Patterns of Stepfamily Relationship Quality and Adolescents’ Short-Term and Long-Term Adjustment

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Stepfamilies experience unique dynamics, with implications for family functioning and youth well-being. Emerging research is incorporating a holistic perspective whereby stepfamily dynamics are viewed more comprehensively, and constellations of stepfamily relationship quality are identified. In the current study, we examined short-term and long-term associations between latent patterns of stepfamily relationships (including the quality of mother–child, stepfather–child, nonresident father–child, and stepcouple dyads) and youth adjustment (i.e., depression, delinquency, self-esteem) across three stages of youth development: adolescence, emerging adulthood, and young adulthood. Using a representative sample of adolescents from the National Longitudinal Study of Adolescent to Adult Health (Harris et al., 2009), results from longitudinal structural equation models and latent-growth curve models indicated that youth adjustment over time is optimized among youth in a residence-centered (i.e., high-quality relationships among mother–child, stepfather–child, and stepcouple dyads) or inclusive (i.e., high-quality relationships across all dyads, including the nonresident father) pattern, as compared with youth in an unhappy-couple (i.e., low-quality stepcouple relationship) or parent–child disconnection (i.e., low-quality relationships between youth and each parental figure) pattern. The results point to many similarities between male and female youth in terms of adjustment responses to patterns of stepfamily relationships, although some differences became apparent. In the context of stepfamily relationships marked by low-quality relationships, male youth might exhibit greater initial levels of externalizing problems than female youth, whereas female youth might exhibit greater initial levels of internalizing problems than male youth. Implications for future research and intervention and prevention efforts are discussed.

Keywords: Add Health, adjustment, family relationships, stepfamily, youth

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Families are a proximal and dynamic social context in which youth develop (Lippold & Jensen, 2017). Currently, children in the United States experience an average of one family structural transition by age 13 (Brown, Stykes, & Manning, 2016), and many of these transitions form stepfamilies—families in which one or both adults in a new committed relationship bring a child or children from a previous relationship ( Ganong & Coleman, 2017). Nearly one third of youth are estimated to live in a stepfamily household at some point before reaching their 18th birthdays (Bumpass, Raley, & Sweet, 1995; Pew Research Center, 2011).

The quality of relationships within stepfamilies is an important mechanism by which the transition to stepfamily life exerts influence on youth adjustment. In general, positive relationships in various stepfamily dyads (i.e., parent–child, stepparent–child, parent–stepparent) are associated with positive youth adjustment ( Hetherington, 1999; Hetherington, Bridges, & Insabella, 1998). Taking a holistic view, a recent cross-sectional study (Jensen, 2017) identified latent patterns of dyadic relationship quality in stepfamilies and examined each pattern’s association with family sociodemographic characteristics and youths’ concurrent adjust-
ment. It remains unclear if and how these patterns shape youth adjustment in the short-term and longitudinally across the transition to emerging and young adulthood.

In the current study, we aimed to build on prior work by examining associations between the patterns of stepfamily relationship quality previously identified and youth adjustment over the early life course (Elder, Shanahan, & Jennings, 2015). Consistent with previous research, we have called attention to three factors of youth adjustment—depression, delinquency, and self-esteem (Dunn, 2002; Dunn, O’Connor, & Cheng, 2005). We also examined sex differences in these associations, as male and female youth might respond differently to stepfamily dynamics (Hetherington & Elmore, 2003; Jensen & Howard, 2015). Understanding connections between complex patterns of stepfamily relationship quality and youth adjustment over time can guide researchers, educators, policymakers, and practitioners in their efforts to develop and deliver tailored interventions to ensure healthy development for the increasing number of youth who reside in step-families. Given that this family structure is relatively common in the population, we focused specifically on youth residing primarily with their mothers and stepfathers, each of whom also has a living nonresident father (Kreider & Ellis, 2011).

**Stepfamily Dynamics**

Stepfamilies warrant ongoing attention, in part, because they experience challenges that are generally not faced by biological nuclear families. Common stepfamily challenges include uncertainty about who is in and who is out of the family (i.e., family-boundary ambiguity), ongoing conflict between coparents, conflict between children and new stepparents, stepcouple disagreements about parenting, conflicting family cultures, family relocation, and declines in parent–child relationship quality (Brown & Manning, 2009; Coleman, Ganong, & Russell, 2013; Hetherington et al., 1998; Jensen & Shafer, 2013; King, 2009; Papernow, 2018; van Eeden-Moorefield & Pasley, 2013). Because stepfamilies attempt to bring together individuals with disparate backgrounds and family histories, new dyadic relationships form that can shift preexisting family processes and relationships.

One key opportunity for stepfamilies is to cultivate high-quality dyadic relationships within the new family system, as high-quality dyadic relationships can have important implications for youth adjustment (Coleman et al., 2013; Hetherington et al., 1998). For instance, high-quality resident parent–child relationships have been linked to reductions in youth stress and fewer internalizing, externalizing, and physical health problems (Dunn, 2002; Jensen & Harris, 2017a; Jensen, Shafer, & Holmes, 2017; King, 2007). These benefits likely emerge because the resident parent serves as an available source of support on which youth can rely when facing the changes and stressors associated with stepfamily life (Jensen, Lippold, Mills-Koonec, & Fosco, 2017). Although stepparent–child relationships take on many forms and often require significant amounts of time to develop (Papernow, 2018), high-quality stepparent–child relationships can also exert positive influence on youth adjustment, including reductions in youth stress, internalizing problems, externalizing problems, substance abuse, academic problems, and physical health problems (Bzostek, 2008; King, 2006; Jensen & Harris, 2017a, 2017b; Jensen et al., 2017). Also, the extent to which youth feel close to their nonresident fathers is linked to increases in youth academic success and decreases in youth internalizing and externalizing problems (Amato & Gilbreth, 1999; Dunn, 2002).

