanding research on influential familial relationships and economic stressors on adolescent African American fathers is discussed.

Keywords Adolescent fathers · Depressive symptoms · Paternal relations · Conflict · Economic stress

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Introduction

The transition to fatherhood represents a major off-time developmental transition for adolescents that can be particularly stressful. Despite emerging interest, research examining the psychological well-being of adolescents confronting fatherhood still lags far behind the extensive studies characterizing the adolescent mothers' experiences (e.g. Buckingham-Howes et al. 2011; Davis 2002; Miller-Loncar et al. 1998; Zayas et al. 2002). Extant literature on adolescent fathers has focused primarily on social support and fulfillment of parenting behaviors related to adolescent mothers and their children, including involvement, child support, and financial assistance (Fagan et al. 2007; Gee and Rhodes 2003; Saleh and Hilton 2011). A small but growing body of work has investigated parental influences on African American adolescent fathers' parenting behaviors (Dallas and Chen 1998; Fagan et al. 2007), yet familial influences specifically during the transition to fatherhood are still not well understood. Attention has also been drawn to the adverse effects of economic hardship for adolescent fathers, detailing the importance of understanding how inadequate economic resources impact the adolescent's transition to fatherhood and the fathering behaviors adopted (Anderson et al. 2005; Nelson 2004). Accordingly, research is needed that further explores how African American adolescent fathers' well-being is influenced by

familial and economic factors as they emerge into their parental role.

Adolescent males are often ill-prepared for the responsibilities associated with fatherhood (Dellmann-Jenkins et al. 1993). Developmental characteristics of adolescence, such as insufficient coping skills, lack of emotional control, and the challenges of forming an identity, often compromise the adolescent male's ability to effectively deal with the stressors of parenthood (Lee et al. 2012). In a qualitative study exploring the experiences of low-income adolescent fathers, Glikman (2004) found that adolescent couples had difficulties maintaining supportive co-parenting relationships, in part because of their lack of interpersonal skills. Investigations of fatherhood at different life stages have provided strong evidence that compared to older fathers, adolescent fathers are more susceptible to parenting stress due to lower educational attainment, greater rates of unemployment, less competence in the parenting role, and relationship instability with the mother of their child (Fagan et al. 2003; Glikman 2004; Quinlivan and Condon 2005).

Cultural perceptions of fatherhood may be an additional source of strain among young fathers compared to adult fathers. In a qualitative study of African American adolescent fathers, Paschal (2006) found that most adolescents conceptualized the father role as providing financial contributions to their child. However, many fathers believed they lacked the financial resources needed to fulfill their father role due to insufficient income from part-time jobs, assistance from their mother, or illegal activities. This is in contrast to adult non-resident African American fathers who primarily defined fatherhood not as being a financial provider, but spending time with and providing emotional support to their children (Hamer 2001). Therefore, discrepancies in how fatherhood is conceptualized and the ability to meet these roles can serve as another avenue of stress among young fathers. Accumulation of these stressors is a significant cause for concern as adolescent fathers, compared to adult fathers, may be more likely to withdraw from parenting when stressors associated with the parenting role are too great (Herzog et al. 2007). This may partially explain why younger fathers tend to become less involved with their children over time (Marsiglio et al. 2000).

African American adolescent fathers are especially vulnerable to economic stressors because they are more likely than other ethnic groups to live in low-income, high-risk communities (Lindsey et al. 2006). Additionally, they must cope with the current manifestations of racism that translate into limited employment prospects (Settersten and Cancel-Tirado 2010) and disproportionate economic stress (Miller-Loncar et al. 1998). Not only is economic stress detrimental to adolescent fathers' psychosocial well-being, but it can also impede fulfillment of parenting roles. A national longitudinal study examining relationships of unmarried couples found that the negative influence of parenting stress on father engagement and co-parental relationship supportiveness was moderated by economic hardship (Bronte-Tinkew et al. 2010). That is, there were more negative effects found between paternal aggravation/stress in parenting and father engagement and coparenting among fathers in households with income below the poverty line. Other researchers have noted that stress from economic hardship contributed to a lack of parental support, increased conflict with children (Barrera et al. 2002), and had adverse effects on child development by increasing poor parenting behaviors (Conger et al. 1992).

