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The Role of Boomerang Fathers in Adolescent Female Depression

Data from the 1979 National Longitudinal Survey of Youth were employed to explore the association between boomerang fathering from birth to age 18 on adolescent depressive symptomatology (N = 3,731). We examined the effects of experiencing a biological father exiting and entering the home because of breaking up and repartnering with an adolescent's mother (i.e., "boomerang fathering") when compared with other father residential patterns on adolescent depression. Findings suggest that boomerang fathering is more beneficial than harmful. Adolescent females exposed to boomerang fathering, as well as those exposed to fathers who resided with them from birth to age 18, reported significantly lower depressive symptoms when compared with females exposed to fathers who exited the household and never returned. Boomerang fathering was not significantly associated with male adolescent depressive symptomatology. Providing greater

family support during times of instability may assist in unifying families and be an indirect source of mental health prevention.

Depression is a common mental health disorder among adolescents, often first developing shortly after puberty and peaking in young adulthood (Hankin et al., 1998; Thapar, Collishaw, Pine, & Thapar, 2012). Depressive symptoms can fluctuate during adolescence (Wight, Sepulveda, & Aneshensel, 2004) and can have negative consequences for child academic outcomes, self-esteem, and problem behaviors, including alcohol and substance abuse, suicide ideation, and suicide (Harlow, Newcomb, & Bentler, 1986; Lemstra et al., 2008; Marmorstein, 2009). Furthermore, adolescent depression is a precursor to a broad range of psychosocial difficulties in adulthood, including anxiety disorders and bipolar disorder (Copeland, Shanahan, Costello, & Angold, 2009; Fergusson, Horwood, Ridder, & Beautrais, 2005), and is associated with forming less committed romantic unions in early adulthood (Manning, Trella, Lyons, & Du Toit, 2010; Sandberg-Thoma & Kamp Dush, 2014). Although depression is common among both genders, girls are twice as likely to experience depressive symptomatology. This may be related to girls focusing inward on their emotions rather than actively relieving their distress (Nolen-Hoeksema, 2001).

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Although there are biological precursors to depression, research also highlights environmental triggers, such as the family environment. Previous research indicates that father absence (Amato, 1991) and family instability (Brown, 2006) during childhood are associated with long-term child mental health problems. This is especially true for adolescent daughters who experience father absence during early childhood (Culpin, Heron, Araya, Melotti, & Joinson, 2013). Yet, research up to this point has traditionally categorized father presence or absence as a static event and thus has considered the process of biological fathers entering or exiting the childhood home as a single action. The current research investigating family demographic trends has neglected to consider the fluidity of biological fathers' residential status. An emerging literature on young adults finds that men classified as resident or nonresident partners at a single point in time may actually be *churners* (Halpern-Meekin, Manning, Giordano, & Longmore, 2013a, 2013b; Halpern-Meekin & Turney, 2016) or *cyclical cohabitators* (Nepomnyaschy & Teitler, 2013). These terms refer to partners who cycle in and out of the home because of breaking up and repartnering with the same partner and consequently are in on-again and off-again romantic relationships (Dailey, Pfiester, Jin, Beck, & Clark, 2009; Dailey, Rossetto, Pfiester, & Surra, 2009). As such, the current literature has not investigated how paternal churning (or other more fluid residential patterns of biological fathers) could be associated with adolescent depressive symptomatology. By focusing on how this understudied residential pattern (churning) may influence the parenting role a biological father may enact (which we refer to as *boomerang fathering*), our research contributes to existing literature by providing national estimates of the proportion of youth who experience cyclical paternal relationships from birth to age 18. Furthermore, we describe the characteristics of households that experience boomerang fathering and compare those characteristics with various father residential patterns. Last, we assess whether boomerang fathering is associated with higher or lower rates of adolescent depressive symptoms among boys and girls.

BOOMERANG FATHERING

Young adulthood is seen as a pivotal time point for developing intimate relationships (Arnett,

2000, 2007); thus, research examining on-again and off-again romantic relationships has primarily focused on young adults (e.g., Dailey, Brody, LeFebvre, & Crook, 2013; Dailey, Pfiester, et al., 2009; Dailey, Rossetto, McCracken, Jin, & Green, 2012). Among young adults in dating relationships, 50% to 60% have reported churning with the same partner (Dailey, Pfiester, et al., 2009; Halpern-Meekin et al., 2013a), and having sex with the ex-partner during a breakup is common (Halpern-Meekin et al., 2013b). Overall, young adult romantic relationships are considered somewhat unstable, and churning contributes to this instability (Halpern-Meekin et al., 2013b).