The quality of the couple relationship between parents and stepparents is also associated with youth adjustment. Youth exposed to parent–stepparent conflict can become distressed, imitate the aggression and hostility to which they have been exposed, and experience adjustment problems over time (Cummings, Koss, & Davies, 2015; Dunn, 2002). Conversely, research has shown that high-quality relationships between a parent and stepparent are associated with concurrent decreases in youth internalizing and externalizing problems (Dunn, 2002; Dunn et al., 2005), and decreases in youth depression in emerging and young adulthood (Jensen & Harris, 2017a).

**Patterns of Stepfamily Relationship Quality and Youth Well-Being**

Most existing studies have focused on how the quality of specific dyadic relationships shape youth well-being. Far less is known about how patterns of dyadic relationship quality take form, nor are the implications of such patterns for stepfamilies and youth well understood. This dearth of research is unfortunate, as family life is complex, and no individual or dyadic relationship exists in a vacuum. Moreover, a family systems perspective favors an inclusive approach, such that subsystems and interdependencies between subsystems are appropriately acknowledged in relation to individual adjustment and other outcomes (Cox & Paley, 1997). Thus, theorists and researchers have advocated (Dunn, 2002) and conducted holistic analyses of dyadic relationships in stepfamilies and identified distinct typologies that can aid in understanding stepchildren’s adjustment over time. For example, Amato, King, and Thorsen (2016) conducted a latent-class analysis of mother–child, stepfather–child, and nonresident father–child closeness using a representative sample of adolescents living in mother–stepfather families. They identified four patterns with varying levels of closeness between youth and their parental figures. Patterns marked by greater closeness between youth and their resident mothers and steppathers were associated with lower levels of youth depression, smoking, marijuana use, and delinquency.

Building on this work, Jensen (2017) used a representative sample of adolescents residing in mother–stepfather families and employed factor-mixture modeling (FMM; Clark et al., 2013) to identify patterns with respect to youths’ perception of the quality of mother–child, stepfather–child, nonresident father–child relationships, and mothers’ perception of the quality of the stepcouple relationship. Because stepcouple-relationship quality is an important correlate of stepfamily stability and youth adjustment (Dunn, 2002; Jensen & Harris, 2017a), the addition of this relationship was noteworthy. FMM allowed for the identification of patterns based on mean levels of relationship quality, as well as the presence and direction of correlations between relationships, enabling the exploration of how dyadic relationships were affecting each other. For example, a positive correlation between the quality of two dyadic relationships indicated that increases in the quality of one relationship were associated with increases in the quality of the other, whereas a negative correlation indicated that increases in the quality...
of one relationship were associated with decreases in the quality of the other.

As described in Jensen (2017), the results yielded four distinct patterns of stepfamily relationship quality. The **residence-centered** pattern was marked by above-average **mother—child closeness**, **stepfather—child closeness**, and **stepcouple-relationship quality**. The nonresident father–child relationship had below-average levels of involvement, and mother–child and stepfather–child closeness were positively correlated, such that increases in the quality of one of these relationships were associated with increases in the quality of the other. The **inclusive** pattern was marked by above-average mother–child closeness, stepfather–child closeness, nonresident father–child involvement, and stepcouple-relationship quality; with an especially involved nonresident father–child relationship. Mother–child closeness was positively correlated with stepfather–child closeness and nonresident father–child involvement. The **unhappy-couple** pattern had above-average mother–child closeness, near-average stepfather–child closeness and nonresident father–child involvement, and very low stepcouple-relationship quality. Mother–child closeness was positively correlated with stepfather–child closeness and stepcouple-relationship quality, whereas nonresident father–child involvement and stepcouple-relationship quality were negatively correlated. The **parent–child disconnection** pattern had very low mother–child and stepfather–child closeness, below-average nonresident father–child involvement, and slightly above-average stepcouple-relationship quality. Mother–child and stepfather–child closeness were positively correlated, but mother–child closeness and nonresident father–child involvement were negatively correlated. Refer to Table 1 for a detailed summary of each pattern.

The same work (Jensen, 2017) revealed the patterns of stepfamily relationship quality to be cross-sectionally associated with various family sociodemographic characteristics and concurrent youth adjustment. Youth in the parent–child disconnection pattern appeared to be at the highest risk of contemporaneous depression. Youth in the unhappy-couple pattern appeared to be at the highest risk of contemporaneous delinquency. Last, youth in the parent–child disconnection pattern yielded the lowest levels of contemporaneous self-esteem.

Although these associations are informative, and served to help validate the factor-mixture solution, they possess some important limitations. For one, the estimated associations are cross-sectional, generating ambiguity about the temporal order of associations. Second, the estimated associations do not account for other variables that might confound associations between the patterns of stepfamily relationship quality and youth adjustment. Consequently, building on the initial results of prior work, the primary aim of the current study was to employ a rigorous, longitudinal approach to the assessment of associations between the patterns of stepfamily relationship quality and youth adjustment. Longitudinal analysis increases our confidence that patterns of stepfamily relationship quality are indeed robust predictors of youth outcomes, and highlight whether these effects persist into emerging and young adulthood.

