

A TYPOLOGICAL EXAMINATION OF STEPFAMILY RELATIONSHIP QUALITY AND
ADOLESCENTS' SHORT-TERM AND LONG-TERM ADJUSTMENT

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A dissertation submitted to the faculty at the University of North Carolina at Chapel Hill in
partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of
Social Work.

Chapel Hill
2017

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ABSTRACT

TODD M. JENSEN: A Typological Examination of Stepfamily Relationship Quality and Adolescents' Short-Term and Long-Term Adjustment
(Under the direction of Gary L. Bowen)

Stepfamilies are an increasingly common family form, marked by distinct challenges and opportunities with implications for family functioning and youth well-being. Currently, there exists a dearth of research whereby adaptive stepfamily processes across central dyadic relationships are investigated holistically. Moreover, few studies have explored links between specific patterns of stepfamily processes and youth adjustment over time. More research is also needed whereby associations between larger social environments, stepfamily processes, and youth well-being are examined together. This three-paper dissertation seeks to fill these gaps in the literature.

The first paper employs factor mixture modeling to identify population heterogeneity with respect to mother-child, stepfather-child, nonresident father-child, and stepcouple relationship quality using a sample of 1,182 adolescents in mother-stepfather families with living nonresident fathers from Wave I of the National Longitudinal Study of Adolescent to Adult Health. The results favor a four-class factor-mixture solution with class-specific factor covariance matrices. The four patterns are labeled *residence-centered*, *inclusive*, *conflictual couple*, and *disconnected*. Socio-demographic and substantive differences between patterns are evident.

The second paper examines associations between the four stepfamily-process patterns identified in the first paper and youth adjustment over the early life course, from adolescence to

young adulthood. Results from structural equation models and latent growth curve models indicate that adjustment over time is optimized among youth in the *residence-centered* and *inclusive* patterns. Typology-adjustment differences between male and female youth arise with respect to concurrent levels of depression and trends in delinquency; male youth appear to benefit most from the *residence-centered* pattern, whereas female youth appear to benefit most from not experiencing the *disconnected* pattern.

Using the stepfamily-process patterns identified in the first paper, the third paper examines three plausible functions of neighborhood collective efficacy with respect to stepfamily life: an ability to (a) *prevent* maladaptive patterns of stepfamily processes, (b) *promote* stepchildren's adjustment beyond the influence of stepfamily processes, and (c) *protect* stepchildren's adjustment when faced with maladaptive patterns of stepfamily processes. The results indicate that higher levels of neighborhood collective efficacy are associated with adaptive stepfamily processes and higher levels of youth self-esteem over time, net the influence of stepfamily processes.

ACKNOWLEDGEMENTS

To begin, I wish to acknowledge the various institutions and funding sources that have formed the foundation upon which I have built my work and future career. These include the Royster Society of Fellows, the Carolina Population Center, and the Carolina Consortium on Human Development at the Center for Development Science, along with Dr. Andrea Hussong, Dr. Jennifer Coffman, and the other predoctoral and postdoctoral fellows. I also wish to acknowledge the staff, faculty, and administrators in the School of Social Work, who have modeled limitless work ethic and unfailing commitment to the core social work professional values. I am a better person for knowing and working with these individuals. I am also grateful for my wonderful doctoral cohort, classmates, and colleagues. I want to mention Teresa Ilinitich by name, who even in the short time I knew her before her passing, touched my life forever.

My acknowledgements undoubtedly extend to members of my dissertation committee: Kathleen Mullan Harris, who despite her heavy workload and demands, was always so gracious and willing to provide feedback and support; Melissa Lippold, who always went the extra mile in providing thoughtful suggestions and encouragement; Kirsten Kainz, who seamlessly brought together genuine kindness and methodological prowess; Marilyn Coleman, whose career and work catalyzed my passion and vision for much of the research I have done and will do; and Gary Bowen, whose character and generosity was always commensurate with his professional renown and achievements. I simply cannot imagine my academic and personal life without Gary; he was truly the best mentor, advisor, and friend I could have ever dreamed of having. My life and work will forever be enriched for having worked with him.