The socio-economic life stressors that African Americans encounter place them at heightened risk for poor psychological well-being. While there is a dearth of research investigating depressive symptomatology among African American adolescent fathers in particular, available studies suggest significantly more teenage fathers experience depressive symptoms than older fathers (Lee et al. 2012; Quinlivan and Condon 2005). Although not all African American adolescents with depressive symptoms will meet clinical criteria for Major Depressive Disorder, those who do face a disproportionate burden related to the clinical course, treatment, and sequelae of their illness. For instance, depressed African Americans are more likely to be persistently ill and suffer from severe functional impairment compared to Whites (Breslau et al. 2005; Williams et al. 2007). Remarkably, Merikangas et al. (2010) reported that African American adolescents with depressive disorders were 87 % less likely than their European American counterparts to have ever received care. Moreover, those who obtain care are at greater risk to receive inadequate treatment (Alegría et al. 2008) and to discontinue services prematurely (Fortuna et al. 2010). Some of the major contributors to these disparities include: communication problems between the physician and patient, lack of culturally tailored interventions (Bailey et al. 2011; Breland-Noble et al. 2006; Das et al. (2006); lower acceptability of anti-depressant medication by patients and greater preference for counseling and prayer as mental health treatment (Givens et al. 2007); and stigma associated with seeking mental health treatment services (Breland-Noble et al. 2011). Overall, these findings highlight the need to better understand the factors that contribute to depressive symptoms among African Americans in order to prevent progression to Major Depressive Disorder and its associated complications.

The adverse consequences caused by the stress of adolescent fatherhood and economic hardship can be alleviated by positive relationships with important members of the adolescent father's social network. Investigators have

reported that while relationships with romantic partners and extra-familial sources emerge as significant predictors of emotional adjustment during early adulthood (Meeus et al. 2007), interactions with parents maintain substantial influence in adolescence (Kim et al. 2001; Parker and Benson 2004). In this regard, supportive parental relations remain vital to adolescent fathers' achievement of healthy psychological functioning. Research by Williams et al. (2012) indicated that prenatal support from their mothers was predictive of lower levels of postpartum depressive symptoms among adolescent fathers, regardless of their prenatal stress levels. In addition to influencing adolescents' mental health outcomes, parental social support also has implications for promoting positive parenting behaviors among adolescents. The quality of relationship between the adolescent mother and her mother has been shown to predict the adolescent mother's amount of parenting nurturance towards her child (Sellers et al. 2011). Similarly for adolescent fathers, Fagan et al. (2007) reported parental social support to be associated with higher levels of paternal involvement with children, possibly through family members actively encouraging the adolescent father to accept his parenting role and engage with his child. Therefore, an examination of adolescent fathers' relationships with their parents is essential to understanding their mental health functioning.

Compared to the literature on African American adolescent fathers' relationship with their mother, their interactions with their father have been critically understudied. Literature that does exist on father–son relationships has focused exclusively on adolescents who have not reached fatherhood. However, these studies demonstrate that having a positive relationship with their father can promote beneficial outcomes for the adolescent. A study exploring the relationship between African American adolescent male psychosocial outcomes and family structure reported emotional support received from fathers was associated with higher self-esteem and life satisfaction, and lower levels of depression among sons (Zimmerman et al. 1995). Moreover, boys in the study who received no paternal emotional support tended to report greater marijuana use, problems at school, and delinquency behaviors.

More recent work built upon this foundational study and revealed increases in African American adolescent well-being that are associated with having a positive father–son relationship (Bryant and Zimmerman 2003). A study conducted by Hurd et al. (2009) indicated that the majority of adolescents rated their father as their role model. These adolescents also reported fewer externalizing and internalizing behavioral problems compared to adolescents without paternal role models. Other studies have specifically highlighted the high degree of closeness among African American non-resident fathers and their sons (King et al. 2004; Thomas et al. 2008; Salem et al. 1998). Altogether, these findings reflect the considerable value that many African American adolescent males place on their relationships with their fathers, even when their fathers do not share the same residence.

Researchers have incorporated many conceptual frameworks to give perspective to adolescents' relationships with their parents, such as attachment theory (Parker and Benson 2004), the determinants of parenting model (Buckingham-Howes et al. 2011), and the parental apprentice model (Sellers et al. 2011). Each framework has its advantage, yet the Convoy Model of Social Support (Antonucci 1986) uses a unique developmental approach to describe the social convoy as a protective network of support that changes in structure as the person develops throughout life. Closest network members remain essential during stressful major life events, like adolescent child rearing. Application of the Convoy Models mapping procedure found that young African Americans tend to have a greater proportion of kin in their networks, have smaller networks, and reported more contact with their social networks, compared to their White counterparts (Ajrouch et al. 2001). This provides evidence that familial relationships are in an especially unique position to influence psychological outcomes among African American adolescents.