Among White, married or cohabitating couples, churning is less common. One quarter of married couples who separate reconcile once, and only 10% of cohabiting couples who separate reconcile with the recent partner (Binstock & Thornton, 2003). Among a sample of socioeconomically disadvantaged cohabiting parents, 22% of the couples reported cyclical cohabitation (Nepomnyaschy & Teitler, 2013). This reunification appears to be short lived for some couples. Of married couples, 50% separate within 3 years and one third of cohabiting couples separate within 1 year of their reconciliation (Binstock & Thornton, 2003). Nonetheless, most of the research on churning has focused on young adults in dating relationships; thus, less is known regarding the number of children exposed to biological fathers who exit and reenter the household. The current study contributes to the literature by providing national estimates of the percentage of adolescents who experience boomerang fathering throughout their 18-year childhood.

THEORETICAL MODEL

A few theories help us conceptualize why couples may decide to either terminate their relationship or reconcile after a separation. The household production theory (Becker, 1991) and a similar counterpart, the parent investment theory (Thomson & McLanahan, 2012), focus on household resources, individual time, and involvement as critical contributions to relationships. To obtain the best possible outcome (or utility) for both parties in a relationship, couples will decide whether it is advantageous to pool financial resources. The household production theory suggests that individuals will form a

union if they believe there is a financial benefit to pooling resources. For households that experience boomerang fathering, fathers may enter the household when there is a mutual benefit to pool resources but exit when the pooling of resources does not result in the best possible outcome.

Similarly, the parent investment theory suggests that couples will unite if they believe the additional adult partner can provide resources to the household. The criteria partners use to evaluate whether the additional partner is a valuable investment for the household is similar to Lamb's three-part taxonomy to father involvement: parental engagement (i.e., direct interaction with the child), availability (i.e., accessibility to the child), and responsibility (e.g., financial support; Lamb, 1986). Thus, when partners are viewed as crucially lacking responsibility or resources across the three areas, couples may choose to dissolve their union. If there are doubts among couples who separated, that is when relationships are negotiated and reforming of relationships may occur (Dailey et al., 2012). In terms of boomerang fathers, fathers who are viewed as engaging, available, and responsible with the child may be more likely to reenter the household. Conversely, permanent separation is more likely when father involvement is lacking.

INSTABILITY AND CHILD DEVELOPMENT

Family stability becomes increasingly important during adolescence in part because this is a time in which various developmental changes occur, including physical and social changes that accompany puberty and the desire to establish autonomy (Eccles, 1999). A stable marriage continues to be considered the most beneficial for child development because much research indicates a number of positive outcomes for children and adolescents who reside in stable married households (Brown, 2006) when compared with children who are exposed to partner instability (Cavanagh, 2008; Cavanagh & Huston, 2008; Magnuson & Berger, 2009; Osborne & McLanahan, 2007). Although single motherhood has been associated with poorer outcomes for children, research suggests that the stability in a single-parent household may be beneficial for children's development. For example, adolescents who reside in stable single-parent households report better emotional and mental health outcomes when compared

with adolescents where biological fathers and stepfathers transition in and out of the household (Demo & Acock, 1996; Williams, Sassler, Frech, Addo, & Cooksey, 2013). In fact, children who are raised in stable households of any kind—whether stably married, cohabiting, or single—do better than children who experience family disruptions and reunifications (Kamp Dush, 2009). Perhaps the stress associated with family structure and residential changes may leave children feeling emotionally disconnected.

The mechanism by which children manifest the stress associated with family structure and residential changes appears to depend on the child's gender. For instance, some studies have found family instability is related to increased child and adolescent problem behaviors for boys but not for girls (Cavanagh, Crissey, & Raley, 2008; Cavanagh & Huston, 2008). Furthermore, biological father absence is associated with marijuana use among African American male adolescents but not African American female adolescents (Mandara, Rogers, & Zinbarg, 2011). Instead of externalizing their stress, girls appear to internalize their emotions associated with family structure changes. For instance, family instability is negatively related to the socio-emotional development of obese girls but not boys (Crosnoe, 2012), and biological paternal absence has been demonstrated to be detrimental to the mental health of daughters but not sons (Culpin et al., 2013).

The question remains as to how children react when their biological father exits and reenters the household. Emerging research on cyclical cohabitators and child well-being suggest that children who reside with cyclical cohabiting parents perform the same as their peers whose biological parents are stably cohabiting (Nepomnyaschy & Teitler, 2013). This may occur because boomerang fathers act more like stably residential fathers—in terms of the relative consistency of resource provision and maintenance of parenting roles and responsibilities—than stably nonresidential fathers, who often provide fewer resources and reduce contact with their children over time. Thus, it may be that the negative results associated with the instability component of boomerang fathering may be counteracted by more consistent access to interpersonal and economic resources over time, resulting in a net positive effect on children's well-being. Furthermore, because boomerang fathering involves the

same biological partner exiting and returning to the same household, this family pattern limits children's exposure to other men entering the house, reducing potential ambiguities within the family system. Thus, boomerang fathering may provide a more consistent access to resources and simultaneously buffer children from the negative consequences associated with different partners entering and exiting the household. The consistency and familiarity may also lower the youth's stress and prevent physiological changes that are precursors to experiencing depressive symptomatology (Graber, Brooks-Gunn, & Warren, 1995; Halligan, Herbert, Goodyer, & Murray, 2007). With these potential benefits in mind, the current study contributes to family literature by investigating whether boomerang fathering during an 18-year period is associated with positive child developmental outcomes (i.e., lower depression in adolescence) and whether this association varies by child gender.

