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Mother-Adolescent and Father-Adolescent Relationships After Divorce: Relations with Emerging Adult's Romantic Attachment

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In Western society, there is tremendous diversity in the type of romantic experiences individuals engage in during emerging adulthood. Although many emerging adults form exclusive relationships that entail high levels of intimacy and commitment (Bouchey & Furman, 2003; Collins, 2003), others' romantic lives are characterized by instability and limited commitment (Arnett, 2004; Cohen, Kasen, Chen, Hardmark & Gordon, 2003). One subgroup of emerging adults who are particularly at risk for experiencing difficulties in romantic relationships are those who have experienced parental divorce in childhood or adolescence. Compared to their counterparts in two-parent families, these emerging adults report less secure romantic relationships than those from two-parent families (Billingham et al., 1989; Summers, Forehand, Armistead, & Tannenbaum, 1998), and some research suggests that they are more likely to divorce (e.g., Li & Wu, 2008).

Social learning and attachment theories propose that from an early age children develop working models, which are based largely on their relationships with their parents in childhood and adolescence, that inform their expectations of people and attitudes about relationships with others, including romantic partners (Amato & DeBoer, 2001; Bowlby, 1982; Hazan & Shaver, 1987). During adolescence, youth transfer attachment functions from parents to peers and begin to engage in the developmental task of navigating romantic relationships (Hazan & Zeifman, 1994; Scharf & Mayseless, 2007).

Several longitudinal studies have shown significant associations between parent-adolescent relationships and romantic attachment in emerging adulthood, but none have examined these relations in divorced families. Attention to this group is important given that 30–50% of American youth undergo parental divorce during childhood or adolescence (National Center for Health Statistics, 2008). Also, when parents divorce, children typically spend more individual time with one or both parents. As such, it is possible that the association between quality of these parent-adolescent relationships and romantic attachment may differ from that among youth from two-parent families.

The research with samples of offspring in two-parent families has found positive relations between adolescents' relationships with their parents and romantic relationships later in

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development. For example, in the National Longitudinal Study of Adolescent Health, a composite of mother-adolescent and father-adolescent relationship quality at ages 12–19 predicted romantic relationship quality in young adulthood (ages 25–32; Johnson & Galambos, 2014). An eight-year longitudinal study found that nurturant-involved parenting over a three-year period (7th-10th grade), significantly predicted interpersonal competence in romantic relationships in emerging adulthood (Conger, Cui, Bryant, & Elder, 2000). Also, a four-year longitudinal study of males found that positive parent-adolescent relationships at age 17 were significantly related to higher capacity for intimacy in romantic relationships at age 21 (Scharf & Mayseless, 2001).

Three studies have examined the effects of mother-adolescent relationship quality only on emerging adults' romantic relationships. An 8-year longitudinal study revealed that support from mothers at ages 13, 15, and 17 significantly predicted bonded love, defined as happiness, attraction, friendship, and trust, in emerging adulthood (Seiffge-Krenke, 2003). However, analyses of data from the National Longitudinal Study of Adolescent Health found a significant association between mid-adolescent males' but not females' ratings of maternal relationship quality and romantic relationship quality in young adulthood (Pflieger, 2009). Another study found that different trajectories of mother-child relationships (e.g., increasingly positive, increasingly negative) across adolescence (ages 14–17) were significantly associated with quality of romantic relationships in emerging adulthood (ages 21 and 23; Seiffge-Krenke, Overbeek, Vermulst, 2010).

Three studies have assessed the relations between father-adolescent relationship quality only and emerging adults' romantic relationships. In their 8-year longitudinal study, Seiffge-Krenke (2003) found non-significant relations between father-adolescent relationship quality at 13, 15 and 17 and bonded love in young adulthood. Similarly, analysis of longitudinal data from the National Survey of Families and Households revealed non-significant links between warmth and closeness in the father-adolescent relationship and romantic relationship quality in emerging adulthood (Pflieger, Gager, & Goldstein, 2008). In a nine-year longitudinal study, examination of different father-adolescent relationship trajectories revealed that no trajectories were predictive of romantic relationship quality in young adult romantic relationships (Seiffge-Krenke, Overbeek, Vermulst, 2010). However, using data from the National Longitudinal Study of Adolescent Health, Pflieger (2009) found that for females but not males, father-adolescent relationship quality significantly predicted young adults' romantic relationship quality.

To date, researchers have not examined the relations between mother-adolescent and father-adolescent relationships or a composite of mother- and father-adolescent relationships and romantic relationship outcomes of emerging adults who have experienced parental divorce. Among emerging adults who experienced parental divorce in childhood, it is possible that the effect of their relationship with one parent in adolescent is conditioned by their relationship with the other parent. Research on other post-divorce outcomes suggests that interactive effects may occur. For example, in their sample of divorced families, Sandler, Miles, Cookston and Braver (2008) found that having a relationship characterized by high warmth with one parent protected children from internalizing problems when warmth of the other parent was low and interparental conflict was high. The authors referred to this effect

as a “compensation effect,” in which a positive relationship with one parent compensated for a poor relationship with the other. Further, research with families experiencing high conflict divorces found that high quality parenting positively predicted child well-being when parenting quality by the other parent was low, but not when the other parent provided high quality parenting (Sandler, Wheeler, & Braver, 2013).