The Convoy Model posits that social network relationships can provide comfort, information, and guidance, but at the same time these relationships can also be sources of significant negative interactions. Consistent with this view are the findings that while supportive parental interactions may have protective qualities, adverse family relationships place adolescents at increased risk for depressive symptomatology (Lincoln and Chae 2012). Barber and Delfabbro (2000) reported that when fathers had a higher level of conflict with their adolescent children, the adolescents were more likely to have poor psychological adjustment. Together, this empirical evidence suggests that adolescent fathers' psychological well-being is, in part, shaped by their positive and negative interactions with their parents.

The goal of the current study is to understand the relationship with their father and family economic stress on depressive symptoms among first-time African American adolescent fathers during the prenatal period. This time period was chosen as previous studies on fatherhood have found that peak distress levels occur during the third trimester of pregnancy for first-time fathers, with slight improvement in the postnatal period (Condon et al. 2004; Schumacher et al. 2008). Sarason et al. (1994) and Cohen (2004) have identified relationship satisfaction as an important aspect of social support when defined as a multidimensional construct. Since most of the literature on adolescent fathers' protective relationships does not distinguish between aspects of social support, we sought to

expand the discourse on social relationships by examining paternal emotional support and relationship satisfaction as key protective factors for depressive symptoms. We also considered conflict with the adolescent's father and perceived family economic stress as risk factors for adolescent fathers' depressive symptoms. This study proposed the following hypotheses: (1) perceived family economic stress will be associated with more depressive symptoms among adolescent fathers, (2) positive quality of relationship (i.e. relationship satisfaction and emotional support) with their father will be associated with fewer depressive symptoms among adolescent fathers, while negative quality of relationship (i.e. conflict) will be associated with more symptoms, (3) quality of the paternal relationship will moderate the association between perceived family economic stress and depressive symptoms. That is, positive quality of relationship will reduce symptoms among adolescent fathers experiencing family economic stress, while negative quality of relationship will increase symptoms among adolescents experiencing family economic stress. Furthermore, adolescent fathers with high levels of positive paternal relationships and low perceived family economic stress will report the fewest depressive symptoms and adolescent fathers with high levels of paternal conflict and high perceived family economic stress will report the most depressive symptoms.

Method

Participants

As part of the Paternity in Early Childbearing Pilot Study, data were collected from 100 multi-generation families with adolescent fathers, 19 years old or younger, and their mothers. Participants were all first-time fathers whose partner was in the third trimester of pregnancy. Recruitment primarily took place at a community-based health clinic in a Midwestern city with the assistance of the clinic nursing staff who provided introductory information about the study to pregnant teens who met study criteria.

Results reported for the current study are restricted to adolescent fathers who had contact with their biological father, or father-figure (n = 66) at the time of the study. One adolescent did not have complete data for key study variables, therefore the final sample contains a total of 65 adolescent fathers with complete data, ages 14–19 years old ($M = 17.33$, $SD = 1.33$). In the city where recruitment took place, 23 % of its families lived below the poverty level compared to 9 % nationwide. There was a 6.8 % unemployment rate and only 69 % of its residents completed high school in 2000. Single-parent households comprised 39.9 % of the family types with six of economic conditions during the time that data collection was completed in 2007.

Twenty-six adolescents (40 %) were raised by their biological fathers, whereas the majority of participants (60 %) were raised by another man who was like a father to them (e.g. step-father, grandfather, uncle, cousin). We use the term "father" in this study to represent the adolescents' biological father or father-figure. The reason for this classification is that the role of fathers in African American families has been demonstrated to be more flexible than among European American cultural groups and can be performed by biological and non-biological fathers alike (Jayakody and Kalil 2002). For example, Letiecq (2010) found that biological and social fathers used similar parenting practices and styles. Additional researchers have supported this finding and reported greater similarities among biological and non-biological father figures than differences (Black et al. 1999; Bzostek 2008). Thus, in accordance with the methods utilized in a growing number of studies (e.g. Bryant and Zimmerman 2003; Jayakody and Kalil 2002; Letiecq 2010; Kim 2010), we include both social and biological fathers in the analyses to more accurately reflect the nature of African American family dynamics.

All participants identified as Black/African American. Table 1 provides descriptive characteristics of the sample. Nearly 80 % of adolescents had not completed high school and 40 % were currently full time students. Forty-four (68 %) adolescent fathers continued to live in the same household as their biological mother, whereas ten (15 %)

Table 1 Demographic characteristics of the sample (N = 65)

Demographic characteristics	n (%)
Age (years)[a]	
14–15	8 (13)
16–17	22 (34)
18–19	34 (53)
Education[a]	
Less than high school	50 (78)
High school graduate	12 (19)
More than high school	2 (3)
Working status	
Working	21 (32)
Temporarily laid off	4 (6)
Unemployed	40 (40)
Main financial provider of household	
Father	6 (9)
Mother	39 (60)
Adolescent father of the baby	2 (3)
Adolescent mother of the baby	2 (3)
Other family member	16 (25)

[a] Sample size varies due to missing data

adolescent fathers reported living with the mother of their baby. All participants currently maintained a relationship with their father, yet only 14 % adolescents reported that their father currently lived in the same household.