COVARIATES

To best assess the relationship between boomerang fathering and adolescent depression in our multivariate analyses, we included a set of adolescent and maternal factors that are likely to have methodological or theoretical associations with the main variables of interest (i.e., father residential patterns). From a methodological perspective, we want to provide a clear reference point for the relationships of interest, and so we include marital status at the time of the child's birth to isolate the effects of general instability from the instability associated with biological fathers exiting and reentering the household after the child's birth.

According to the household production theory, unions are formed on the premise that there is a financial benefit to pooling resources. With this rationale in mind, we control for the percentage of time adolescents were exposed to poverty and maternal unemployment from their birth to age 18 along with mother's educational attainment at the child's birth and whether she increased her education by the child's 18th birthday, as these characteristics of households are related to youth depressive symptomatology as well as the prevalence or occurrence of family instability. Last, the application of parental investment theory suggests that during times of greater parental mental illness or stress, engagement and accessibility

are needed from the nondepressed parent to maintain child well-being. Thus, we draw on the multigenerational nature of the data and control for elevated maternal depressive symptomatology because an intergenerational transmission of mental illnesses has been observed (Garber & Cole, 2010; Hammen, Brennan, & Le Brocq, 2011).

PRESENT STUDY

The current study integrates the emerging literature on partner churning (Halpern-Meeke et al., 2013a; Nepomnyaschy & Teitler, 2013), or in this case boomerang fathering, and the broader literature of family instability, paternal involvement, and child psychological well-being (Amato & Sobolewski, 2001; Brown, 2006; Osborne & McLanahan, 2007; Strohschein, 2005). Up until now, research on family structure instability has paid little attention to the biological relatedness of the male partners who transition into and out of the household and how this may influence child well-being (Nepomnyaschy & Teitler, 2013). Furthermore, to the authors' knowledge, no research up to this point has taken an adolescent life span approach to provide an estimate of how many adolescents from birth to age 18 have experienced boomerang fathering. The research questions for the current study are the following:

- 1 What are the household characteristics of families who experience boomerang fathering, and how do these characteristics compare with households with other father residential patterns?
- 2 When compared with nonboomerang fathering (i.e., fathers who exit the household and do not return), is boomerang fathering associated with higher or lower rates of depressive symptoms among adolescent girls and boys?

Although there is limited research on the effects of boomerang fathering on child well-being, we hypothesize that adolescent girls who experience boomerang fathering will be associated with higher depressive symptoms when compared with adolescent girls who experience instability, but whose fathers did not boomerang. We do not expect to find this association among adolescent boys. Our hypotheses are driven from two sets of literature. The first found that girls are more likely than boys to internalize their emotions related

to family structure instability and biological father absence (Crosnoe, 2012; Culpin et al., 2013). The second set of literature found that the stability in two-parent and single parent households is related to positive child outcomes (Kamp Dush, 2009). Thus, daughters may have a stronger depressive response to the instability associated with disruptions and reunifications that depicts boomerang fathering.

METHOD

This study uses data from the National Longitudinal Survey of Youth (NLSY) 1979 (NLSY79) and the linked Young Adults files. NLSY data are sponsored by the U.S. Department of Labor and have been compiled through the Ohio State University Center for Human Resource Research. The original NLSY79 cohort contains a nationally representative sample of 12,686 men and women who were 14 to 22 years old when they were first surveyed in 1979. The NLSY has surveyed the biological children of these women every 2 years since 1986 and represents more than 90% of all the children born to this cohort.

Analytic Sample

Of the 6,283 NLSY women in the original cohort, women were eligible for the analytic sample if they ever reported having children (1,353 childless women excluded), were not part of the military or poverty oversamples discontinued in the 1980s and 1990s (892 women excluded), were alive at the final survey (144 excluded), were deemed eligible for interview (8 excluded), and completed enough surveys to reliably assess relationship histories during the period (520 excluded). Our final sample of mothers includes 3,366 NLSY women who gave birth to 8,261 children from 1970 to 2006 (3,242 children born to ineligible women were excluded). Sensitivity analyses indicate that our sample of women ($n = 3,366$) does not significantly differ from the full NLSY women cohort in terms of weighted descriptive characteristics of women's race and ethnicity, early life characteristics (e.g., immigrant status, maternal and paternal education, resided with parents at age 14), and education, employment, and poverty at the time of the first child's birth.

The child sample was further restricted to youth who were at least 18 years old by 2010

and had valid depression data (3,861 cases excluded), lived with their mothers at least 75% of the time from their birth until their 18th birthday (204 cases excluded), and had valid information related to their exposure to maternal unemployment and poverty from birth to age 18 (465 cases excluded). The final analytic sample consisted of 3,731 adolescents who were born between 1978 and 1992.