The current study extended prior research on the relations between parent-adolescent relationships and romantic relationship outcomes in three ways. First, the sample consists of emerging adults from divorced families, a group that is at risk for experiencing difficulties in romantic relationships. Second, the interactive effects of mother-adolescent and father-adolescent relationship quality on romantic relationships are examined. Third, based on findings that gender moderated the relations between mother and father relationship quality and romantic outcomes (Pflieger, 2009) and research demonstrating differences in the relationships females and males have with their fathers after divorce (see Nielsen, 2011 for a review), youth gender was examined as a moderator of the relation between mother-adolescent and father support and romantic outcomes.

It was hypothesized that both mother-adolescent relationship quality and father support would significantly predict the quality of emerging adults’ romantic relationships. It was also hypothesized that there would be a significant interactive effect of mother-adolescent and father support on romantic relationship quality. Based on more consistent research supporting the relation between mother-adolescent relationship quality and offspring romantic relationship outcomes and because all children in this sample lived primarily with their mothers, it was hypothesized that at high levels of mother-adolescent relationship quality, emerging adults would experience positive romantic relationship outcomes, regardless of the support they received from their fathers. Father support was predicted to be significantly related to romantic relationships outcomes when mother-adolescent relationship quality was low, such that high support from with fathers was predicted to compensate for the negative effects of low quality mother-adolescent relationships. Romantic outcomes were expected to be poorest when emerging adults had experienced poor quality relationships with their mothers and low support from their fathers. Because of the very limited prior research in this area that included gender as a moderator, the analysis of gender as a moderator was exploratory.

METHODS

Researchers

Drs. Wolchik and Sandler have devoted several decades of research at Arizona State University to understanding vulnerability and resilience factors among at-risk youth. They have focused specifically on youth who have experienced parental divorce or parental death and have examined modifiable individual- and family-level variables that impact youth’s short- and long-term adjustment. With their research teams, which have included Drs. Tein and Carr, Drs. Wolchik and Sandler have developed and evaluated empirically-based interventions, including the New Beginnings Program (NBP) for divorced and separating families to prevent or limit problem outcomes among youth who have experienced family disruptions. Dr. Tein has served as a Co-Principal Investigator on related grants and has

contributed significantly to data analysis. Dr. Carr was a graduate student of Dr. Wolchik's during the 15-year NBP follow-up grant period and an effectiveness trial for the NBP throughout Arizona. She was involved in developing program workbooks for participants, developing online trainings for NBP leaders, and leading data collection efforts in schools to acquire data from teachers. Her graduate research focused on understanding how parent-child relationships impact young adults' approaches to romantic relationships and the relation between youths' romantic relationships and alcohol use. Dr. Carr completed the data analyses described in this paper for her Master's degree thesis. Drs. Sandler, Wolchik, and Tein are currently working towards collecting 26-year follow-up data for the NBP, and Dr. Carr delivers the NBP to clients in the Phoenix, AZ region.

Participants

Participants were 72 emerging adults whose families whom the NBP research team randomly assigned to the control condition of an experimental trial of the NBP that examined the efficacy of a parenting intervention for divorced families (Wolchik et al., 2000). Emerging adults whose families were assigned to the intervention were not included due to potential intervention effects on romantic relationship outcomes. Mothers and their children participated in the trial when the youths were in late childhood or early adolescence. Wolchik, Sandler, and their NBP research team recruited participants primarily using court records of randomly selected divorce cases with children; 20% were recruited through media advertisements. Eligible families had at least one child between the ages of 9 and 12 who lived at least 50% of the time with the mother and had experienced divorce within the previous two years (see Wolchik et al., 2000 for complete eligibility criteria). The NBP research team randomly assigned families to the parenting-focused mother program only ($n = 81$), a dual-component (parenting-focused program plus child-coping program; $n = 83$), or a literature control condition ($n = 76$). The NBP research team provided mothers and children in the control condition with three books on children's adjustment to divorce along with reading guidelines. The authors excluded four emerging adults from the current analyses because one of their parents had died or their parents had remarried each other or cohabitated together after program completion.

At baseline, youth mean age was 10.26 ($SD = 1.07$) years, maternal mean age was 36.5 ($SD = 4.6$) years, and paternal mean age was 38.9 ($SD = 5.2$) years. Among youth, 51.4% ($n = 37$) were female. Of the mothers, 86.1% were non-Hispanic white; 11.1% were Hispanic; 1.4% were black, and 1.4% were other. Seventy-five percent of mothers had at least some postsecondary education.

Procedures

All study procedures were approved by the Arizona State University's Institutional Review Board for the Protection of Human Subjects. The NBP research team assessed participants at six time points: baseline (Wave 1), post-test (Wave 2), 3-month follow-up (Wave 3), 6-month follow-up (Wave 4), 6-year follow-up (Wave 5), and 15-year follow-up (Wave 6). The current study used data from Waves 5 and 6; participants were between ages 15 and 19 and ages 24 and 28, respectively.

The vast majority of participants completed assessments at home; a minority completed them at the university research center. Trained NBP research staff interviewed mothers and adolescents/emerging adults separately using a structured computer program. After research staff explained confidentiality, mothers and emerging adults/adolescents signed informed consent/assent forms, respectively. At Wave 5, parents and youths each received \$100 compensation. At Wave 6, parents received \$50 and emerging adults received \$225 compensation.