Procedure

Based on the Institutional Review Board's approved protocol for the study, we recruited our sample of young fathers at a local health clinic with the assistance of the clinic nursing staff. The clinic nursing staff informed teenage mothers who met study criteria about the study. The research staff confirmed the pregnancy status of the young mother through self-reports using IRB approved screening forms for the study after they had been identified by the nursing staff, expressed interest in being in the study, and had appropriate parental consent. A research staff member was given office space at the clinic to provide detailed written information about the study and consent forms to qualified teenagers to take home if she was interested in participating in the study and/or willing to pass information about the study on to the father of her baby who met study criteria. Follow up phone calls were made to secure permission for all minors to participate in the study. Written consent from parents or legal guardians and assent for minors were obtained at the time of the interview.

A face-to-face interview was conducted by a trained interviewer to collect study data. Data were collected on a number of demographic characteristics, issues related to the pregnancy, individual and intergenerational family contextual factors, and social, psychological, and mental health outcomes. Interviews were completed in 90 min or less and each respondent received $25 for his participation. The interview for the current study took place during the third trimester of pregnancy.

Measures

Depressive Symptomatology

Depressive symptomatology was measured with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff 1977). Participants were asked to report the frequency which depressive symptoms were experienced within the previous week. Sample items on this 20-item scale include "My sleep was restless" and "I felt that I could not shake off the blues even with help from my family or friends." The Likert-type response scale ranged from 0 = rarely to 3 = most or all of the time. Scores of 16 and above are considered high levels of depressive symptoms and scores of 23 and higher are suggestive of the clinical depression range. In adolescent and young adult studies, this scale has been found to have fairly consistent reliability (e.g. Garrison et al. 1991; Radloff 1991; Roberts et al. 1990). Cronbach's alpha for the present study was .80 for adolescent fathers.

Perceived Family Economic Stress

Family economic status was measured by a single item asking how adolescent fathers perceived their family of origin's financial situation today. A Likert-type response scale ranged from 1 = well to do to 5 = very poor, not enough to get by. Higher scores thus reflect perceptions of greater current family economic stress by the adolescent. Similar to several other researchers (e.g. Cheng et al. 2002; Kinnunen and Pulkkinen 1998; Lavee et al. 1996; McLoyd et al. 1994), we used a single-item measure of perceived economic stress to directly assess the reported stress resulting from insufficient economic conditions as uniquely perceived by these adolescent fathers.

A subjective measure of family economic stress was chosen for this study to capture the discrepancy between available and needed financial resources as *experienced* by the adolescent fathers. Objective economic indicators have been suggested to be inadequate in capturing a family's unmet need and explaining how low levels of family economic resources can contribute to adverse outcomes, especially in low-income families (Barrera et al. 2001). Moreover, there is empirical evidence demonstrating that subjective measures of economic stress were associated with the adjustment of economically disadvantaged adolescents (e.g. Coley and Chase-Lansdale 2000; McLoyd et al. 1994; Whitbeck et al. 1997). Relatedly, McLoyd et al. (1994) used a single item to assess adolescent's perceptions of economic hardship by asking how often the adolescent's family had problems paying for basic necessities. Adolescents who perceived their families as experiencing more severe economic hardship reported higher anxiety, more cognitive distress, and lower self-esteem.

Quality of Relationship Measures

Paternal Emotional Support Scale

Seven items assessed the perceived level of emotional support adolescent fathers received from their fathers. These items were adapted from Social Networks in Adult Life Questionnaire (Antonucci and Akiyama 1987) to measure the respondent's closeness with his father, reciprocity in sharing feelings, and ease in sharing problems with his father. Sample items include: "My father is always there when I need him," and "My father and I are much closer than most fathers and sons." The response categories were on a 5-point Likert-type scale (1 = strongly agree,

5 = strongly disagree). Items were reverse coded so that higher scores reflected adolescent fathers' higher perceptions of emotional support from their fathers. The scale had Cronbach's alpha of .96 for this sample.

Paternal Relationship Satisfaction

Adolescent fathers' overall satisfaction with the relationship with their fathers was measured as the sum of two questions: (1) satisfaction with current relationship with adolescent's father, and (2) satisfaction with father's present involvement in adolescent's life. The response scales ranged from 1 = completely dissatisfied to 7 = completely satisfied. Possible scores range from 2 to 14, with higher scores corresponding to greater overall relationship satisfaction. The correlation between the two relationship satisfaction items was .85 ($p < .001$).