Foremost, I wish to acknowledge the ceaseless support and strength I received from my wife, Maggie. Without her, none of my work would be possible. I aspire to her level of class and intellect. As I engage in social work research, she actually embodies the very best of what social work is.

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INTRODUCTION

YOUTH DEVELOPMENT IN THE CONTEXT OF FAMILY TRANSITIONS AND STRUCTURAL DIVERSITY: OPPORTUNITIES FOR SOCIAL WORK

The American Academy of Social Work & Social Welfare has recently articulated 12 Grand Challenges for Social Work, an initiative that aims to unify the efforts of researchers, practitioners, and educators across the field of Social Work. One challenge is to *ensure healthy development for all youth*. Although there are a variety of social contexts in which youth development unfolds, perhaps the most proximal context is the family.

Turning to families in the United States, there has been a proliferation of family structural transitions, leading to the most diverse array of family structures the country has ever seen. This is due, in part, to several demographic trends, including persistently high rates of relationship dissolution and repartnering; and increasing rates of cohabitation, non-partnered child-bearing, and multiple-partner fertility (Cherlin, 2010). As a result of these trends, youth experience an average of one family structural transition by age 13 (Brown, Stykes, & Manning, 2016), with a transition being defined as a parent entering or exiting a committed residential relationship. Importantly, patterns of family transitions are influenced by a family's cultural background and racial/ethnic identity. For example, the average number of transitions African American youth experience by age 13 expands to 1.6 (Brown et al., 2016). Family instability is also more prevalent among families who face socioeconomic disadvantage (Manning, Brown, & Stykes, 2014).

Structural transitions in families can give rise to stressful processes that place youth at a heightened risk of maladjustment (Amato, 2000; Hetherington & Elmore, 2003). Further, family stress can be exacerbated in the context of ongoing discrimination and oppression (Peters & Massey, 1983). Thus, a focus on family transitions and structural diversity will be an integral piece of any professional effort to build a just and equitable society that works for all families and children. It will also be a vital component of efforts to ensure the healthy development of all youth.

A Focus on Stepfamilies

One of the most common transitions families in the United States experience is the formation of a stepfamily. Indeed, one-third of all youth will reside in a cohabiting or married stepfamily before reaching legal adulthood (Bumpass, Raley, & Sweet, 1995; Pew Research Center, 2011). Stepfamilies form when one or both partners in a new committed relationship bring a child or children with them from a previous relationship. Thus, stepfamilies bring together new and existing dyadic relationships, forming a mix of biological and social relations.

Although stepfamilies are increasingly common, the pathways to and initiation of stepfamily life (e.g., divorce, death of a parent) remain largely unexpected and stressful. Moreover, few social or legal guidelines are available to help individuals successfully navigate family transitions (Cherlin, 1978; Coleman et al., 2013). As a result, stepfamilies often face challenges, including loyalty binds (e.g., children being hesitant to draw close to a stepparent to avoid hurting the non-resident parent), stepcouple disagreements about parenting, uncertainty about who is functionally in or out of the family system, conflicting family cultures, strain between resident and nonresident biological parents, incompatible expectations between stepfamily members, shifts in financial and social resources, stepparent-child conflict, and

disruptions in parent-child relationships (Brown & Manning, 2009; Coleman et al., 2013; Jensen & Shafer, 2013; Jensen, Shafer, & Larson, 2014; Pace, Shafer, Jensen, & Larson, 2015; Papernow, 2013; Shafer, Jensen, Pace, & Larson, 2013). These challenges, among others, can be stressful for youth in stepfamilies.

The Implications of Family Structural Transitions

Stepfamily stressors have implications for the well-being of youth. Nationally representative studies indicate that youth in stepfamilies exhibit more behavioral problems (e.g., getting into fights, violating laws; Hoffman, 2006), a 12.7 to 24.6 percent higher rate of drug use (Hoffman, 2002), more school-related behavior problems (e.g., failure to complete assignments, strain in relationships with other students and teachers), and a .10- to .45-point lower grade-point average (Tillman, 2007) than youth in biological nuclear families. A meta-analysis of 61 studies confirmed that youth living in a stepfamily household fare significantly worse than youth in biological nuclear families across indicators of academic achievement (i.e., grades, standardized test scores) and psychological well-being (i.e., depression, self-esteem, overall mental health; Jeynes, 2006). Further, children in stepfamilies either fare no better or worse than their counterparts in single-parent families (Jeynes, 2006). As a case in point, youth in post-divorce stepfamilies exhibit higher levels of depression and are at greater risk of suicidal ideation than children from post-divorce single-parent families (Sweeney, 2007). These well-being disparities are costly to youth, families, and society.