Measures

Demographics.—At Wave 5, mothers reported on demographics including their education level and gross family income. At Wave 6, emerging adults reported on their age, gender, current relationship status, race, and education level. Given the high proportion of non-Hispanic white participants (84.4%), the first author recoded race as non-Hispanic white vs. other. All these demographic variables were examined as potential covariates given findings showing that they relate significantly to romantic attachment (e.g., Mickelson, Kessler, & Shaver 1997).

Mother-Adolescent Relationship.—The NBP research team assessed relationship quality at Wave 5 using the 16-item Acceptance and 16-item Rejection subscales of the Child Report of Parenting Behavior Inventory (CRPBI; Schaefer, 1965). The CRPBI assesses adolescents' impressions of their mothers' parenting behavior. The NBP research team gave adolescents the Acceptance and Rejection subscales specifically these scales represented categories of behavior that were targeted for change in the NBP, a program designed to increase positive parent-child interactions and foster more connected relationships via good listening and communication. Example items for acceptance and rejection are "Your mother always spoke to you in a warm and friendly voice" and "Your mother made you feel you are not loved," respectively. Adolescents responded to items on a 3-point Likert scale (1="like" to 3= "not like"). NBP research staff reverse coded rejection items and summed the acceptance and rejection items. Higher scores reflect more acceptance and less rejection. Wolchik et al. (2000) reported internal consistency reliability of .86 for this composite score. Research has shown significant associations between CRPBI scores and child/adolescent adjustment outcomes (Imbimbo, 1995; Wolchik, Wilcox, Tein, & Sandler, 2000). Internal consistency reliability in the current sample was .94.

Father-Adolescent Relationship.—The NBP research team assessed father-adolescent relationship using two measures at Wave 5, father support and level of contact in the previous year. The father support measure was comprised of five items from the Children's Inventory of Social Support (CISS; Wolchik, Sandler, & Braver, 1987) that assessed support in terms of play, advice, goods and services, emotional support, and positive feedback, as well as one new item that assessed whether the father is a source of negative emotions. Wolchik, Sandler, and colleagues developed the CISS and revised it to for the NBP efficacy trial to measure social support by nonresidential fathers of their children after separation or divorce. In prior research with this sample, scores on CISS were found to be significantly negatively correlated with child adjustment problems (Wolchik et al., 1989). Provision of goods and services and positive feedback were consistently related to parental and teacher

reports of positive adjustment. Wolchik et al. (1989) reported adequate psychometric properties for the CISS.

A sample item from the CISS and father support measure is: “Sometimes dads give kids advice or help kids figure out things that are important to them. They might help solve a problem or even help kids figure out what to do. For example, you might have been mad at your teacher, and dad might have helped you understand what to do about it. How often has he given you advice or information in the past month?” The sixth, added item on the father support measure is: “Instead of telling us good things, some dads make young people feel very bad, unhappy, upset or angry. How often has your dad made you feel bad during past month?” Youth rated each item on a four-point response scale (1= Almost never to 4= A lot of times). After reverse coding the item about negative emotions, NBP research staff computed the mean of the six items. Higher scores reflect higher levels of support. The internal consistency reliability was .86.

Two items assessed contact: “How often has your dad visited with you during the past year?” and “How often has your dad had phone or mail contact with you in the past year?” A six-point response scale (1= Not at all to 6= Several times a week) was used. The median responses were 1–3 visits/month and one phone or mail contact/week. The two items were highly correlated ($r = .81$) so the first author computed the mean; higher scores reflect greater contact. Based on a high correlation between the contact and social support scores ($r = .60$), the first author created a composite score by standardizing the means, computing the average and centering these scores; this composite was labeled “father support.”

Romantic Attachment.—Adolescents completed the 36-item Experiences in Close Relationships scale (ECR; Brennan, Clark, & Shaver, 1998), a measure designed to assess romantic attachment, at Wave 6. Eighteen items assess romantic anxiety and 18 items assess romantic avoidance. The anxiety subscale assesses fear of rejection and abandonment, and a sample anxiety item is: “I need a lot of reassurance that I am loved by my partner.” The avoidance subscale assesses discomfort with closeness and dependence on others, and a sample avoidance item is: “I prefer not to show a partner how I feel deep down.” Emerging adults rated how much each item accurately described their feelings in romantic relationships generally (1= Disagree Strongly to 7= Strongly Agree). Participants were instructed to rate the items in terms of how they generally experienced romantic relationships, not just in terms of what is happening in their current relationship. Mean anxiety and avoidance scores were computed. Higher scores indicate higher levels of romantic avoidance and anxiety.

Both subscales have shown high internal consistency, with α 's ranging from .89-.92 (Anxiety) and .91-.95 (Avoidance) (Brennan, Clark, & Shaver, 1998; Lopez & Gormley, 2002). The subscales have been shown to positively correlate with personal problems (Lopez, Mitchell, & Gormley, 2002) and depression (Zakalik & Wei, 2006). In this sample, internal consistency reliability was .95 (Avoidance) and .93 (Anxiety).

RESULTS

Preliminary Analyses.