Dependent Variables

Depression. Adolescent self-reported depressive symptoms were assessed using the Center for Epidemiological Studies Depression Scale Short Form (CES-D SF; Radloff, 1991). The CES-D is considered to be reliable in measuring depressive symptoms across individuals of various race and ages as well as gender (Knight, Williams, McGee, & Olaman, 1997; Radloff, 1991; Roberts, Vernon, & Rhoades, 1989). Youth responded to seven items (e.g., "I felt that everything I did was an effort," "I could not get going") gauging the frequency of depressive symptomatology during the past week on a scale ranging from 0 (*rarely, none of the time, 1 day*) to 3 (*most, all of the time, 5–7 days*). Items were aggregated and averaged whereby higher values indicated greater depressive symptomatology, and youth responses were taken from the survey wave in which youth were 18 or 19 years old in efforts to draw on measures of family instability spanning the adolescent's entire childhood (birth to 18 years; see description of coding).

Independent Variables

Father residential patterns. Father residential patterns were based on adolescent's experiences of their mother's romantic relationships and unions from the child's birth to age 18 years. Residential patterns were constructed from mothers' self-reported relationship statuses and childbearing from 1979 onward. At each survey, mothers were asked to indicate whether they were in a current residential relationship, identify the relationship type (marriage, cohabitation, single), describe up to three changes in relationship status since the prior interview (divorce, move out, marriage, move in), and provide the start and end dates of each relationship. These data were then matched to household roster data that provides a unique

partner identifier, allowing us to simultaneously link individual partners to women's childbearing and relationship histories, identify the children's biological fathers, and determine whether the same partner ever exited and reentered the home.

These data were then incorporated into child-specific relationship history profiles that were identified from the child's birth through their 18th birthday: when the biological father (or other nonbiological fathers) were in the child's home (i.e., entrance dates), when the biological father (or other nonbiological fathers) were not in the child's home (i.e., exit dates), what the relationship or marital status was between the biological or nonbiological fathers and the child's mother, and all relationship or marital transitions that occurred over time (i.e., cohabitation start, marriage start, marriage end via separation, and marriage end via divorce; Dorius, 2012).

Among the adolescents whose fathers resided with their children for part of their childhood, their experiences with their father's residential patterns were further explored to identify potential cyclical relationships (i.e., boomerang fathering) between the biological parents. Boomerang fathering was constructed to reflect whether a birth father ever lived in the home, was then reported as leaving, and returned to the home at least one time, regardless of the possible change in relationship status (e.g., "marriage, divorce, cohabitation" and "marriage, separation, reentry" would both be considered boomerang fathering if the biological father was the man in question). Therefore, adolescents were coded as experiencing boomerang fathering if their biological father exited the home because of a break up (of any type) and then reentered the house because of a cohabitation, a marital reunification, or a marriage with the child's mother (Dorius, 2012). From these data, the following four categories that describe the child's biological father's residential pattern over time were included in the current study: biological father resided with his children the entire time from birth to age 18 (i.e., stable group); biological father resided with his children for part of their childhood and then exited the household (i.e., unstable group); biological father never resided with his children (i.e., not present group); or biological father resided with his children, exited the household, and later returned to the household (i.e., boomerang).

Gender. Adolescent's gender was reported by mothers during the first survey after the child's birth (1 = girl; 0 = boy).

Covariates

A set of adolescent and mother characteristics were incorporated into the models as covariates to reflect selection factors that might be a cause or consequence of a mother's union stability and biological father's residential patterns as well the adolescent's depressive symptoms. Adolescent characteristics include race and ethnicity (White [reference], Hispanic, Black), positive self-esteem (1994 Rosenberg Self-Esteem Scale [RSE]; Rosenberg, 1965), number of siblings, and percentage of childhood adolescent was exposed to poverty and maternal unemployment (i.e., birth to age 18 years).

Maternal characteristics include her age at child's birth (years), relationship status at child's birth (single, cohabiting, married [reference]), education at child's birth (less than high school diploma, high school diploma/General Educational Development [reference], some college, bachelor's degree, or more), education level increased by adolescent's 18th birthday (1 = increased education category; 0 = no change), and maternal elevated depressive symptoms in adulthood (where women who scored in the ≥ 75 th percentile were considered to have elevated depression symptoms and given a value of 1).

Analytic Plan

Using STATA SE 13 statistical software (Stata-Corp LP, College Station, TX), descriptive analyses, and ordinary least squares (OLS) regression models were performed. Weighted descriptive analyses were conducted on nonimputed data, and bivariate associations between the father residential patterns and each covariate were investigated. Before conducting multivariate OLS regression models, multiple imputation techniques were used to impute missing values on independent covariates (2% of values) using switching regression techniques. The multiple imputation process created five imputed data sets that are modeled simultaneously to increase the accuracy of parameter estimates and correct standard errors. This is in comparison to listwise deletion, which can result in a sample that no longer represents the population (Graham,

2009; Graham & Schafer, 1999). The dependent variable was not imputed.