Paternal Conflict Scale

Six items were adapted from the Social Networks in Adult Life Questionnaire (Antonucci and Akiyama 1987) to measure the perceived level of conflict adolescent fathers had with their fathers. This scale assessed concepts such as the frequency of disagreement, how tense adolescents felt around their father, and amount of criticism adolescents received from their father. Sample items include the following: "I often fight or argue with my father," and "My father is often critical of me." The response categories were on a 5-point Likert-type scale (1 = strongly agree, 5 = strongly disagree). Items were reverse coded so that higher scores reflected adolescent fathers' higher perceptions of conflict with their fathers. The scale had an acceptable Cronbach's alpha of .78 for this sample.

Data Analyses

All analyses were performed using the Statistical Program for Social Sciences [(SPSS) Chicago, IL], Version 19 for Windows. Demographic characteristics of the sample were examined using univariate analysis. Independent samples *t* tests were used to assess whether there were significant differences among participants included in the study sample and those that were excluded. Pearson's correlations were calculated to determine bivariate associations. Multiple regression models analyzed associations between the independent variables, perceived family economic stress and adolescent's perceptions of conflict and relationship satisfaction and the dependent variable, adolescent depressive symptoms, while controlling for education. Analysis of moderation effects was undertaken by including a two-way interaction term with each paternal relationship variable as potential moderators of perceived family economic stress and the adolescent father's depressive symptoms. All variables involved in the interaction terms were centered and we used methods outlined by Aiken and West (1991) to estimate predicted means when the interaction terms were significant. For the significant interaction, we used a plot to illustrate the simple slope of the outcome variable estimated at selected conditional values (1 SD below and above the mean) of the paternal relationship moderator. In this interaction plot, the perceived family economic stress variable was dichotomized such that adolescent fathers reporting that their family was "well to do," and had "more than enough" were coded as having low perceived economic stress, whereas adolescent fathers who reported having "enough to get by, but no extras," "barely enough to get by," and "very poor, not enough to get by" were coded as having high perceived economic stress.

The regression analyses were performed in two models. In Model 1, perceived family economic stress, relationship satisfaction and conflict with father were entered as predictors to examine the main effects on depressive symptoms. In Model 2, the economic stress × relationship satisfaction and economic stress × conflict first order interaction terms were entered to examine if the association between quality of father–son relationship and adolescent depressive symptoms varied by levels of relationship satisfaction and paternal conflict. A standard education variable of grade level completed by the adolescent father was controlled for in these models.

Due to paternal emotional support being highly correlated with relationship satisfaction ($r = .80$, $p < .01$) and the fact that relationship satisfaction reflected an overall relationship assessment rather than a particular functional aspect of social support, we decided not to include emotional support in the multiple regression models. Similarly, age of the adolescent fathers was significantly correlated with their education level ($r = .68$, $p < .001$); therefore, only education level was included in the regression models as a control. We made this decision because education is a better reflection of a personal resource variable for adolescent fathers than age. Specifically, fathers with more education would be expected to be better prepared for fatherhood. Age alone would not provide this information for this young population, especially because there can be a mismatch between age and education among African American males (e.g. older adolescents in lower grade levels).

Results

Independent sample *t* tests revealed there were significant differences in age, $t(92.6) = -2.47$, $p = .015$, and

education, $t(89.8) = -2.12$, $p = .036$, with participants included in the sample being younger and less educated than the adolescents not included in the sample (e.g. adolescents who did not have contact with their biological father or father-figure). There were no significant differences in work status, perceived family economic stress, or depressive symptoms. About 15 % the sample described their current family's financial situation as "barely enough to get by," or worse, 49 % reported their family had "enough to get by, but no extras," and 35 % reported having "more than enough" or greater. Forty-six adolescent fathers (71 %) reported living with at least one of their parents. Independent t tests revealed no significant differences in perceived family economic stress between adolescents who lived with their parents compared to those who did not, $t(63) = -.85$, $p = .401$. As indicated in Table 1, only 3 % of adolescent fathers were the main financial providers for the household and approximately 9 % of adolescents reported that their father was the main provider. The majority (60 %) reported their mother as the main provider; therefore, perceived family economic stress was largely reflective of the mother's income level.