Table 1 shows the descriptive statistics of the study variables. The skewness and kurtosis of all variables fell within the acceptable range (skewness cut-off -2 and kurtosis cut-off -7 ; West, Finch & Curran, 1995). Correlations among study variables and demographic variables are presented in Table 2. As shown, father support was significantly correlated with mother-adolescent relationship quality. Romantic anxiety was significantly correlated with romantic avoidance and emerging adult's education level. Emerging adults with higher education levels reported lower romantic anxiety than those with lower education levels. Romantic avoidance was significantly correlated with emerging adults' relationship status and race (non-Hispanic white vs. other races). Non-Hispanic whites and emerging adults who had a romantic partner reported lower romantic avoidance than emerging adults of other races and those without romantic partners. The demographic variables that were significantly correlated with romantic anxiety or romantic avoidance were included as covariates for that outcome.

Attrition analysis was conducted to examine whether attrition was significantly related to any demographic or Wave 1 study variables. T-tests were used to compare those who did ($n = 57$) and did not ($n = 15$) complete the assessment in emerging adulthood. No significant attrition effect was found.

Outlier analyses were conducted to identify participants with extreme scores on study variables. DFFITS, a measure of the influence of individual cases on the regression equation, and DFBETAS, a measure of the change in regression coefficients, were used to identify potential outliers (Cohen, Cohen, West & Aiken, 2013; Neter, Wasserman, & Kutner, 1989). No case met any criterion for being an outlier.

Primary Analyses.

Multiple regression analyses, using MPlus software (Version 7, Muthén & Muthén, 1998–2011), were applied to examine the unique and interactive effects of mother-adolescent relationship quality and father support on romantic anxiety and romantic avoidance. Missing data were handled using full information maximum likelihood (FIML). The following auxiliary variables (assessed at Wave 1) that were identified as potentially relevant to the study variables were added to enhance FIML: child age, mother's income, maternal depressive symptoms, interparental conflict, and maternal report of child internalizing problems and externalizing problems.

Separate step-wise regressions were run for romantic anxiety and romantic avoidance. Predictors were entered in four steps: 1) covariates (i.e., emerging adult education level for anxiety models; emerging adult race and relationship status for avoidance models; 2) father support; 3) mother-adolescent relationship quality; 4) mother-adolescent relationship quality x father support. These analyses were re-run, reversing steps 2 and 3, to examine whether father support/mother-adolescent relationship alone predicted romantic anxiety or avoidance, controlling for the covariates. Only results of the first set of regressions are presented in tables as no significant differences occurred when steps 2 and 3 were reversed.

For romantic anxiety, there was no significant main effect of mother-adolescent relationship quality or father support after controlling for education level. A significant mother-adolescent relationship quality x father support interaction was found ($p = .02$; see Table 3). This interaction was plotted (see Figure 1), using Aiken and West's (1991) method of regressing simple slopes of anxiety on father support at the mean, 1 SD above the mean ("high"), and 1 SD below the mean ("low") of mother-adolescent relationship quality. The simple slope of father support was significant at low levels of mother-adolescent relationship quality ($b = .4$, $p = .03$), but the slopes of father support at high ($b = .19$, $p = .4$) and mean ($b = -.11$, $p = .5$) levels of mother-adolescent relationship quality were not significant.

For romantic avoidance, as shown in Table 4, there was no significant main effect of mother-adolescent relationship quality or father support after controlling for race and romantic relationship status. Further, the father support by mother-adolescent relationship quality interactive effect was not significant.

Analyses revealed a marginal interactive effect of mother-adolescent relationship quality and gender on anxiety ($p = .09$). Neither simple slope for males ($b = .06$, $p = .13$) nor females ($b = .02$, $p = .29$) was significant. There was a marginal main effect of gender on avoidance when gender was entered after the covariates ($p = .08$); males had higher avoidance than females. A marginal main effect of gender on anxiety occurred when gender was entered after covariates and father support ($p = .09$); males had higher anxiety than females.

DISCUSSION

This study is the first to examine the relations between mother-adolescent relationship quality and father support and romantic attachment among emerging adults who experienced parental divorce in childhood. This study is also novel in its consideration of whether the effects on romantic attachment of one's relationships with one parent depended on the relationship with the other parent. Further, this is one of very few studies to examine adolescent gender as a moderator. The hypothesized interactive effect emerged; having a supportive relationship with one's father compensated for having a low quality relationship with one's mother such that the relation between father support and emerging adult romantic anxiety was only significant when mother-adolescent relationship quality was low. Neither mother-adolescent relationship quality nor father support independently predicted romantic anxiety or avoidance. Further, gender did not significantly moderate the relation between father support or mother-adolescent relationship quality and avoidance or anxiety.

The interactive effect of mother-adolescent and father support on romantic anxiety extends the limited research that has examined how relationships with both parents affect children's post-divorce outcomes (King & Sobolewski, 2006; Sandler et al., 2008; Sandler et al., 2013; Sobolewski & Amato, 2007). For example, in their examination of internalizing problems and acting out problems, King and Sobolewski (2006) found that having a warm, supportive relationship with one parent compensated for a low quality relationship with the other parent. Similarly, Sandler et al. (2008) found that under conditions of high interparental conflict, having a relationship with one parent that was characterized by high warmth protected children from internalizing problems when the warmth of the other parental

relationship was low. The current study demonstrated a compensatory effect on an additional outcome, romantic anxiety, and at a later developmental stage than has been studied in previous research.