Marked differences in well-being between stepchildren and children in single-parent families suggest that stepfamily formation can pose challenges to children above and beyond the challenges that accompany parental divorce and life in single-parent homes—common precursors to stepfamily formation. Indeed, there is growing consensus that family transitions

have a cumulative impact on children's well-being (e.g., Cavanagh, Schiller, & Riegle-Crumb, 2006; Osborne & McLanahan, 2007; Shafer, Jensen, & Holmes, 2016). Two meta-analytic studies found that parental divorce, a common transition, diminishes children's school achievement, self-concept, and psychological and social adjustment (Amato, 2001; Amato & Keith, 1991). Family transitions also have economic implications, as family fragmentation costs U.S. taxpayers approximately \$112 billion each year (Scafidi, 2008).

Opportunities for Helping Youth Thrive

The past several decades of stepfamily research have mostly provided insights relating to stepfamily stressors and risks (Coleman & Ganong, 1990; Coleman, Ganong, & Fine, 2000). This body of research embodies a deficit-comparison perspective (Coleman & Ganong, 1990), by which the well-being of youth in a variety of family structures is contrasted with youth in biological nuclear families. Relatively less is known about factors distinguishing stepfamilies that promote youth well-being from stepfamilies that inhibit well-being. Efforts to distinguish these families embody a normative-adaptive perspective (Coleman & Ganong, 1990), casting light on antecedents and correlates of stepfamily resilience and the thriving of youth in stepfamilies. Generation of knowledge in this area is paramount to inform policy-making, family life education, and intervention programs for stepfamilies. Moreover, a normative-adaptive perspective will be an important feature of future research as evidence suggests youth in stepfamilies, although having lower mean levels of adjustment, have greater variation in adjustment than their counterparts in biological nuclear families, with the capacity to outperform other youth on various indicators of well-being (Hetherington & Elmore, 2003). The question remains, then, what factors elevate youth in stepfamilies to higher levels of adjustment and well-being?

At least three core categories of factors can promote the well-being of youth in stepfamilies: individual factors (e.g., personality characteristics, attachment orientation, temperament), extra-familial factors (e.g., support and accommodations in legal, health, educational, and community settings), and familial factors (e.g., positive relationships and interactional patterns between family members, financial status; Hetherington & Elmore, 2003). Of these, familial factors may be particularly fruitful targets of intervention development given their malleability (Fraser & Galinsky, 2010). Moreover, research consistently shows the power and influence of family processes in shaping individual outcomes. Indeed, what families do can exert greater influence on youth well-being than what families look like (e.g., Hetherington et al., 1998).

The Dissertation Papers

The literature highlights the primacy of processes within at least four specific stepfamily relationships: resident parent-child, stepparent-child, nonresident parent-child, and stepcouple dyads (Coleman, Ganong, & Russell, 2013). The quality of each of these relationships can shape youth adjustment in important ways; however, little is known about the presence and influence of distinct patterns of relationship quality across these four relationships. Developments in person-centered analyses allow for the detection of such unobserved patterns, with the potential for unveiling meaningful constellations of dyadic relationship quality that youth in stepfamilies experience. The existence of unique constellations of dyadic relationship quality in stepfamilies would have important implications for the design and implementation of interventions intended to address the needs and demands of these families. Thus, in Paper 1, “Constellations of Dyadic Relationship Quality in Stepfamilies: A Factor Mixture Model,” I draw from family systems theory and conflict theory to hypothesize the presence of distinct patterns of relationship quality

across mother-child, stepfather-child, nonresident father-child, and stepcouple dyads. Using factor mixture modeling, this paper merges together advancements in family theory, latent-variable mixture methodology, and a focus on informing intervention development for stepfamilies—the fastest growing family form in the United States (Teachman & Tedrow, 2008). Validation analyses are also conducted to highlight meaningful differences between stepfamily-process patterns with respect to socio-demographic characteristics, stepcouple stability, and youths' concurrent adjustment. Findings from Paper 1 highlight four distinct patterns of stepfamily processes, each with unique levels of dyadic relationship quality and inter-relationship correlations. Implications for intervention development center on a need to address distinct stepfamily experiences marked by unique challenges and strengths.