Table 2 presents the means, standard deviations, and correlations for the study variables. Adolescent fathers' depressive symptoms were not indicative of severe depressive symptoms ($M = 10.61$, $SD = 7.42$). On average, adolescent fathers reported a relatively high degree of emotional support from ($M = 3.87$, $SD = 1.13$) and overall relationship satisfaction with their fathers ($M = 10.66$, $SD = 4.03$). In addition, adolescents reported a moderately-low amount of conflict with their fathers ($M = 1.94$, $SD = .71$). Correlation results indicate that conflict and relationship satisfaction were significantly correlated with depressive symptoms. That is, more relationship satisfaction and less conflictual paternal relationships were correlated with fewer adolescent depressive symptoms. As previously mentioned, emotional support from fathers was highly correlated with relationship satisfaction ($r = .80$, $p < .01$).

Results of the multiple regression analyses to examine the influence of paternal relationship and perceived family economic stress on adolescent's depressive symptoms after controlling for education are presented in Table 3. Model 1 was significant overall, $F(4, 59) = 3.41$, $p = .01$, and accounted for 19 % of the variance of depressive symptoms among adolescent fathers. As hypothesized, adolescent fathers who were more satisfied with their paternal relationship had fewer depressive symptoms ($\beta = -.30$, $p < .05$). Paternal conflict was associated with more depressive symptoms as expected ($\beta = .32$, $p < .01$).

With the addition of two interaction terms, Model 2 explained a greater proportion of variance in depressive symptoms ($R^2 = .24$), and was significant overall $F(6, 57) = 3.03$, $p = .01$. Results indicated that the interaction

Table 2 Means, standard deviations, and correlations of key variables

	Mean (SD)	1	2	3	4	5	6	7
1. Depressive symptoms	10.61 (7.42)	1	.07	−.09	.05	−.14	−.29*	.29*
2. Age	17.33 (1.33)		1	.68**	.24	−.03	−.22	.12
3. Education	10.39 (1.40)			1	.04	.09	.04	.12
4. Family economic stress	2.74 (.96)				1	.09	−.02	.09
5. Emotional support from father	3.87 (1.13)					1	.80**	−.02
6. Relationship satisfaction	10.66 (4.03)						1	.05
7. Conflict with father	1.94 (.71)							1

* $p < .05$; ** $p < .01$

Table 3 Analyses of adolescent depressive symptoms regressed on perceived family economic stress and characteristics of paternal relationship

	Model 1			Model 2		
	B	SEB	β	B	SEB	β
Education[a]	−.60	.63	−.11	−.63	.62	−.12
Family economic stress	.13	.91	.02	.14	.92	.02
Relationship satisfaction	−.54	.22	−.30*	−.51	.21	−.28*
Conflict with father	3.32	1.24	.32**	3.22	1.22	.31*
Economic stress × satisfaction				.07	.31	.03
Economic stress × conflict				−2.89	1.44	−.23*
R^2	.19			.24		
ΔR^2	.19			.05		
F-statistic	3.41*			3.03*		

* $p < .05$; ** $p < .01$

[a] Control variable

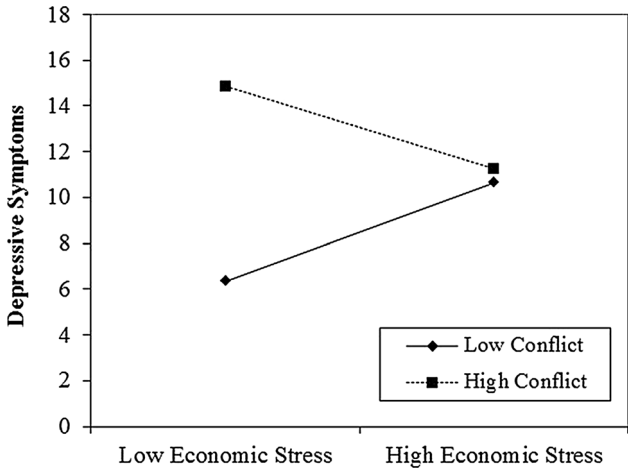

Fig. 1 Paternal conflict moderating the association between perceived family economic stress and adolescent fathers' depressive symptoms

between economic stress and relationship satisfaction was not significant; suggesting that the association between perceived family economic stress and adolescent depressive symptoms did not vary across levels of paternal relationship satisfaction. However, there was evidence of a moderation effect of paternal conflict on family economic stress and adolescent depressive symptoms ($\beta = -.23$, $p < .05$). Figure 1 presents the graph of the interaction results. In this figure, among adolescent fathers who were experiencing less conflict with their father, perceptions of family economic stress was associated with greater depressive symptoms. Adolescent fathers with low perceived family economic stress and highly conflictual relations with their fathers had the highest risk of depression. However, there was no difference found in depressive symptoms for adolescent fathers with greater perceived family economic stress when comparing higher or lower levels of paternal conflict.