Why might having a supportive relationship with one's non-residential father be protective for adolescents who have low quality relationships with their mothers? Given that for many children, it is common for bonds with parents to weaken following divorce (Bulduc, Caron, & Logue, 2007; Riggio, 2004), having high levels of support from fathers may be particularly impactful. Adolescents who have high or medium quality relationships with their mothers might turn to their mothers to talk about important aspects of their lives, including their experiences with romantic partners. Those with low quality relationships with their mothers might turn to their fathers to talk about these aspects of their lives. Research has shown that increased physical availability of fathers creates opportunities for parental guidance (Bulanda & Majumdar, 2008). Having a supportive relationship with one's nonresidential father could contribute to lower romantic anxiety by providing opportunities for guidance about romantic relationships. It is also possible that having a supportive relationship with one's father may provide evidence that one matters to a significant other, which may generalize to other significant relationships and lead to reductions in romantic anxiety. Perhaps having high levels of support from fathers helps adolescents develop a belief that loved, significant others are consistent and permanent, which is likely to contribute to interpersonal trust and positive expectations of romantic partners. It is also possible that increased self-esteem, positive social expectations and social competence that are associated with father availability, involvement and positive father-child relationships in adolescence (Bulanda & Majumdar, 2008; Elicker, Englund, & Sroufe, 1992; Parker & Benson, 2004) could lead to less anxiety about romantic relationships in emerging adulthood.

The current findings not only highlight the importance of examining one parent-adolescent relationship in the context of the other parent-adolescent relationship, but also indicate that nonresidential fathers have important influences on adolescents' socialization and conceptualization of relationships when adolescents have poor quality relationships with their mothers. The results suggest that maintaining or enhancing adolescents' relationships with fathers after divorce could contribute positively to adolescents' working models of how relationships work, particularly when the mother-child relationship quality is poor. Although it is possible that an interactive mother-adolescent and father-adolescent parenting effect occurs only in divorced families, it also possible that a similar compensatory effect occurs in two-parent families with low quality mother-child relationships. An important direction for future research is to examine whether such a compensatory effect occurs in two-parent families as well.

The absence of main effects of mother-adolescent relationship quality on romantic avoidance and romantic anxiety differs from the limited previous studies that found significant main effects of mother-adolescent relationship quality in young adults from two-parent families (Seiffge-Krenke, 2003; Seiffge-Krenke et al., 2010). It is possible that differences in the aspects of the mother-child relationship that were assessed might account for the discrepant findings. The current study measured acceptance and rejection, whereas

other studies measured mother-adolescent conflict, affection, and admiration (Seiffge-Krenke, 2003; Seiffge-Krenke et al., 2010). The nonsignificant main effect of father support on avoidance and anxiety is consistent with previous research with two-parent families (Seiffge-Krenke, 2003; Pflieger et al., 2008).

The absence of significant main and interactive effects of mother-relationship quality and father support on romantic avoidance might be due to the large amount of variance in avoidance attributable to the covariates, romantic relationship status and race, which accounted for 31.9% of variance in avoidance. Specifically, non-Hispanic whites were significantly less likely to report romantic avoidance than youth of other races, and emerging adults who had a romantic partner were significantly less likely to report avoidance than those who did not have a partner. It is likely that factors that were not measured, such as the nature of one's experiences in recent relationships, affect romantic avoidance to a greater degree than relationships with their parents earlier in development.

There are a few limitations of this study that have implications for future research. First, the sample size was small. It is possible that with a larger sample, the main effects of mother-adolescent and father-adolescent relationships in predicting romantic avoidance and anxiety and the interactive effects of mother-adolescent and father support on romantic avoidance would have been significant. It is also possible that gender would emerge as a significant moderator in larger samples. Further investigations should use larger sample sizes to increase power to detect these effects. Second, the sample was largely non-Hispanic white and emerging adults' mothers were, on average, highly educated. Additionally, there were multiple inclusion criteria (Wolchik et al., 2000). Future studies should include more diverse samples in terms of ethnic background and education level and should include fewer inclusion criteria to allow for greater generalizability of findings. Third, this study employed different measures to assess mother-adolescent and father-adolescent relationships. Two subscales from a widely used measure with strong validity were used to assess the mother-adolescent relationship, whereas shorter, less well-validated scales measuring support and contact were used to assess the father-adolescent relationship. Thus, it is possible that the effects of father-adolescent relationship on romantic attachment were underestimated. Finally, this study did not examine mechanisms that might explain the interactive effect. Future studies should consider, for example, whether highly supportive relationships with fathers compensate for low quality maternal relationships in their effect on romantic anxiety by increasing adolescents' self-esteem, social competence, positive expectations of close relationships, or self-efficacy to navigate relationships. Finally, the sample only included emerging adults from divorced families. Future studies should include emerging adults who experienced parental divorce and those with continuously married parents to enable comparison between the effect of adolescents' relationships with both parents and romantic attachment in these groups.

The current findings have implications for policies and preventive interventions for divorced families. The compensation effect that emerged in this study provides support for legal policies and interventions that promote the maintenance and enhancement of the father-child relationship following divorce.