The literature also exhibits a dearth of research whereby stepfamily processes are linked to youth adjustment over time (Sweeney, 2010). Also missing are rigorous studies that examine such links differentially by youth sex—a notable omission as male and female youth can display adjustment differences as a result of disparate stress reactivity processes (Hankin, Mermelstein, & Roesch, 2007). Thus, in Paper 2, “A Typology of Stepfamily Processes and Adolescents' Short-Term and Long-Term Adjustment,” I examine the implications of the stepfamily-process patterns identified in Paper 1 with respect to youth depression, delinquency, and self-esteem across the early life course. Specifically, I apply stress-and-support and emotional-security perspectives to hypothesize links between youths' adjustment and stepfamily-process patterns marked by low-quality and conflictual dyadic relationships. The analyses encompass both short-term and long-term views via longitudinal structural equation modeling and latent-growth curve modeling. Consistent with a stress reactivity perspective, differences in model parameters are also examined in the context of youth sex. Findings from Paper 2 highlight the significance of

the stepfamily-process patterns identified in Paper 1 with the respect to the contours of youth development and well-being across adolescence, emerging adulthood, and young adulthood.

Paper 2 also highlights the role of youth sex as a moderating influence.

Importantly, family scholars have admonished researchers to “put families into place” by examining the influence of the larger and overlapping social environments, such as communities or neighborhoods, in which families are embedded (Mancini & Bowen, 2013; Noah, 2015).

Currently, the literature lacks research by which stepfamily processes and stepchildren’s adjustment are contextualized in such environments. Thus, In Paper 3, “Stepfamily Processes and Adolescent Adjustment: The Role of Neighborhood Collective Efficacy,” I examine three plausible functions of neighborhood collective efficacy with respect to stepfamily life: an ability to (a) *prevent* maladaptive patterns of stepfamily processes, (b) *promote* youths’ adjustment beyond the influence of stepfamily processes, and (c) *protect* youths’ adjustment when faced with maladaptive patterns of stepfamily processes (i.e., moderating influence). Findings from Paper 3 highlight the importance of viewing stepfamilies in their larger social contexts. From an intervention standpoint, the findings also emphasize the value of targeting neighborhood-level characteristics in an effort to bolster stepfamily relationships and youth adjustment.

Together, all three papers address important gaps in the literature and form a cohesive yet distinct set of findings that can be used to inform ongoing intervention development for families with structural and transitional demands, such as stepfamilies. Overall, this dissertation serves to further develop problem theory—an important point along the intervention-research sequence (Fraser & Galinsky, 2010)—in the area of youth adjustment and development amid family structural transitions and family stress. Following the presentation of each of the three papers, a conclusion section is presented in which the findings from each paper are pieced together.

Implications for social work practice, social work education, and future research are also discussed in that section.

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PAPER I

CONSTELLATIONS OF DYADIC RELATIONSHIP QUALITY IN STEPFAMILIES: A FACTOR MIXTURE MODEL

Prior to age 18, nearly one-third of all youth in the United States will reside in a stepfamily household (Pew Research Center, 2011). Stepfamilies form when one or both partners in a new committed relationship bring a child or children from a previous relationship (Ganong & Coleman, 2017). Stepfamily scholars favor this inclusive definition of stepfamilies, which encompasses both married and cohabiting partnerships. The majority of stepfamilies—roughly 80%—are reared by a biological mother and stepfather (Kreider & Ellis, 2011).

Over the past several decades, stepfamilies have drawn considerable scholarly and clinical attention. This focus on stepfamilies is warranted on several fronts. For one, stepfamilies are an increasingly common family form. Stepfamilies are also marked by distinct challenges that are generally not experienced by biological nuclear families (Coleman, Ganong, & Russell, 2013). Further, stepfamilies, just like any other family, represent a central developmental context for the adults and youth who reside in them.