### Theoretical Framework

As noted earlier, family systems theory posits that patterns of family dynamics have implications for youth adjustment. Indeed, according to family systems theory, families form adaptive and

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**Table 1**

<table>
<thead>
<tr>
<th>Patterns of Stepfamily Relationship Quality</th>
<th>Residence-centered</th>
<th>Inclusive</th>
<th>Unhappy-couple</th>
<th>Parent-child disconnection</th>
</tr>
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<tbody>
<tr>
<td>Parent—child relationship quality</td>
<td>Mother—child closeness</td>
<td>Stepfather—child closeness</td>
<td>Stepcouple relationship quality</td>
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<tr>
<td>1 Residence-centered</td>
<td>Above average</td>
<td>Average</td>
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<tr>
<td>2 Inclusive</td>
<td>Above average</td>
<td>Above average</td>
<td>Above average</td>
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<tr>
<td>3 Unhappy-couple</td>
<td>Average</td>
<td>Very above average</td>
<td>Below average</td>
<td></td>
</tr>
<tr>
<td>4 Parent-child disconnection</td>
<td>Very below average</td>
<td>Average</td>
<td>Below average</td>
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</table>

**Note.**

Reflective of the findings of Jackson et al. (2010), the results yielded four distinct patterns of stepfamily relationship quality. The **residence-centered** pattern was marked by above-average mother—child closeness, stepfather—child closeness, and stepcouple-relationship quality. The nonresident father–child relationship had below-average levels of involvement, and mother—child and stepfather—child closeness were positively correlated, such that increases in the quality of one of these relationships were associated with increases in the quality of the other. The **inclusive** pattern was marked by above-average mother—child closeness, stepfather—child closeness, nonresident father–child involvement, and stepcouple-relationship quality; with an especially involved nonresident father–child relationship. Mother—child closeness was positively correlated with stepfather—child closeness and nonresident father–child involvement. The **unhappy-couple** pattern had above-average mother—child closeness, near-average stepfather—child closeness and nonresident father–child involvement, and very low stepcouple-relationship quality. Mother—child closeness was positively correlated with stepfather—child closeness and stepcouple-relationship quality, whereas nonresident father–child involvement and stepcouple-relationship quality were negatively correlated. The **parent–child disconnection** pattern had very low mother—child and stepfather—child closeness, below-average nonresident father–child involvement, and slightly above-average stepcouple-relationship quality. Mother—child and stepfather—child closeness were positively correlated, but mother—child closeness and nonresident father–child involvement were negatively correlated. Refer to Table 1 for a detailed summary of each pattern.

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### Theoretical Framework

As noted earlier, family systems theory posits that patterns of family dynamics have implications for youth adjustment. Indeed, according to family systems theory, families form adaptive and
regulatory systems marked by specific family roles and interactional patterns (Cox & Paley, 1997). Family systems are generally composed of multiple dyadic relationships, the totality of which structures the rich social context in which individuals develop. Given the structural complexity of most stepfamilies, the family system often includes relationships that transcend single households, such as relationships between youth and nonresident parents.

Life course theory emphasizes the role of social relationships in shaping human development over time. Thus, efforts are warranted to examine associations between earlier family experiences and youth adjustment prospectively across distinct and formative stages of development, including adolescence, emerging adulthood, and young adulthood (Arnett, 2000; Sadowski, Ugarte, Kolvin, Kaplan, & Barnes, 1999; Sawyer et al., 2012; Sheeber, Hops, & Davis, 2001). Although family systems and life course theories suggest that patterns of family dynamics are important for understanding youths’ short-term and long-term adjustment, these perspectives do not necessarily predict which patterns of relationship quality would be most facilitative of youth adjustment over time.

A stress-and-support perspective highlights the positive influence of high-quality and involved parent–child relationships (Sheeber et al., 2001). Indeed, youth who possess numerous high-quality relationships with parental figures are less likely to experience stress, and will have more sources from which to draw support in times of need. Thus, we hypothesized that stepfamily patterns marked by high-quality mother–child, stepfather–child, or nonresident father–child relationships (i.e., the residence-centered or inclusive patterns) would be associated with relatively more positive youth adjustment over time, whereas stepfamily patterns marked by relatively few high-quality parent–child relationships (i.e., the parent–child disconnection pattern) would be associated with youth maladjustment over time.

Other theories emphasize the couple relationship. For instance, emotional security theory attends to the quality of the couple relationship and frequency of parental conflict for predicting youth adjustment over time (Davies & Cummings, 1994). Emotional security theory posits that parental conflict can confer upon youth “less effective coping and greater emotional and behavioral dysregulation in response to daily stresses and challenges” (Davies & Cummings, 1994, p. 389). Thus, we hypothesized that stepfamily patterns distinctly marked by a low-quality stepcouple relationship (i.e., the unhappy-couple pattern) would be associated with higher rates of youth maladjustment over time.

Youth Sex as a Moderating Influence

Another important question is whether female and male youth differ in their long-term associations between patterns of stepfamily relationship quality and adjustment outcomes. Scholars have noted that individual characteristics, including youth sex, can moderate the link between family relationships and youth adjustment (Dunn, 2002; Hetherington et al., 1998; Hetherington & Elmore, 2003), although the moderating influence of youth sex in stepfamily contexts has not been well studied. From a stress reactivity perspective, there is some evidence that female youth exhibit higher levels of stress, as evidenced physiologically (e.g., cortisol), than male youth in the face of the same interperso-

n stressors (Hankin, Mermelstein, & Roesch, 2007; Lippold, McHale, Davis, Almeida, & King, 2016). Moreover, male and female youth might respond to distress in different ways, such that female youth are more likely than male youth to experience depressive symptoms in reaction to stressful interpersonal dynamics; male youth might be more likely than female youth to react in the form of substance use or other externalizing problems (Hankin et al., 2007). Thus, we explored youth sex as a potential moderating influence with respect to how patterns of stepfamily relationship quality exert influence on youth adjustment over time.

Method

Data and Sample

Data for this study came from the National Longitudinal Study of Adolescent to Adult Health (Add Health; Harris et al., 2009). We used information from in-home youth interviews and parent questionnaires at Wave I (1994–1995; ages 12–17; adolescence), as well as youth in-home interviews at Waves II (1996), III (2001–2002; ages 18–26, emerging adulthood), and IV (2008–2009; ages 26–32, young adulthood). Respondents for in-home interviews at Wave I were randomly selected from a nationally representative in-school sampling frame of adolescents. In-home interviews with youth (N = 20,745) incorporated laptop computers and included questions about youths’ family dynamics and well-being. Interviews with respondents at subsequent waves involved similar procedures. Parent data at Wave I were collected using interviewer-assisted questionnaires that were issued primarily to resident mothers.