OLS regression models were conducted on imputed data to predict youth depressive symptomatology. Specifically, models were stratified by gender, and youth depressive symptomatology was regressed on biological father residential patterns and adolescent and mother covariates. In these models, the unstable residential group was the reference category and represented the households where biological fathers exited and entered the household only once. As stated previously, much research has indicated a number of positive outcomes for children and adolescents who reside in stable married households (Kelly, 2000), and there is research indicating that children who reside in stable single-parent households are also associated with positive well-being (Demo & Acock, 1996; Williams et al., 2013). Yet, it is unclear whether depressive symptoms vary among children who reside in households where biological fathers exit and enter the household only once from children whose biological fathers exit and enter the household multiple times (i.e., boomerang fathers). For this reason, we chose to use "unstable" as the reference group. The findings include the unstandardized beta coefficient and standard errors. Standard errors were adjusted using the Huber-White sandwich estimator to account for the lack of independence of observations based on siblings born to the same mother (Rogers, 1993; Williams, 2000).

RESULTS

Table 1 displays the distribution of biological father residential pattern characteristics. Slightly more than half of the sample resided with their biological father from birth to age 18 years. One third of the sample experienced an unstable father residential pattern, with 15% of these adolescents experiencing boomerang fathering (5% of the total sample). Of the sample, 13% never resided with their biological father. Adolescents exposed to boomerang fathering experienced between two and eight parent relationship transitions, with an average number of transitions being slightly more than three.

Table 1 also contains three additional variables that were created in efforts to parse apart what aspects of boomerang fathering itself may at least partially explain adolescent depressive symptoms when compared with the other

residential patterns. Specifically, we created a variable capturing the duration of time that had passed since the last transition with the biological father (i.e., the recency of his latest entrance or exit), whether the boomerang pattern resulted in the biological father remaining in the household by the adolescent's 18th birthday (1 = yes, he was in the home and 0 = no, he was not in the home), and the number of nonbiological father partners the adolescent was exposed to from birth to age 18 years (i.e., father figures). When compared with adolescents who experienced unstable but nonboomerang residential patterns, adolescents exposed to boomerang fathering were more likely to have their biological father in the household by their 18th birthday and experienced a transition with their biological father more recently. In addition, 59% of adolescents who resided in a boomerang household never resided with a nonbiological resident father (i.e., father figure). This proportion was much greater than the share of adolescents who resided in unstable, nonboomerang fathering households and households where the biological father was never present.

Table 2 displays adolescent and maternal characteristics for the analytic sample. Adolescents in the analytic sample reported relatively low depressive symptomatology (compared to the scale range from 0 to 21). On average, adolescents in stable residential patterns reported significantly lower depressive symptoms than adolescents exposed to unstable nonboomerang fathers and adolescents who never lived with their biological father. Notably, adolescent depressive symptoms were not significantly different between adolescents who lived with their biological fathers from birth to age 18 years and those exposed to boomerang fathering. Of the stable couples, 96% were married at the time of the adolescent's birth. Mothers in boomerang relationships, compared to women in unstable, nonboomerang relationships, were less likely to have been married at the time of the adolescent's birth and more likely to be single. Mothers involved in boomerang relationships and mothers in households where the biological father was not present displayed similar educational profiles. These two groups were more likely to have not completed high school and less likely to have completed a bachelor's degree by the child's birth when compared with mothers in stable relationships and mothers in unstable, nonboomerang relationships. At

Table 1. Analytic Sample Weighted Father Residential Pattern Characteristics and by Biological Father Residential Patterns, M (SD) [Range] or %

	Analytic sample, <i>n</i> = 3,731	Stable fathering, <i>n</i> = 1,580	Biological father residential pattern		
			Unstable, <i>n</i> = 1,325		Not present, <i>n</i> = 826
			Nonboomerang fathering, <i>n</i> = 1,121	Boomerang fathering, <i>n</i> = 204	
Biological father residential pattern from birth to 18 years					
Stable	52	100	—	—	—
Unstable, includes nonboomerang fathering and boomerang fathering	35	—	85	15	—
Not present	13	—	—	—	100
Type of biological father unstable pattern					
Boomerang fathering	5	—	—	100	—
Number of transitions with biological father	0.64 (0.99) [0 – 8]	0.03 (0.18) [0 – 1] ^{abc}	1.55 (0.54) [0 – 3] ^b	3.29 (1.04) [2 – 8]	—
Duration since last biological father transition, years	10.78 (4.91) ^d	—	11.07 (4.87) ^b	8.97 (4.80)	—
Biological father ended up in household, birth to 18 years	54	100 ^{bce}	1 ^b	31	0 ^{bc}
No. of nonbiological resident fathers (i.e., father figures) from birth to 18 years					
0	70	100 ^{bce}	37 ^b	59	27 ^{bc}
1	23	—	50 ^b	30	49 ^b
2+	8	—	13	11	24 ^{bc}

Note. All values are weighted (except *n*) and based on nonimputed data.