Amid family structural transitions and stress, family processes are a proximal determinant of family resilience, collective and individual goal attainment, and individual well-being (Hetherington, Bridges, & Insabella, 1998; Walsh, 2002). Family processes in stepfamilies are relatively complex, variable, and ambiguous. This is largely because stepfamilies merge together existing and new dyadic relationships that vary in function and transcend single households (Coleman et al., 2013).

Past research highlights the centrality of resident parent-child, stepparent-child, nonresident parent-child, and stepcouple relationships (Coleman et al., 2013); however, less is known about the ways in which relationship quality across these four dyads cluster together and interrelate to form distinct patterns of stepfamily processes. The identification of holistic stepfamily-process patterns can enrich understanding about youth adjustment in stepfamilies, highlight processes that promote or hinder stepfamily resilience, and inform the development of stepfamily interventions that address issues linked to varying stepfamily experiences (Coleman, Ganong, & Fine, 2000). The general aim of the current study was to identify the presence of distinct stepfamily-process patterns with respect to mother-child, stepfather-child, nonresident father-child, and stepcouple relationship quality in a representative sample of youth residing in mother-stepfather families. To properly frame the current study, I begin by overviewing relevant background information, theory, and research.

Stepfamilies: Challenges and Opportunities

Although stepfamilies are increasingly common, the pathways to and initiation of stepfamily life (e.g., divorce, death of a parent) can be strenuous. Moreover, few social or legal guidelines are available to help individuals successfully navigate family transitions (Cherlin, 1978). As a result, stepfamilies often face challenges, such as children experiencing loyalty binds between nonresident parents and stepparents, stepcouple disagreements about parenting strategies, family role and boundary ambiguity, competing expectations and values among stepfamily members, shifts in financial and social resources, stepparent-child conflict, and disruptions in parent-child relationships (Brown & Manning, 2009; Coleman et al., 2013; Jensen & Shafer, 2013; Jensen, Shafer, & Larson, 2014; Papernow, 2013). These challenges can be stressful for individuals in stepfamilies.

Stepfamilies also bring together individuals with distinct family and relationship histories, structurally forge together existing and new dyadic relationships, and encompass relationships that transcend single households. Whereas biological nuclear families generally include parental and parent-child dyads, central relationships in stepfamilies generally include resident parent-child, stepparent-child, nonresident parent-child, and stepcouple dyads.

Although complicated at times, the formation of new dyads in stepfamilies can generate positive opportunities for youth and adults (Sweeney, 2010). For example, the entrance of a stepparent can bolster youths' social capital and social support networks; provide meaningful support and companionship to youths' biological parents; and result in increased household income and other tangible assets, which can help ease the financial stress that often accompanies single parenthood (Sweeney, 2010). In all, the diverse array of dyadic relationships adds complexity to the stepfamily experience, and the quality and output of these relationships has implications for stepfamily functioning and individual well-being. Below I highlight the primacy and interconnectedness of four common stepfamily dyads.

Common Stepfamily Dyads

Resident parent-child. High-quality resident parent-child relationships are generally marked by warmth, affection, closeness, nurturance, support, emotional engagement, and good communication. The parent-child relationship can provide a sense of continuity, stability, and safety for stepfamily members, especially youth (Jensen & Shafer, 2013). High-quality parent-child relationships in stepfamilies have also been linked to youth adjustment and willingness to form relationships with new stepparents (Jensen & Shafer, 2013; King, 2006). Although the resident biological parent-child relationship is not unique to stepfamilies, the amount of change and variability in this relationship is magnified in the context of stepfamily life. Indeed, parents

often struggle in their efforts to foster strong emotional bonds with their new romantic partner while simultaneously maintaining strong bonds with their children. In some instances, gains in one relationship can be obtained at the expense of other relationships, especially early on in stepfamily development (Papernow, 2013).