The analytical sample from which the patterns of stepfamily-relationship quality were originally identified consisted of adolescents who reported living with their biological mothers and stepfathers at Wave I, and who had living nonresident fathers (n = 1,182; Jensen, 2017). This sample of adolescents had a mean age of 15.64 years (SD = 1.70). Nearly 53% of the sample was female and 74% of the parents indicated being married to the stepparent (as opposed to unmarried cohabitation or missing response). Nearly 62% of adolescents identified as non-Hispanic White, 19% as non-Hispanic Black, 3% as non-Hispanic Asian, 2% as non-Hispanic Other/Native American, and 14% as Hispanic. The average length of time the adolescent reported living in the same household as the stepfather was 6.72 years (SD = 4.11 years).

From this original sample, two analytical subsamples were specified for the current study: one to analyze the influence of stepfamily relationship quality patterns on youths’ short-term adjustment (i.e., from Wave I to Wave II), and the other to analyze the influence of stepfamily relationship quality patterns on youths’ trajectories of adjustment over time (i.e., across Waves I, III, and IV). Adolescents with adjustment information collected at Wave II comprised the first subsample for the analysis of short-term adjustment (n = 881; mean age = 15.41 years, SD = 1.60; 52% female; 62% non-Hispanic White). Adolescents with adjustment information collected across Waves I, III, and IV comprised the second subsample for the analysis of long-term adjustment trajectories (n = 758; mean age = 15.55 years, SD = 1.69; 56% female; 65% non-Hispanic White).
**Measures**

**Patterns of Stepfamily Relationship Quality.** As outlined in prior work (Jensen, 2017), the focal independent variable was youths’ membership in one of four patterns of stepfamily relationship quality (summarized in the Introduction section and Table 1), labeled (1) Residence-centered, (2) Inclusive, (3) Unhappy couple, and (4) parent–child disconnection. As noted earlier, these patterns were originally estimated using FMM with four latent factors representing mother–child closeness, stepfather–child closeness, nonresident father–child involvement, and stepcouple-relationship quality; each pattern had unique interfactor correlations (refer to Jensen, 2017 for details about the analysis). Specific measurement items are summarized in the notes of Table 1. Each pattern was dummy coded for subsequent analysis.

**Depression.** Depression was a dependent latent construct measured with nine items from the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The items asked respondents to indicate along a 4-point scale (0 = never or rarely, 3 = most or all of time) how frequently during the last week they (1) felt bothered by things that do not usually bother them, (2) felt that they could not shake off the blues, (3) felt that they were as good as other people, (4) had trouble keeping their mind on what they were doing, (5) felt depressed, (6) felt that they were too tired to do things, (7) enjoyed life, (8) felt sad, and (9) felt that people disliked them. Each item was coded such that higher values indicated higher levels of Depression. The analysis of youths’ short-term adjustment incorporated the same nine items from Wave II (α = .81), whereas the analysis of youths’ long-term adjustment trajectories incorporated the same nine items from Waves I (α = .82), III (α = .82), and IV (α = .83).

**Self-Esteem.** Self-Esteem was a dependent latent construct measured with six items that asked respondents to indicate their level of agreement along a 5-point scale (1 = strongly agree, 5 = strongly disagree) with respect to the following statements: (1) you feel like you are doing everything just about right, (2) you feel loved and wanted, (3) you feel socially accepted, (4) you have a lot of good qualities, (5) you have a lot to be proud of, and (6) you like yourself just the way you are. The items were reverse-coded such that higher values indicated higher levels of Self-Esteem. Because all six indicators of Self-Esteem were not available beyond Wave II, Self-Esteem was only incorporated into the analysis of youths’ short-term adjustment (i.e., Wave II; α = .85).

**Delinquency.** Delinquency was a dependent observed variable measured with seven items that asked respondents to indicate how often in the past 12 months they had (1) deliberately damaged property that didn’t belong to them, (2) stole something worth more than $50, (3) went into a house or building to steal something, (4) used or threatened to use a weapon to get something from someone, (5) sold marijuana or other drugs, (6) stole something worth less than $50, or (7) took part in a group fight. Consistent with other recent studies (e.g., Amato et al., 2016), the seven items were dichotomized (0 = never, 1 = at least once) and summed to create a count index of delinquent behaviors (range = 0 – 7). The analysis of youths’ short-term adjustment incorporated the count index from Wave II, whereas the analysis of youths’ long-term adjustment trajectories incorporated the count index from Waves I, III, and IV.

**Covariates and grouping variables.** To more fully isolate the influence of patterns of stepfamily relationship quality on youth adjustment, all analyses incorporated several sociodemographic covariates, including household composition (a continuous indicator of the number of household residents), mothers’ education (dummy-coded variables representing less than high school, high-school completion [reference], some college, and college degree or more), household income (continuous measure in thousand-dollar units; natural-logged to adjust for positive skew), youths’ racial/ethnic identity (dummy-coded variables representing non-Hispanic Black, non-Hispanic White [reference], non-Hispanic Asian/other, and Hispanic), youth age (continuous measure in years), and stepfamily duration (continuous measure in years indicating how long the stepfather had resided in the household; Amato et al., 2016). To control for the potential influence of stepfamily dissolution on youth adjustment over time, a dichotomous covariate was included in analyses to indicate whether the stepfamily was still intact at Wave II (i.e., the stepfather was still residing in the household; 0 = no, 1 = yes). To account for previous family transitions (e.g., Osborne & McLanahan, 2007), a continuous covariate was included to indicate the number of mothers’ relationships in the past 18 years. To assess the extent to which model parameters differed between male and female youth, youth sex was incorporated into all analyses as a grouping variable (i.e., a moderator).