^aChildren in this group could still experience a relationship transition that did not involve the father leaving the house (i.e., moving from cohabitation to marriage). ^bSignificantly different from boomerang fathering (*p* < .05). ^cSignificantly different from nonboomerang fathering (*p* < .05). ^dThis statistic reflects the average time since the last biological father transition for the unstable residential group (i.e., Nonboomerang Fathering + Boomerang Fathering; *n* = 1,325). ^eSignificantly different from not present (*p* < .05).

the same time, a greater percentage of mothers in boomerang relationships increased their education by their adolescent’s 18th birthday when compared with mothers in stable relationships and those in unstable, nonboomerang relationships. A greater percentage of mothers in boomerang relationships had elevated maternal depressive symptoms when compared with mothers in stable relationships, mothers

in unstable, nonboomerang relationships, and mothers where the youth’s biological father was never present in the household.

Multivariate Regression Models

Next, we investigated how boomerang fathering—compared with unstable, non-boomerang fathering—contributed to adolescent

Table 2. Adolescent and Mother Weighted Characteristics for the Analytic Sample and by Biological Father Residential Patterns, M (SD) or %

	Analytic sample, <i>n</i> = 3,731	Biological father residential patterns			
		Stable, <i>n</i> = 1,580	Unstable, <i>n</i> = 1,325		Not present, <i>n</i> = 826
			Nonboomerang, <i>n</i> = 1,121	Boomerang, <i>n</i> = 204	
Adolescent characteristics					
Adolescent Depressive Symptoms (CES-D SF)	4.35 (3.56)	4.00 (3.37) ^{bc}	4.77 (3.73)	4.55 (3.44)	4.69 (3.79)
Girl	49	48	51	46	50
Race/ethnicity					
White	76	88 ^{abc}	77 ^a	68	33 ^{ab}
Black	16	6 ^{abc}	13	19	59 ^{ab}
Hispanic	8	6 ^{abc}	10	13	8 ^{ab}
Positive self-esteem	3.19 (0.40)	3.23 (0.40) ^{ab}	3.15 (0.39)	3.14 (0.37)	3.18 (0.41)
Number of siblings	1.84 (1.25)	1.79 (1.17) ^{ac}	1.82 (1.27) ^a	1.92 (1.27)	2.03 (1.47) ^b
Proportion of childhood (birth to age 18) exposed to:					
Family poverty	0.19 (0.29)	0.07 (0.17) ^{abc}	0.21 (0.28) ^a	0.30 (0.30)	0.54 (0.33) ^{ab}
Maternal unemployment	0.36 (0.30)	0.34 (0.31) ^c	0.32 (0.27) ^a	0.34 (0.27)	0.48 (0.30) ^{ab}
Mother characteristics					
Age at child's birth (years)	26.29 (4.15)	27.33 (3.60) ^{abc}	25.88 (4.04) ^a	24.37 (4.16)	23.88 (4.88) ^b
Marital status at child's birth					
Single	15	--	3 ^a	18	100 ^{ab}
Cohabiting	6	4 ^{ab}	11	11	—
Married	79	96 ^{ab}	86 ^a	71	—
Education at child's birth					
Less than high school diploma	15	8 ^{abc}	15 ^a	29	38 ^b
High school diploma/GED	46	43 ^b	51	51	44 ^b
Some college	21	23 ^{ac}	22 ^a	16	16 ^b
Bachelor's degree or more	19	26 ^{abc}	12 ^a	4	3 ^b
Education increased by child's 18th birthday	19	12 ^{abc}	22 ^a	32	32 ^b
Elevated maternal depressive symptoms	24	17 ^{abc}	28 ^a	39	34 ^a

Note. All values are weighted (except *n*) and based on nonimputed data. GED = General Educational Development.
^aSignificantly different from boomerang (*p* < .05). ^bSignificantly different from nonboomerang (*p* < .05). ^cSignificantly different from not present (*p* < .05).

female depressive symptomatology and adolescent male depressive symptomatology (Table 3). Female adolescents exposed to boomerang fathering reported significantly lower depressive symptoms at age 18 when compared with their female peers exposed to unstable, nonboomerang fathering (*b* = −0.80, *p* < .05). In addition, female adolescents in stable home environments reported significantly lower depressive symptoms (*b* = −0.76,

p < .001) when compared with female adolescents exposed to unstable, nonboomerang fathering. Yet, boomerang fathering was not significantly related to male adolescent depressive symptoms. The intergenerational association between elevated maternal depressive symptoms and youth depressive symptoms was significant for male, but not female, adolescents in the analytic sample. Specifically, male adolescents whose mothers reported elevated depressive

Table 3. Ordinary Least Squares Regressions Predicting the Association Between Biological Father Relationship Patterns and Elevated Adolescent Depressive Symptom