Discussion

The effects of fatherhood on adolescent psychological well-being have been markedly underrepresented in literature. To address this gap, we examined the effects of perceived economic stress and paternal emotional support, conflict, and relationship satisfaction on prenatal depressive symptoms among African American adolescent who were first-time fathers. We also tested the moderating effect of quality of paternal relationship on the association between perceived family economic stress and depressive symptoms among adolescent fathers.

Study findings revealed that adolescent fathers who had more relationship satisfaction with their father reported fewer depressive symptoms. Since only a minority of the adolescent fathers (14 %) reported living with their fathers at the time of the study, it is clear that living in the same household was not necessary for fathers to have a meaningful influence on their son's well-being. While adolescent fathers reported a relatively high amount of emotional support from their fathers, we did not find paternal support to be significantly correlated with depressive symptoms. Most of the attention on positive quality of relationships has focused on emotional support or overall social support (e.g. Fagan and Lee 2011; Sheeber et al. 1997; Williams et al. 2012); however, it is possible that paternal relationship satisfaction has a distinct and equally important role in health for adolescent fathers.

African American adolescent males have been described as receiving more emotional support from their mothers compared to their fathers (Smetana et al. 2004). This suggests that adolescents may refer to their mother as the primary source of emotional support, but receive other benefits from the relationship with their father that they may generalize to reflect a more global satisfaction, perhaps due to less emotional support expectations from fathers than mothers. Relatedly, a qualitative study with low-income African American men revealed that their father was a source of instruction specifically regarding self-sufficiency, independence, responsibility, and masculinity (Roy 2006). We included both concepts in this study and overall relationship satisfaction with father appears to be qualitatively different than emotional support in its association with depressive symptoms for these first-time fathers during pregnancy. Nonetheless, much has yet to be learned about the nature of African American adolescents' complex relationships with their fathers. Therefore, studies examining the effects of familial relationships as African American adolescents transition to fatherhood should include an assessment of the overall satisfaction with their relationship with their father since emotional support alone may not fully explain the unique qualities of this relationship.

In accordance with our hypothesis, we found paternal conflict to be a significant risk factor for depressive symptomatology among adolescent fathers, even after controlling for education, family economic stress, and paternal relationship satisfaction. Our results indicate that paternal conflict may arise as a significant stressor during the sensitive period of transitioning to fatherhood. Several studies (Hurd et al. 2009; King et al. 2004; Salem et al. 1998) have found African American male adolescents to report feelings of closeness with their fathers or list their father as their role model, regardless of whether they had daily contact. It is not surprising that negative interactions with these important male figures would result in an adverse influence to their depressive symptomatology. Indeed, our study findings support previous research

demonstrating a positive association between paternal conflict and poor psychosocial functioning among adolescent sons (Barber and Delfabbro 2000).

Notable conflicts may emerge during the transition to fatherhood as the adolescent's relationship with his own father takes on a new level of significance (LaRossa 1995). As adolescents are confronted with the challenge of constructing their own paternal identity, they may come to realize the discrepancies in role expectations and behaviors of their fathers. In this study, the majority of adolescent fathers did not live with their father, nor was their father the main provider in the household. Thus, the adolescents could have perceived their father as failing to fulfill their traditional role as provider for the family. In a qualitative study examining the paternal role identities of African American men, Roy (2006) reported that as adolescents grew more uncomfortable with their father's lack of consistent support and presence in their lives, they began to reflect anger and opposition towards their father. Similarly, conflict over paternal role fulfillment may originate from the father's perspective as well. As mentioned previously, fathers often exert pressures for their son to be self-sufficient and responsible (Roy 2006). Tension may arise as fathers expect their adolescent sons to become financially independent and provide for the mother of their baby, instead of relying on their mother. Additional research is needed to clarify the salient sources of conflict between adolescent fathers and their fathers during this time. Even so, having high amounts of conflict with their father appears to be detrimental to the psychological well-being of adolescent fathers during the prenatal period.

The test of the paternal conflict moderation yielded results that differed somewhat from our expectations. We hypothesized that the influence of family economic stress on adolescent depressive symptoms would be more substantial for adolescent fathers experiencing high paternal conflict. Interestingly, our results indicate there was no significant difference found in depressive symptoms for adolescent fathers with high perceived family economic stress when comparing higher or lower levels of paternal conflict. However, adolescent fathers at greatest risk for depressive symptoms were those reporting low perceived economic stress and highly conflictual relationships with their fathers. These findings suggest that for adolescent fathers not confronted with the strains of economic hardship, conflict with their fathers could be among the most salient stressors present in their life.