**Data Analysis**

**Short-term adjustment.** Longitudinal structural equation modeling (SEM) was used to estimate associations between patterns of stepfamily relationship quality at Wave I and youths’ short-term adjustment at Wave II, net the influence of covariates. Three separate models were estimated for each outcome construct: Depression (Model 1), Self-Esteem (Model 2), Delinquency (Model 3). Models 1 and 2 used latent factors to represent Depression and Self-Esteem, whereas Model 3 used a negative-binomial function to account for the count-index form of the Delinquency outcome.

**Long-term adjustment.** In terms of long-term Depression trajectories, we attempted to fit a second-order latent-growth curve model (LGCM; Wickrama, Lee, O’Neal, & Lorenz, 2016). Initial results yielded nonsignificant latent slope mean and variance estimates for Depression, meaning that LGCM was not suitable for modeling Depression outcomes over time in the sample. Thus, longitudinal SEM with auto-correlated errors was used in place of second-order LGCM, and associations between patterns of stepfamily relationship quality and Depression at Waves I, III, and IV were estimated, net the influence of covariates. In terms of long-term delinquency trajectories, a negative-binomial LGCM was used to estimate latent intercept and slope parameters, as well as to assess associations between patterns of stepfamily relationship quality and growth-curve parameters, net the influence of covariates. Again, indicators of youth Self-Esteem were not available in Add Health beyond Wave II. Thus, we were unable to incorporate self-esteem in the long-term analyses.

**All models.** Across all short-term and long-term models, the referent stepfamily pattern was rotated so that significant differences between patterns could be ascertained. Because items used to measure Depression and Self-Esteem were ordinal, models...
incorporating these items employed a means- and variance-adjusted weighted least squares (WLSMV) estimator and poly-choric input correlation matrix (Bovaird & Koziol, 2012). For these models, the following criteria were indicative of acceptable model fit: comparative fit index (CFI) and Tucker–Lewis index (TLI) values greater than or equal to .95, and a root-mean-square error of approximation (RMSEA) value less than or equal to .06 (with the upper bound of the 90% CI less than or equal to .06; West, Taylor, & Wu, 2012). Because Delinquency was a count variable and significantly overdispersed, models that focused on Delinquency used a negative-binomial function and a maximum-likelihood estimator with robust standard errors (MLR). For these models, the Akaike information criterion (AIC) and Bayesian information criterion (BIC) were used to assess relative model fit (Liu & Powers, 2007).

In terms of multiple group-comparison analyses, metric (i.e., invariant factor loadings) and scalar (i.e., invariant thresholds) invariance was indicated (in models with measurement parameters; i.e., models focused on Depression or Self-Esteem) if measurement parameters could be constrained to equality between male and female youth without significantly increasing the model CFI (i.e., ΔCFI < .01; Cheung & Rensvold, 2002). Wald tests were used to assess structural invariance in all models, or whether structural parameters were significantly different between male and female youth (Chou & Huh, 2012). Each model accounted for potential within-school clustering among participants, and incorporated appropriate sampling weights to produce nationally representative estimates. Preliminary calculations indicated that each model was overidentified and sufficiently powered to assess model fit (Kenny & Milan, 2012; Lee, Cai, & MacCallum, 2012). Data management was conducted using Stata 14, and all multivariate modeling was conducted using Mplus 7.4. Missing data was handled using a full-information maximum likelihood estimator (Enders, 2010; see online supplemental materials for more details about the study design). The Office of Human Research Ethics at the authors’ university reviewed procedures proposed for the secondary analysis and determined that the submission was exempt, as it did not constitute human-subjects research.

Results

Short-Term Adjustment

Depression. Table 2 displays results associated with Models 1, 2, and 3. Model 1 estimated associations between patterns of stepfamily relationship quality at Wave I and Depression at Wave II, while holding constant model covariates. Model 1 yielded acceptable fit based on prespecified criteria, χ²(183) = 293.873, p < .001; CFI = .95; TLI = .95; RMSEA = .026; upper 90% CI = .032. Measurement and structural invariance tests indicated that item-factor loadings, item thresholds, and all structural parameters in Model 1 were statistically indistinguishable between male and female youth. Thus, male and female youth were combined together to estimate Model-1 parameters. All standardized factor loadings were significant and acceptable in this model, as well as all subsequent short-term models (measurement results are available upon request).

Results indicated that patterns of stepfamily relationship quality at Wave I were significantly associated with Depression at Wave II. Specifically, youth in residence-centered pattern (b =
had a lower expected count of delinquent behaviors at Wave II compared with youth in the unhappy-couple pattern, \( \exp(b) = 0.68; 32\% \). These findings were attenuated when Delinquency at Wave I was entered into the model as a covariate, suggesting that earlier Delinquency might have been a more salient antecedent of subsequent Delinquency than stepfamily relationships, at least in the short-term.

**Long-Term Adjustment**

**Depression.** Table 3 displays results from the auto-correlated longitudinal SEM with Depression at Waves I, III, and IV, regressed on patterns of stepfamily relationship quality and covariates. Measurement-invariance tests indicated metric and partial scalar invariance for Depression constructs over time—all but six item thresholds could be constrained to equality across all three waves. These findings offer sufficient evidence that the same construct was being measured at each wave (Wickrama et al., 2016). Multiple-group comparison analyses further indicated that all item–factor loadings and thresholds were statistically indistinguishable between male and female youth at all three waves. Moreover, structural invariance tests indicated that all structural parameters were statistically indistinguishable between male and female youth, except for parameters linking patterns of stepfamily relationship quality to Depression at Wave I. Thus, Table 3 highlights male- and female-specific parameters for associations between patterns of stepfamily relationship quality and Depression at Wave I. The final model yielded acceptable fit, \( \chi^2(1,564) = 1,803.947, p < .001; \text{CFI} = .95; \text{TLI} = .95; \text{RMSEA} = .020; \text{upper 90\% CI} = .024. \)

Male youth in the residence-centered pattern reported lower levels of Depression at Wave I than male youth in the inclusive \((b = -0.46, p < .10)\), unhappy couple \((b = -0.73)\), and parent–child disconnection \((b = -0.52)\) patterns. Female youth in the residence-centered, inclusive, and unhappy-couple patterns reported lower levels of Depression at Wave I than female youth in the parent–child disconnection \((b = -1.18, -1.01, \text{and} -0.92, \text{respectively})\).