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REFERENCES

- Aiken LS, West SG, & Reno RR (1991). Multiple regression: Testing and interpreting interactions. Newbury Park: Sage Publications.
- Amato PR, & DeBoer DD (2001). The transmission of marital instability across generations: Relationship skills or commitment to marriage? *Journal of Marriage and Family*, 63, 1038–1051. doi: 10.1111/j.1741-3737.2001.01038
- Arnett JJ (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.
- Billingham RE, Sauer AK & Pillion LA (1989, November). Family structure in childhood and sexual attitudes and behaviors during late adolescence. Paper presented at the Annual Meeting of the National Council on Family Relations, New Orleans, LA.
- Bouchey HA, & Furman W (2003). Dating and romantic experiences in adolescence. *Blackwell Handbook of Adolescence*, 312–329. doi: 10.1002/9780470756607.ch15
- Bowlby J (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York, NY: Basic Books.
- Brennan KA, Clark CL, & Shaver PR (1998). Self-report measurement of adult attachment: An integrative overview In Simpson JA & Rholes WS (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford Press.
- Bulanda RE, & Majumdar D (2009). Perceived parent-child relations and adolescent self-esteem. *Journal of Child and Family Studies*, 18, 203–212. doi: 10.1007/s10826-008-9220-3
- Bulduc JL, Caron SL, & Logue ME (2007). The effects of parental divorce on college students. *Journal of Divorce & Remarriage*, 46(3–4), 83–104. doi: 10.1300/J087v46n03_06
- Cohen J, Cohen P, West SG, & Aiken LS (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. London: Routledge.
- Cohen P, Kasen S, Chen H, Hartmark C, & Gordon K (2003). Variations in patterns of developmental transitions in the emerging adulthood period. *Developmental Psychology*, 39, 657–669. doi: 10.1037/0012-1649.39.4.657 [PubMed: 12859120]
- Collins WA (2003). More than myth: The developmental significance of romantic relationships during adolescence. *Journal of Research on Adolescence*, 13(1), 1–24. doi: 10.1111/1532-7795.1301001
- Conger RD, Cui M, Bryant CM, & Elder GH Jr. (2000). Competence in early adult romantic relationships: A developmental perspective on family influences. *Journal of Personality and Social Psychology*, 79, 224–237. doi: 10.1037/0022-3514.79.2.224 [PubMed: 10948976]
- Elicker J, Englund M, & Sroufe LA (1992). Predicting peer competence and peer relations in childhood from early parent-child relationships In Parke RD and Ladd GW (Eds.), *Family-peer relationships: Modes of linkage* (pp. 77–106). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Hazan C, & Shaver PR (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511–524. doi: 10.1037/0022-3514.52.3.511 [PubMed: 3572722]
- Hazan C, & Zeifman D (1994). Sex and the psychological tether In Bartholomew K & Perlman D (Eds.), *Advances in personal relationships* (Vol. 5, pp. 151–178). London: Jessica Kingsley.
- Imbimbo PV (1995). Sex differences in the identity formation of college students from divorced families. *Journal of Youth and Adolescence*, 24(6), 745–761. doi: 10.1007/BF01536955
- Johnson MD, & Galambos NL (2014). Paths to intimate relationship quality from parent–adolescent relations and mental health. *Journal of Marriage and Family*, 76(1), 145–160. doi: 10.1111/jomf.12074