Stepparent-child. Mutually satisfying stepparent-child relationships are central antecedents to stepfamily functioning and stability (Papernow, 2013). Stepparent-child relationships are generally more variable than parent-child relationships, and stepparents can assume one of many different roles in the lives of their stepchildren (e.g., Weaver & Coleman, 2005). Even in the best cases, high-quality stepparent-child relationships require significant amounts of time to develop (Coleman, Ganong, & Jamison, 2011; Papernow, 2013). If achieved, stepparent-child relationships marked by warmth, closeness, good communication, support, and affection can promote youth adjustment across a number of physical, behavioral, and psychological well-being indicators (Bzostek, 2008; Jensen, Shafer, & Holmes, 2015; King, 2006); and positively influence other stepfamily relationships (King, Thorsen, & Amato, 2014).

Nonresident parent-child. Although present in many post-divorce or never-married single-parent families, nonresident biological parent-child relationships are a prominent feature of many stepfamilies. The quality of this relationship is highly variable, particularly between nonresident fathers and youth (Aquilino, 2006), and influenced by post-divorce/separation custody arrangements and the quality of the coparental relationship (Sobolewski & King, 2005). Relationship quality between a nonresident biological parent and youth is often indicated by the frequency and type of contact, quality of communication, and perceived emotional closeness. Greater closeness with nonresident fathers can promote youth adjustment (Amato & Gilbreth, 1999).

Stepcouple. High-quality couple relationships often encompass positive communication, affection, relationship satisfaction, and stability (Amato, Booth, Johnson, & Rogers, 2007). Stepouples differ from couples in biological nuclear families as they are often burdened by stress originating from other stepfamily subsystems and tensions with ex-partners. Stepparents can also experience a “stuck outsider” position, often causing them to feel put off by both stepchildren and their new partner (Papernow, 2013). Whereas in biological nuclear families couples have time to forge normative and predictable patterns of behavior prior to introducing children into the family system, stepcouples are formed in the context of existing family relationships and processes—a context into which stepparents can have difficulty integrating (Papernow, 2013). Consistent with emotional security theory, conflict between a biological parent and stepparent has been linked to youth maladjustment (Dunn, O’Connor, & Cheng, 2005). Conflictual stepcouple relationships can also impair parent-child and stepparent-child relationships (Cox & Paley, 1997; Dunn et al., 2005). Conversely, youth are more likely to report being close to a resident stepfather when they report that their mother and stepfather agree on parenting and argue infrequently (Jensen & Shafer, 2013).

Theoretical Framework

In addition to past research, several theoretical perspectives support a holistic and inclusive view of dyadic relationships in stepfamilies. For one, *family systems theory* posits that individual behavior and outcomes cannot be divorced from the complex network of relationships in which the individual is embedded (Cox & Paley, 1997). Families are viewed as complex systems, made up of interrelated subsystems. One portion of the family system cannot be influenced without impacting the whole system and other system components. Thus, an

understanding of stepfamily functioning can be optimized when features of multiple individuals and relationships are examined together.

A systems perspective would also posit the existence and aid in the prediction of distinct patterns of stepfamily relationship quality. As systems, families strive for equilibrium via goal attainment, adaptation, integration, and pattern maintenance (Robbins, Chatterjee, & Canda, 2012). When stepfamily members share common goals (e.g., forging a cohesive family unit) and demonstrate a sufficient and unified use of family resources, equilibrium can resemble a constellation of universally high-quality dyadic relationships (although other states of equilibrium are certainly possible). Importantly, stepfamilies can restrict family boundaries to include primarily those who reside in the household, or expand boundaries to include nonresident biological parents and other nonresident kin (Ganong & Coleman, 2017). Thus, stepfamily equilibria marked by high-quality dyadic relationships could pertain only to residential relationships or to all dyadic relationships of which children and parents are a part, regardless of the number and location of households involved. In these contexts, high-quality dyadic relationships can be positively reinforcing due to positive spillover effects and circular causality (Cox & Paley, 1997; Robbins et al., 2012). Moreover, these types of stepfamilies might have greater access to resources, such as education and income, which help facilitate the interactions needed to acquire and maintain positive stepfamily relationships.