Turning to emerging adulthood, youth in the residence-centered pattern reported lower levels of Depression at Wave III compared with youth in the unhappy couple \((b = -0.37)\) and parent–child disconnection \((b = -0.31)\) patterns. Youth in the inclusive pattern also reported lower levels of Depression at Wave III compared with youth in the unhappy couple \((b = -0.28)\) and parent–child disconnection \((b = -0.21, p < .10)\) patterns. In terms of young adulthood, youth in the residence-centered and inclusive patterns reported lower levels of Depression at Wave IV compared with youth in the unhappy-couple pattern \((b = -0.31 \text{ and} -0.28, \text{respectively})\).

**Delinquency.** All latent-growth curve parameters for Delinquency were significantly different between males and females. Thus, model parameters were estimated separately for both groups. Table 4 displays results associated with the unconditional (i.e., only intercept and slope parameters estimated; no independent variables or covariates added) and conditional latent-growth curve models (i.e., independent variables or covariates added) for males and females. With respect to unconditional growth-curve parameters for males, the average initial expected count of Delinquent behaviors was .96, \(b = -0.04, \exp(b) = .96\), with notable inter-individual variance, represented by significant random effects. The
Table 3
Autocorrelated Longitudinal SEM With Youth Depression at Waves I, III, and IV Regressed on Patterns of Stepfamily Relationship Quality by Youth Sex (N = 758)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Males (n = 334)</th>
<th>Females (n = 424)</th>
<th>Depression (Wave I)</th>
<th>Depression (Wave III)</th>
<th>Depression (Wave IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
</tr>
<tr>
<td>Residence-centered</td>
<td>-.52**</td>
<td>-.73***</td>
<td>-.46†</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td></td>
<td>-.18***</td>
<td>-.32</td>
<td>-.21 ref</td>
<td>-.31**</td>
<td>-.37**</td>
</tr>
<tr>
<td></td>
<td>-.01†</td>
<td>-0.09</td>
<td>ref</td>
<td>-.21†</td>
<td>-.28</td>
</tr>
<tr>
<td></td>
<td>.08</td>
<td>.30</td>
<td>ref</td>
<td>.08</td>
<td>ref</td>
</tr>
<tr>
<td>Inclusive</td>
<td>.17</td>
<td>.26</td>
<td>.72**</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td></td>
<td>-.92†</td>
<td>-0.09</td>
<td>ref</td>
<td>.01 ref</td>
<td>-.24</td>
</tr>
<tr>
<td></td>
<td>.08</td>
<td>.30</td>
<td>ref</td>
<td>.32†</td>
<td>ref</td>
</tr>
<tr>
<td>Parent-child disconnection</td>
<td>ref</td>
<td>.05</td>
<td>-.53†</td>
<td>1.03**</td>
<td>1.04**</td>
</tr>
<tr>
<td></td>
<td>ref</td>
<td>.26</td>
<td>.72**</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Male R²</td>
<td>.15</td>
<td>.13</td>
<td>.07</td>
<td>.08</td>
<td>.09</td>
</tr>
<tr>
<td>Female R²</td>
<td>.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Coefficients are unstandardized. Metric and scalar invariance confirmed between male and female youth; structural invariance was confirmed for all parameters at each wave except for class membership at Wave I. Means- and variance-adjusted weighted least squares (WLSMV) estimator was used and observed indicator errors were autocorrelated across waves. Empty cells for females at Wave I indicate that parameters were not significantly different between males and females. Covariates: stepcouple intact (at Wave II), household composition, mothers’ education, household income, youth racial/ethnic identity, youth age, mothers’ relationships in past 18 years, and stepfamily duration. Bold values indicate R-squared values.

*p ≤ .10, **p ≤ .05, ***p ≤ .01, ****p ≤ .001.

Discussion

The purpose of this study was to build on prior work by assessing associations between patterns of stepfamily relationship quality and youth depression trajectories. Our findings are largely consistent with our hypotheses, and further support a holistic view of family relationships in the early life course. Our findings indicate that youth are advantaged when they perceive high-quality relationships with their parents, whether centered in the primary residence or including a nonresident parent figure. Specific factors associated with positive outcomes include youth perceptions of positive relationships with their parents, a secure attachment style, and a history of positive family relationships.

In terms of conditional growth-curve parameters, female youth in the residence-centered pattern had lower expected initial counts of Delinquent behavior compared with male youth in the unhappy-couple pattern (b = -.42, exp(\(\beta\)) = .65) and parent-child disconnection (b = -.33). The expected decrease in the residence-centered pattern was also less negative (or steeper) for male youth in the inclusive pattern compared with male youth in the residence-centered pattern (b = -.40, exp(\(\beta\)) = .65) and parent-child disconnection (b = -.42). The relatively less negative slopes for male youth in the inclusive pattern compared with male youth in the residence-centered pattern likely reflect the fact that the residence-centered, inclusive, and parent-child disconnection patterns had lower expected counts of Delinquent behavior over time. In terms of conditional growth-curve parameters, female youth in the residence-centered, inclusive, and parent-child disconnection patterns had lower expected counts of Delinquent behavior than male youth in the unhappy-couple pattern (b = -.77, exp(\(\beta\)) = .46). With an average of 54% per wave, \(b = -.40\), respectively). Moreover, decreases in the expected count over time were less negative (or steep) for male youth in the unhappy-couple pattern compared with male youth in the residence-centered and inclusive patterns.