Biological father residential pattern	Girls, <i>n</i> = 1,849		Boys, <i>n</i> = 1,882	
	<i>b</i>	<i>SE b</i>	<i>b</i>	<i>SE b</i>
Stable	−0.76**	0.22	−0.32	0.20
Unstable (reference)	—	—	—	—
Not present	−0.68	0.70	−0.89	0.59
Boomerang	−0.80*	0.38	−0.34	0.37
Adolescent characteristics				
Race/ethnicity				
White (reference)	—	—	—	—
Black	0.09	0.24	0.11	0.21
Hispanic	−0.36	0.22	0.15	0.21
Positive self-esteem	−1.63**	0.22	−1.44**	0.21
Number of siblings	−0.00	0.08	−0.06	0.07
Proportion of childhood exposed to:				
Family poverty	−0.22	0.43	−0.15	0.38
Maternal unemployment	0.59	0.37	−0.23	0.30
Mother characteristics				
Age at child's birth	−0.03	0.02	−0.03	0.02
Marital status at birth				
Single	0.15	0.67	1.08	0.57
Cohabiting	0.58	0.37	0.61	0.36
Married (reference)	—	—	—	—
Education at child's birth				
Less than high school diploma	−0.08	0.27	−0.11	0.25
High school diploma/GED (reference)	—	—	—	—
Some college	−0.32	0.22	0.00	0.19
Bachelor's degree or more	−0.32	0.29	−0.31	0.25
Education level increased by child's 18th birthday	0.03	0.24	0.07	0.20
Elevated maternal depressive symptoms	0.27	0.20	0.71**	0.19
<i>R</i> ²		0.16		0.05

Note. Models were conducted on imputed data. Additional parallel models on the full sample that included a gender interaction term with biological father residential patterns were conducted. This was done to assess whether gender differences were present in the association between biological father residential pattern and depression. Results were nonsignificant. GED = General Educational Development.

p* < .05. *p* < .001.

symptoms had significantly higher depressive symptoms when compared with male adolescents whose mothers did not report elevated symptoms (*b* = 0.71, *p* < .001).

Sensitivity Models

The first set of sensitivity models assessed whether gender differences exist across father residential history groups and depression. We ran parallel models with the full sample and assessed an interaction effect of gender and father residential patterns on depression. The results were nonsignificant.

Two additional models were conducted to assess whether it was the number of biological father transitions rather than the type of biological father residential pattern that predicted youth depressive symptoms because cumulative risk theory suggests that adolescent depression manifests itself as the number of risk factors increases (Elovainio et al., 2015; Forehand, Biggar, & Kotchick, 1998). In this case, risk was operationalized as the number of biological father transitions youth experience, and these transitions could either have a linear effect or a threshold effect on adolescent depression.

Specifically, the linear risk model suggested that the number of transitions corresponded to a linear increase in adolescent depression (Appleyard, Egeland, Dulmen, & Sroufe, 2005; Sameroff, Seifer, Baldwin, & Baldwin, 1993). On the other hand, the threshold risk model suggested that there was a tipping point at which a specific number of transitions occurred that was exponentially negatively related to adolescent depression. In both models, the dichotomous indicator for boomerang fathering was omitted and either (a) a continuous variable (linear risk model) or (b) a categorical variable indicating the number of transitions (threshold risk model) was included. Results from these models indicated that neither a linear nor a threshold effect was present when the number of biological father transitions was entered into the models.

DISCUSSION

The overarching goal of the current study was to contribute to the family instability and paternal involvement literature by focusing on an understudied father residential pattern called *boomerang fathering*. By focusing on the residential patterns of biological fathers from the birth of their child to their adolescent's 18th birthday, we were able to estimate the proportion of youth who experienced boomerang fathering throughout childhood. Findings from this study suggest that more than one third of adolescents experienced biological father instability, whereas 13% of adolescents in the sample never lived with their biological father from their birth through their 18th birthday. Among the adolescents who experienced family instability, 15% experienced boomerang fathering (i.e., 5% of the total sample). This number is slightly less than the number of children who experienced a cyclical cohabitation in other research (Nepomnyaschy & Teitler, 2013). The difference in prevalence rates could be related to the fact that the study by Nepomnyaschy and Teitler (2013) was based solely on cohabiting couples. Furthermore, the sample used by Nepomnyaschy and Teitler (2013) is a much more ethnically diverse as well as more socioeconomically disadvantaged when compared with the current sample. Previous research has indicated that among socioeconomically disadvantaged populations, cohabitation has been a common lifestyle for several decades (Cherlin, 2010). Among this demographic, cohabitation has been referred

to as the poor man's marriage (Clarkberg, 1999; Landale & Forste, 1991), suggesting that cohabitation is viewed as a potential solution to economic hardship. Among socioeconomically disadvantaged families, greater family instability has been observed among cohabiting relationships when compared with married relationships (Osborne, Manning, & Smock, 2007). Thus, it is reasonable to observe a higher percentage of cycling in the prior study when compared with this study where the sample included married and cohabiting biological parents along with economically advantaged families.