- King V, & Sobolewski JM (2006). Nonresident fathers' contributions to adolescent well-being. *Journal of Marriage and Family*, 68, 537–557. doi: 10.1111/j.1741-3737.2006.00274.x [PubMed: 18270550]
- Li JA, & Wu LL (2008). No trend in the intergenerational transmission of divorce. *Demography*, 45 (4), 875–883. [PubMed: 19110902]
- Lopez FG, & Gormley B (2002). Stability and change in adult attachment style over the first-year college transition: Relations to self-confidence, coping, and distress patterns. *Journal of Counseling Psychology*, 49, 366–364. doi: 10.1037/0022-0167.49.3.355
- Lopez FG, Mitchell P, & Gormley B (2002). Adult attachment and college student distress: Test of a mediational model. *Journal of Counseling Psychology*, 49, 460–467. doi: 10.1037/0022-0167.49.4.460.
- Mickelson KD, Kessler RC, & Shaver PR (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology*, 73(5), 1092–1106. doi: 10.1037/0022-3514.73.5.1092 [PubMed: 9364763]
- Muthén LK, & Muthén BO (1998-2011). *Mplus User's Guide*. Sixth Edition Los Angeles, CA: Muthén & Muthén.
- National Center for Health Statistics (2008). Marriage and divorce Retrieved April 11, 2012 from <http://www.cdc.gov/nchs/fastats/divorce.htm>.
- Neter J, Wasserman W, & Kutner MH (1989). *Applied linear regression models*.
- Nielsen L (2011). Divorced fathers and their daughters: A review of recent research. *Journal of Divorce & Remarriage*, 52(2), 77–93. doi: 10.1080/10502556.2011.546222
- Parker J, & Benson M (2004). Parent-adolescent relations and adolescent functioning: Self-esteem, substance abuse, and delinquency. *Adolescence*, 39, 519–530. [PubMed: 15673227]
- Pflieger JC (2009). Adolescents' parent and peer relations and romantic outcomes in young adulthood. (Unpublished doctoral dissertation). Arizona State University, Tempe, AZ.
- Pflieger JC, Gager CT, & Goldstein S (2008). The moderating role of early versus late adolescence: Exploring the differential effects of mothers and fathers on young adults' romantic relationships. Unpublished manuscript, Arizona State University.
- Riggio HR (2004). Parental marital conflict and divorce, parent-child relationships, social support, and relationship anxiety in young adulthood. *Personal Relationships*, 11, 99–114. doi: 10.1111/j.1475-6811.2004.00073.x
- Sandler I, Miles J, Cookston J, & Braver S (2008). Effects of father and mother parenting on children's mental health in high- and low-conflict divorces. *Family Court Review*, 46(2), 282–296. doi: 10.1111/j.1744-1617.2008.00201.x
- Sandler IN, Wheeler LA, & Braver SL (2013). Relations of parenting quality, interparental conflict, and overnights with mental health problems of children in divorcing families with high legal conflict. *Journal of Family Psychology*, 27(6), 915. doi: 10.1037/a0034449 [PubMed: 24098960]
- Schaefer ES (1965). Children's report of parental behavior: An inventory. *Child Development*, 36, 413–424. [PubMed: 14300862]
- Scharf M, & Mayseless O (2001). The capacity for romantic intimacy: Exploring the Contribution of best friend and marital and parental relationships. *Journal of Adolescence*, 24, 379–399. [PubMed: 11476613]
- Scharf M, & Mayseless O (2007). Putting eggs in more than one basket: A new look at developmental processes of attachment in adolescence. *New Directions for Child and Adolescent Development*, 117, 1–22. doi: 10.1006/jado.2001.0405
- Seiffge-Krenke I (2003). Testing theories of romantic development from adolescence to young adulthood: Evidence of a developmental sequence. *International Journal of Behavioral Development*, 27, 519–531. doi: 10.1080/01650250344000145
- Seiffge-Krenke I, Overbeek G, Vermulst A (2010). Parent-child relationship trajectories during adolescence: Longitudinal associations with romantic outcomes in emerging adulthood. *Journal of Adolescence*, 33, 159–171. doi: 10.1016/j.adolescence.2009.04.001 [PubMed: 19476993]
- Sobolewski JM, & Amato PR (2007). Parents' discord and divorce, parent-child relationships and subjective well-being in early adulthood: Is feeling close to two parents always better than feeling close to one? *Social Forces*, 85, 1105–1124. doi: 10.1353/sof.2007.0056

- Summers P, Forehand R, Armistead L, Tannenbaum L (1998). Parental divorce during early adolescence in Caucasian families: The role of family process variables in predicting the long-term consequences for early adult psychosocial adjustment. *Journal of Consulting and Clinical Psychology*, 66(2), 327–336. doi: 10.1037/0022-006X.66.2.327 [PubMed: 9583336]
- West SG, Finch JF, & Curran PJ (1995). Structural equation models with nonnormal variables: Problems and remedies In Hoyle RH (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 56–75). Thousand Oaks, CA: Sage Publications, Inc.
- Wolchik SA, Ruehlman LS, Braver SL, & Sandler IN (1989). Social support of children of divorce: Direct and stress buffer effects. *American Journal of Community Psychology*, 17, 485–501. doi: 10.1007/BF00931174 [PubMed: 2610205]
- Wolchik SA, Sandler IN, & Braver SL (1987). Social support: Its assessment and relations to children's adjustment In Eisenberg N (Ed.), *Contemporary topics in developmental psychology* (pp. 319–349). New York: Wiley.
- Wolchik SA, West SG, Sandler IN, Tein J, Coatsworth D, Lengua L... & Griffin WA. (2000). An experimental evaluation of theory-based mother and mother-child programs for children of divorce. *Journal of Consulting and Clinical Psychology*, 68(5), 843–856. doi: 10.1037/0022-006X.68.5.843 [PubMed: 11068970]
- Wolchik SA, Wilcox KL, Tein J-Y & Sandler, I. N. (2000). Maternal acceptance and consistency of discipline as buffers of divorce stressors on children's psychological adjustment problems. *Journal of Abnormal Child Psychology*, 28(1), 87–102. [PubMed: 10772352]
- Zakalik RA, & Wei M (2006). Adult attachment, perceived discrimination based on sexual orientation, and depression in gay males. *Journal of Counseling Psychology*, 53, 302–313. doi: 10.1037/0022-0167.53.3.302

Figure 1.
Interaction Between Mother-Adolescent Relationship Quality and Father support on Romantic Anxiety

Table 1:

Descriptive Information on Study Variables

Variable	<i>M</i> (<i>SD</i>)	Possible Range	Actual Range	Skewness	Kurtosis
Father Support ^a	0 (.93)		−1.94-1.4	−.57	−.58
Mother-Adolescent Relationship Quality	0 (10.72)		−39.88-11.12	−1.31	2.05
Romantic Avoidance	2.54 (1.1)	1-7	1-6.22	.88	1.1
Romantic Anxiety	3.12 (1.08)	1-7	1.22-5.72	.06	−.48

Note. N= 57 except for Mother-Adolescent Relationship Quality (N= 61).