With respect to unconditional growth-curve parameters, females, the average intercept of Delinquent behavior for females, \(\beta_{\text{int}}\), was 42 (\(\exp(\beta_{\text{int}}) = .65\)). The expected decrease in Delinquent behavior over time was also less negative (or steep) for male youth in the unhappy-couple pattern compared with male youth in the residence-centered and inclusive patterns. The expected decrease in Delinquent behavior over time was also less negative (or steep) for male youth in the unhappy-couple pattern compared with male youth in the residence-centered and inclusive patterns.
Thus, a stress-and-support perspective might be especially helpful for understanding adjustment in the short-term for youth in mother–stepfather families. Our results also point to the influence of couple relationships when investigating the role of family systems on youth adjustment, in line with an emotional security perspective. Because both residence-centered and inclusive patterns possess high-quality stepcouple relationships, positive interactions between resident parents and stepparents might be important components of family systems that bolster youths’ emotional security, leading to positive adjustment. Moreover, both of these patterns display positive correlations between at least two dyadic relationships, indicating

**Table 4**

**Youth Delinquency Latent-Growth Curve Across Waves I, III, and IV Regressed on Patterns of Stepfamily Relationship Quality**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unconditional model</th>
<th>Conditional model</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intercept</td>
<td>Slope</td>
<td>Intercept</td>
</tr>
<tr>
<td></td>
<td>( b ) ( \exp(b) )</td>
<td>( b ) ( \exp(b) )</td>
<td>( b )</td>
</tr>
<tr>
<td>Growth-curve parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>(-.04) ( .96^{**} )</td>
<td>(-.77^{<strong>} .46^{</strong>} )</td>
<td>(-.33) ( -.73^{**} -.31 ) ref</td>
</tr>
<tr>
<td>Variance</td>
<td>(.28^{**} )</td>
<td>(.08^{**} )</td>
<td>(.47^{\dagger} )</td>
</tr>
<tr>
<td>Intercept–slope covariance</td>
<td>(.14^{**} )</td>
<td>(.01 )</td>
<td></td>
</tr>
<tr>
<td>Patterns of stepfamily relationship quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residence-centered</td>
<td>(-.33) ( -.73^{**} -.31 ) ref</td>
<td>(.50^{<strong>} .63^{</strong>} .30 ) ref</td>
<td></td>
</tr>
<tr>
<td>Inclusive</td>
<td>(-.02) ( -.42^{*} ) ref</td>
<td>(.31)</td>
<td>(.21) ( .33^{\dagger} ) ref</td>
</tr>
<tr>
<td>Unhappy couple</td>
<td>(.40^{\dagger} ) ref</td>
<td>(.42^{*} .73^{**} ) ref</td>
<td>(-.12) ref</td>
</tr>
<tr>
<td>Parent–child disconnection</td>
<td>ref (-.40^{\dagger} .02 .33 ) ref</td>
<td>(.13)</td>
<td>(-.21)</td>
</tr>
</tbody>
</table>

**Note.** Coefficients are unstandardized. Covariates in conditional models: stepcouple intact (at Wave II), household composition, mothers’ education, household income, youth racial/ethnic identity, youth age, mothers’ relationships in past 18 years, and stepfamily duration.

\( ^{\dagger} p \leq .10. \quad ^{*} p \leq .05. \quad ^{**} p \leq .01. \quad ^{***} p \leq .001. \)

(Hetherington, 1999; King, 2006). Thus, a stress-and-support perspective might be especially helpful for understanding adjustment in the short-term for youth in mother–stepfather families.

Our results also point to the influence of couple relationships when investigating the role of family systems on youth adjustment, in line with an emotional security perspective. Because both

![Figure 1](https://via.placeholder.com/150)

**Figure 1.** Visualization of latent-growth curves representing expected count of delinquent behaviors for each pattern of stepfamily relationship quality by youth sex.
mutually reinforcing processes and more cohesive family systems—systemic features that might confer upon youth various adjustment benefits (Jensen, 2017). With respect to more long-term adjustment, patterns of stepfamily relationship quality during adolescence are associated with youth adjustment amid the transition to emerging adulthood. Specifically, earlier membership in residence-centered and inclusive patterns appears to be associated with the lowest levels of depression at this developmental stage. This further supports a stress-and-support perspective. Moreover, numerous high-quality parent–child relationships during adolescence could produce an abundance of social capital for youth (Coleman, 1988; Rose, Woolley, & Bowen, 2013), leading to a rich production of human capital that can help youth manage the tasks of emerging adulthood, such as exploring self-identity; examining life possibilities surrounding employment, ideology, and romantic relationships; and pursuing novel experiences autonomously (Arnett, 2000). Ultimately, these conditions might optimize psychological well-being during emerging adulthood.

Moving into young adulthood, membership in the unhappy-couple pattern, where the stepcouple relationship is strained, during adolescence is influential with respect to depression. This lends support to emotional security theory, and suggests that the stepcouple relationship exerts unique, and potentially long-lasting, influence on youth depression as they enter young adulthood and face the developmental tasks and role transitions associated with it. Plausible mechanisms linking membership in the unhappy-couple pattern and depression in young adulthood include heightened emotional and behavioral dysregulation during adolescence (in response to stepcouple conflict) that go on to influence youths’ relationship experiences later in life (Davies & Cummings, 1994). Greater dysregulation in the context of adult romantic, or other, relationships might lead to diminished psychological well-being in young adulthood.