The rich data employed in this study also provide us the opportunity to contribute to existing literature by examining profiles of households that can be categorized by boomerang fathering. Findings indicate that biological parents who boomerang are more likely to be single at the time of the child's birth. This finding suggests that perhaps the lack of a legal (i.e., marriage) or residential (i.e., cohabitation) commitment may be a gateway for which cycling or boomeranging exists. Although the households categorized as having experienced boomerang fathering were not as socioeconomically disadvantaged as households where the biological father never resided, they were less economically advantaged when compared with unstable, nonboomerang fathering households. Mothers involved with boomerang fathers had lower levels of education and the adolescents experienced a greater proportion of their childhood in poverty when compared with both stable married household and unstable, nonboomerang households. Building on the household production theory (Becker, 1991), reconciliation may have occurred during times of economic hardship.

Last, we were able to assess whether boomerang fathering is associated with elevated depressive symptoms among the adolescent offspring exposed to these relationship patterns. Contrary to our hypothesis, the results suggest that boomerang fathering serves as a protective factor for female adolescent depression when compared with female adolescents who experienced instability but did not boomerang (e.g., biological fathers who left but never returned). A sociobiological frame may assist in explaining this counterintuitive finding. Previous research has suggested that stressful experiences during childhood influence the physiological changes associated with pubertal timing (Graber et al., 1995). For instance, father absence (Ellis,

McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999; Moffitt, Caspi, Belsky, & Silva, 1992) and stepfather presence (Ellis & Garber, 2000) are considered to be stressful events. Heightened distress is associated with early puberty and activation of the hypothalamic-pituitary-adrenal (HPA) axis of cortisol. Among adolescents, consistent or chronic exposure to high levels of cortisol can trigger depression (Halligan et al., 2007). Although we lack the information of pubertal time and physiological measurements (such as cortisol levels), the findings suggest that most youth who experienced boomerang fathering did not experience an additional nonbiological resident father in the household after the exit of their biological father (59%). Furthermore, about one third of these youth had their biological father residing in the house with them on their 18th birthday. Thus, the familiarity of a biological father who enters and exists the house—coupled with the fact that his presence likely deters nonbiological partners from entering the house—may lower the stress activation of the HPA axis of cortisol and consequently depressive symptoms. Perhaps it is through these mechanisms that boomerang fathering serves as a protective factor in terms of the mental health of daughters. Although the relationship between the biological father and mother may be complex, there appears to be a dedicated commitment to the child by the biological father, creating a healthy bond between the father and child.

In all models, it was assumed that the direction of our assessment moved from boomerang fathering to adolescent depression. Building on the parent investment theory (Thomson & McLanahan, 2012), the results could be a reflection of active fathers who reentered the household when the depressive symptoms of their adolescents emerged and exited the household when the depressive symptoms lessened. At the same time, a greater percentage of mothers who were involved with boomerang fathers experienced depression when compared with the other residential patterns. Here again, fathers may be reacting to bouts of maternal depression and entering the household during those times and exiting the household when symptoms subsided. Or alternatively, these fathers may return to the household, or be invited back into the household, when mothers are healthy or more emotionally stable, and leave or be pushed out of the household when her depressive symptoms

increase. Unfortunately, our data do not allow us to tease this out. Either way, the current findings are described as father effects, when in fact the current findings may reflect responsive parenting and be related to either adolescent or mother effects or adolescent- or mother-initiated pushes and pulls to and from the household (Hawkins, Amato, & King, 2007).

There are several limitations that must be noted. Although the NLSY79 captured data of male youth in 1979, the data set did not capture self-reported data from fathers of adolescents nor children of the original male cohort. Thus, we were unable to provide sociodemographic information on the fathers of the adolescents in our sample as we were for the mothers; consequently, our knowledge is limited in furthering the understanding of boomerang fathering. In addition, the data lack measures of the quality of the parental relationship or father-child relationship, along with the financial resources, paternal availability, and paternal engagement at the time boomerang fathers entered and exited the household.

Despite these limitations, the current study adds to the broader literature on family instability and paternal involvement by focusing on an understudied father residential pattern, boomerang fathering. The findings suggest that family instability is much more fluid and complex than research had previously perceived. To our knowledge, we provided the first national estimates of the percentage of adolescents that are exposed to biological fathers cycling in and out of the home because of breaking up and repartnering with their mothers. Although the proportion of the population that experiences boomerang fathering is small, results from this study suggest that having a biological father exit and reenter the household may provide some form of stability to adolescent daughters because this pattern is also associated with fewer nonbiological fathers entering the house. At the same time, women who boomeranged with their child's biological father had higher depressive symptoms; however, we were unclear whether this was a cause or consequence of the fluidity in the relationship with the child's biological father. It should be acknowledged that although complex, biological fathers that boomerang appear to be committed to their families and, consequently, boomerang fathering lessens depressive symptomatology expressed by their adolescent daughters. Furthermore, boomerang

fathering may act as a buffer to an intergenerational transmission of depressive symptoms among adolescent females. Providing greater family support during times of instability may assist in unifying families and be an indirect source of mental health prevention.

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