A possible explanation for this effect modification is that adolescents reporting high family economic stress may be preoccupied with other conditions associated with economic hardship that may not be present or salient in the lives of more economically stable adolescents. Early work by Garrison et al. (1987) found that among African American youth aged 11–17, as parental social class increased, reports of undesirable life events (e.g. parental job loss, juvenile court involvement, school failure) decreased. As previously mentioned, research studies have consistently documented the adverse effects of economic burden on adolescent well-being. Within this context, it is possible that high levels of conflict with their nonresident father may emerge as a primary concern specifically among adolescent fathers with fewer socio-economic stressors. Contrarily, adolescent fathers within households that are experiencing economic strain could be confronted with a myriad of problems, such as deficiencies in food and clothing, unstable housing, and neighborhood violence. Thus for these fathers, paternal conflict fails to become a significant determinant of depressive symptoms. Further research is undeniably needed to investigate conflictual processes of adolescent fathers from differing economic backgrounds.

While this study advances our understanding of the influence of perceived economic stress and paternal relationships on first-time adolescent fathers' psychological well-being, it does have several limitations. Foremost, due to the small sample size and nonrandom sample, the results of the study cannot confidently be extended to the general population of African American adolescent fathers. For instance, the range of the levels of depressive symptoms experienced by adolescents in our sample suggests that our sample was not representative of adolescent fathers with more severe depression. Moreover, this sample size may have limited our power to detect a significant main effect of perceived family economic stress on depressive symptoms in the regression model. An additional limitation is that because of the cross-sectional design of this study, we cannot determine the directionality between positive or negative aspects of paternal relationships and depressive symptomatology. It has been documented among fathers that the prenatal period is a time of heightened stress (Condon et al. 2004). It is therefore possible that the task of coping with the realization of becoming a father and the accumulation of stressors associated with the fulfillment of the father role contributed to depressive symptoms, which in turn drove reports of paternal conflicts or low relationship satisfaction. Additional longitudinal studies are needed to assess depressive symptoms among adolescents before, during, and after the pregnancy. Lastly, a further limitation is that all data were self-reported by the adolescents. As a result, these perceptions about paternal relationship characteristics may not be mirrored by the fathers of the adolescents.

Despite these limitations, our results contribute substantially to the limited base of knowledge on the expectant adolescent father's experience though a familial context. Foremost, this study is one of few to examine the interplay

between positive and negative paternal relationships and perceived economic stress during pregnancy among first-time African American fathers. Additionally, this study demonstrates the importance of familial factors in influencing the psychological well-being of these young men. The use of the single-item perceived economic stress measurement can be construed as a limitation as well as a strength. The lack of multiple indicators to describe economic disadvantage may have resulted in a limited assessment of economic hardship. However, a major contribution of the present study is in addressing the dearth of knowledge on the impact of family economic stress as experienced by these African American adolescent fathers. It is our intention that this study will serve as a foundation for future research to further explore the economic context of these adolescent fathers.

Relatedly, our findings highlight the need for greater attention to be directed to this greatly understudied topic. It will be important to explore other aspects of adolescent fathers' paternal relationships, such as whether the quality of father–son relationships depend on the nature of the adolescent's relationship with their mothers. Again, subsequent work on adolescent fathers' depressive symptomatology would benefit from examining economic stress, paternal support, conflict, and relationship satisfaction over an extended period of the fatherhood transition. As our sample size was too small to perform a stratified analysis, future work should examine the effects of support, relationship satisfaction and conflict by biological and non-biological fathers. The present study focused on adolescents who currently had a relationship with their father in order to determine the positive and negative characteristics among father–son relationships that influenced adolescent well-being. Additional work in this area may benefit from including adolescent fathers who have no contact with their fathers in the sample to determine whether these adolescents have significant differences in depressive symptomatology. Finally, our findings suggest that the interplay between economic stressors and paternal relationships is a significant contributor to mental health for African American adolescent fathers. Thus, studies investigating the determinants of well-being among this population should also consider the influence of paternal relationship quality.

Health care providers working with African American adolescent fathers are advised to create more programming that incorporate members of the adolescent's social networks, as this may help to reduce the negative impact of stressors on the young fathers. Since close relationships tend to give rise to conflicts, in addition to providing support support, it may be beneficial to focus on the promotion of effective communication and other interpersonal skills. Importantly, these efforts should not overlook adolescent fathers who come from families who are not experiencing economic hardships, as this subset of fathers may be uniquely susceptible to negative family interactions. Furthermore, mental health care providers should consider promoting the use of coping strategies to enable adolescent fathers to find productive ways to relieve stress and effectively contribute to the development of their child. Finally, as young African American men are known to under-utilize mental health treatment, involving family members in culturally-tailored interventions may combat stigma and enable the adolescent to obtain the services needed to manage the stressors of fatherhood.

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