^aComposite score was created by standardizing and averaging scores on the support and contact measures.

Table 2:

Bivariate Correlations Among Study Variables and With Potential Covariates.

	Father Support	Mother-Adolescent Relationship Quality	Romantic Anxiety	Romantic Avoidance
Father Support ^a	1			
Mother-Adolescent Relationship Quality	.27*	1		
Romantic Anxiety	-.15	-.12	1	
Romantic Avoidance	-.18	-.14	.36**	1
EA Gender	-.08	-.05	-.23[†]	-.17
T5 Mother's Financial Status	-.12	-.17	-.04	-.01
T5 Mother's Education Level	-.12	-.13	-.05	-.04
EA Age	-.06	.05	.09	-.02
EA Relationship Status	.03	.14	-.17	-.48**
EA Race	-.05	.03	-.03	-.35**
EA Education Level	-.03	.05	-.32*	-.11

**
p < .01

*
p < .05

[†]
p < .10.

^a *Note.* Composite score was created by standardizing and averaging scores on the support and contact measures. Gender is coded as 0 = male, 1 = female. Relationship status is coded 0 = no romantic partner, 1 = romantic partner. Race is coded as Non-Hispanic White = 1, other = 0. Mother's financial status is coded as 1–21 based on identification of annual income (1 = Less than or equal to \$5,000... 21 = over \$100,000). Mother's education level is coded as 1 = 8th grade or less, 2 = 9th–11th grade, 3 = 12th grade, high school diploma, GED, 4 = 1 year college, vocational/technical training, 5 = 2 years college or technical, AA degree, 6 = 3 years, but no college degree, 7 = BS or BA degree, 8 = MS, MA, MFA, etc., 9 = Ph.D., JD, MD, etc. EA education level is coded as 1 = 8th grade or less, 2 = 9th–11th grade, 3 = 12th grade, high school graduate; 4 = GED, 5 = 1 year college, vocational/technical training, 6 = 2 years college or technical, AA degree, 7 = 3 years of college but no college degree, 8 = BS or BA degree, 9 = MS, MA, MFA, etc., 10 = PhD, JD, MD.

Table 3:

Stepwise Regression of Romantic Anxiety on Covariates, Father Support, Mother-Adolescent Relationship Quality, and the Mother-Adolescent Relationship Quality x Father Support Interaction Term.

Measure	Step 1 <i>B</i> (<i>SE B</i>)	Step 2 <i>B</i> (<i>SE B</i>)	Step 3 <i>B</i> (<i>SE B</i>)	Step 4 <i>B</i> (<i>SE B</i>)
EA Education Level	-.18* (.07)	-.18* (.07)	-.18* (.07)	-.17* (.07)
Father Support		-.18 (.15)	-.17 (.16)	-.11 (.16)
Mother-Adolescent Relationship Quality			-.01 (.01)	.00 (.01)
Mother-Adolescent Relationship Quality × Father Support				.03* (.01)
	$R^2 = .10$	$R^2 = .12$ $R^2 = .02$	$R^2 = .13$ $R^2 = .01$	$R^2 = .2^*$ $R^2 = .07$

*

p < .05

Note. $R^2 = R^2$ change. EA education level is coded as 1= 8th grade or less, 2= 9th-11th grade, 3= 12th grade, high school graduate; 4= GED, 5= 1 year college, vocational/technical training, 6= 2 years college or technical, AA degree, 7= 3 years of college but no college degree, 8= BS or BA degree, 9= MS, MA, MFA, etc., 10= PhD, JD, MD.

Table 4:

Stepwise Regression of Romantic Avoidance on Covariates, Father Support, Mother-Adolescent Relationship Quality, and the Mother-Adolescent Relationship Quality $\times$ Father Support Interaction Term.

Measure	Step 1 <i>B</i> (<i>SE B</i>)	Step 2 <i>B</i> (<i>SE B</i>)	Step 3 <i>B</i> (<i>SE B</i>)	Step 4 <i>B</i> (<i>SE B</i>)
EA Race	-.96** (.35)	-.99** (.34)	-.98** (.34)	-.98** (.34)
EA Romantic Relationship Status	1.11** (.27)	1.1** (.27)	1.09** (.27)	1.09** (.27)
Father Support		-.22 (.14)	-.19 (.15)	-.18 (.15)
Mother-Adolescent Relationship Quality			-.01 (.01)	-.01 (.01)
Mother-Adolescent Relationship Quality $\times$ Father Support				.01 (.01)
	$R^2 = .33^{**}$	$R^2 = .36^{**}$ $R^2_{adj} = .03$	$R^2 = .36^{**}$ $R^2_{adj} = 0$	$R^2 = .37^{**}$ $R^2_{adj} = .01$

**
p < .01

*
p < .05

+
p < .10

Note. $R^2 = R^2$ change. Race is coded as Non-Hispanic White = 1, other = 0. Relationship status is coded 0 = EA does not have a romantic partner and 1 = EA has a romantic partner.

Note. When step 2 assessed EA race, EA relationship status, and Mother-Adolescent Relationship Quality *B*(*SE B*) for Mother-Adolescent Relationship Quality was -.01(.01) and was not statistically significant