In terms of sex differences, male and female youth exhibited different delinquency trajectories over time in response to patterns of stepfamily relationship quality. Male youth in the unhappy-couple pattern reported the highest initial count of delinquent behavior, whereas female youth in the parent–child disconnection pattern, where all parent–child relationships were low-quality, reported the highest initial count of delinquent behavior. Thus, emotional security theory might be a salient perspective for understanding male adolescent delinquency in mother–stepfather families. Indeed, male youth who witness stepcouple conflict might experience significant distress (Davies & Cummings, 1994) and imitate the aggression and hostility they observe, leading to a rise in delinquent behavior (Dunn, 2002). For female youth, the stress-and-support perspective might be especially suitable for understanding delinquency in stepfamilies. Indicators of family chaos, including low-quality or highly conflictual parent–child relationships, can heighten female youths’ propensity to engage in delinquent behavior (Krutschnitt, 2013).

Male and female youth also appear to respond differently to stepfamily relationships in terms of initial levels of depression (Hankin et al., 2007). What appears to matter most for male youth during adolescence is membership in the residence-centered pattern; male youth in every other pattern reported higher levels of depression, suggesting that high-quality relationships in the home are critical for shaping male depression. What appears to matter most for female youth during adolescence is not being in the parent–child disconnection pattern; female youth in every other pattern reported substantially lower levels of depression. From a stress reactivity standpoint, female youth may be more physiologically reactive than male youth to stepfamily contexts marked by very low-quality parent–child relationships, particularly with the resident mother and stepfather. Ultimately, this finding points to possible sex differences in adjustment responses to stepfamily dynamics—a finding that would benefit from additional investigation.

Limitations and Future Research

In terms of study limitations, analyses omitted information about other dyadic processes in stepfamilies, including the quality of the mother-nonresident father relationship and sibling relationships; Add Health does not possess information about these processes. In addition, although we speculate about how youth adjustment might be shaped by couple conflict (such as in the unhappy-couple pattern), we note that the measures used to extract the original patterns of stepfamily relationship quality do not indicate whether youth were actually exposed to couple conflict. Rather, mothers reported on the frequency of conflict in the couple relationship. Although informed by past research and the distribution of item responses, we also note the limitations of dichotomizing and summing the count of delinquency items, which treats items as equally weighted. In terms of external validity, because the current study focused exclusively on mother–stepfather families, results should only be generalized to youth who reside primarily with a biological mother and resident stepfather. Another limitation includes our general focus on patterns of stepfamily-relationship quality and youth adjustment, without overt or nuanced attention given to the experiences of racial/ethnic minority groups or socioeconomically disadvantaged families—areas warranting future investigation. The Add Health study also began in the 90s, which allowed us to track youth outcomes at later stages of adult development, but should temper the generalization of our findings to newly forming stepfamilies today.

Moving forward, researchers should examine other factors that might moderate associations between patterns of stepfamily-relationship quality and youth adjustment. With respect to the contextual model of family stress (Boss, Bryant, & Mancini, 2016), plausible moderators include features of the family’s external environment, such as the quality of the larger neighborhood or community. There are also opportunities for researchers to explicitly examine underlying mechanisms that link earlier stepfamily experiences to adjustment outcomes later in life. Moreover, researchers could focus on the extent to which patterns of stepfamily relationship quality influence other important youth outcomes, including health risk behaviors, substance use, the likelihood of experiencing various forms of maltreatment, features of healthy and positive development, and relationship dynamics later in life (e.g., fertility timing, parenting behaviors, processes in committed romantic relationships).

Practical Implications

Based on the results of the current study, we highlight several practical implications. For one, stepfamily experts note that many practitioners who engage stepfamilies tend to apply intervention strategies that are designed for intact, nuclear families—a generally counterproductive approach (Papernow, 2018). Instead, helping professionals should acquire sufficient training to work effectively with families that deviate from the nuclear-family model, with adequate attention given to the complex dynamics that transcend single house-
Second, helping professionals should attend to possible sex differences with respect to how youth adjust to various stepfamily dynamics. Specifically, given the risk associated with the parent–child disconnection class, interventions to ensure at least one connection in the family might be especially important for reducing female depression; given the risk associated with the unhappy couple class, interventions that ensure positive relationships among many family members, including the couple relationship, might be critical for male youth.

Third, ongoing efforts to cultivate high-quality stepcouple relationships in stepfamilies seem warranted, especially given associations between the unhappy-couple pattern and youths’ adjustment across all stages of development investigated (i.e., adolescence, emerging adulthood, young adulthood). Fortunately, most extant stepfamily education programs and interventions explicitly target the stepcouple relationship (Lucier-Greer & Adler-Baeder, 2012).

Fourth, efforts to cultivate a strong stepcouple relationship should not overshadow efforts to cultivate warm and meaningful connections between youth and each of their parental figures. Indeed, the parent-child disconnection pattern was the strongest predictor of youth maladjustment across the early life course. The complex make-up of this pattern, including negative correlations between some relationships, will require tactful navigation and clinical skills among helping professionals. Stepfamily experts encourage a compartmentalized and dyadic approach to working with stepfamilies (Papernow, 2018). Our findings further support this approach, and point to possible challenges for practitioners in terms of how strengthening one dyadic relationship might cause strain in another (recall that the quality of some dyadic relationships in some patterns were negatively correlated).

Our findings also speak to the value of a prevention perspective. What can family educators and helping professionals do to prevent the onset of maladaptive stepfamily relationship patterns? Practitioners have assembled materials that speak to common stepfamily challenges and strategies for overcoming them (Papernow, 2013, 2018). Individuals who are in the process of forming a new stepfamily should be directed to materials, such as those referenced, that can guide them during the transition to stepfamily life. It might also be advisable for individuals to seek out professional assistance early on during stepfamily formation to resolve challenges while or before they emerge. From a policy standpoint, policymakers should favor policies that facilitate an inclusive view of family systems, and promote legal guidelines that optimize the degree to which youth can acquire and retain positive relationships with parental figures that reside inside and outside their primary residences.

References