Systemic equilibrium can become disrupted, or take on a more conflictual form, when stepfamily members have divergent values and goals—a phenomenon known as systemic rebellion (Robbins et al., 2012). Divergent goals among parents might be particularly influential, as parents generally wield the most power in families. For example, if a parent's goal centers on creating a high-quality parental relationship, a constellation of stepfamily relationship quality

might emerge that reflects a high-quality parental relationship and strained parent-child relationships. Alternatively, a resident biological parent might value the maintenance of high-quality relationships with his or her children, leading to the production of high-quality parent-child relationships and a strained couple relationship. The goals of and resources available to nonresident parents can also influence their parenting behaviors (e.g., Russell, Beckmeyer, Coleman, & Ganong, 2016), and thus influence the make-up of parent-child relationship quality and other stepfamily dynamics. Youth in stepfamilies are also capable of possessing goals that diverge from those of their parents, leading to strained and conflictual parent-child relationships. Moreover, triangulation tactics might be used among system members who possess divergent goals and seek to rebel against the stepfamily system (e.g., youth seeking to form a coalition with a biological parent against a stepparent; one biological parent seeking to turn a child against the other biological parent).

Whereas systems theory frames goal-consensus as the adhesive that holds systems together, *conflict theory* highlights the inevitability and role of change, conflict, and goal-divergence within systems (Robbins et al., 2012). Thus, the concept of systemic rebellion is particularly congruent with conflict theory. From this perspective, stepfamily members likely possess divergent goals and compete for the resources needed to attain those goals. For example, stepparents and children might compete with each other for attention from the biological parent. Conflict theory would posit the existence of relationship-quality constellations marked by disparities across stepfamily dyads, and the potential for negative interdependencies between dyadic relationships. That is, gains in one dyadic relationship might be attained at the expense of other dyadic relationships as a result of conflict and limited resources. Extant research and clinical literature render conflict theory a meaningful perspective, and, together with systems

theory, a full gamut of relationship-quality constellations is theoretically possible, ranging from universally high-quality and positively related to disparately high-quality and negatively related.

Typological Analyses of Stepfamily Relationship Quality

In relation to these theoretical perspectives, quantitative typological or person-oriented analyses (i.e., mixture modeling) offer a holistic view of participants in a sample and cluster together individuals who appear to share previously unobserved commonalities across measured phenomena (i.e., population heterogeneity). These types of analyses are scarce in the stepfamily literature, although at least two notable studies exist. Using cluster analysis, Schrodtt (2006) identified five constellations of stepfamily functioning with respect to measures of stepfamily dissension, involvement, avoidance, flexibility, and expressiveness. More recently, Amato, King, and Thorsen (2015) used latent class analysis and identified four latent classes, each with a unique pattern of mother-child, stepfather-child, and nonresident father-child closeness.

There are valuable opportunities for ongoing typological analyses of dyadic relationship quality in stepfamilies. For one, building on the Amato et al. (2015) study, information about the stepcouple relationship could be included alongside information about parent-child relationships. In addition, advancements in mixture modeling make it possible to model latent relationship-quality factors with multiple items, thereby handling measurement error and providing stronger construct measures. Another important question in this area of research remains: are there distinct subtypes of stepfamily relationships with different patterns of interrelationships between dyads? To date, no study of which I am aware has applied the methods needed to quantitatively identify such subtype-specific dyadic interrelationships—complex features that reflect tenets of the theories reviewed above, and that are now detectable as a result of methodological advancements.

Current Study

Taken together, previous research and theory suggest that dyadic relationships in stepfamilies are highly variable, interrelated, and associated with individual and family outcomes. In addition, population heterogeneity likely exists with respect to constellations of dyadic relationship quality in stepfamilies; however, little is known about the actual composition of such constellations. The current study aimed to address gaps in the literature by identifying latent constellations of multiple-item factors pertaining to mother-child, stepfather-child, nonresident father-child, and stepcouple relationship quality. Another aim was to identify constellation-specific patterns of interdependence across dyadic relationships. Comparative demographic profiles of each latent class were also generated, and the predictive validity of stepfamily-process patterns was examined in the context of stepcouple stability and youth adjustment. The current study focused on stepfamilies with adolescent stepchildren because adolescents tend to experience greater hardship in response to family transitions compared to younger children (Jensen & Howard, 2015), and adolescence is a sensitive and pivotal developmental period (Sawyer et al., 2012).

Method

Data and Sample

Data came from Wave I of the National Longitudinal Study of Adolescent to Adult Health (Add Health). Add Health began as a school-based study with a nationally representative sample of adolescents in grades 7 through 12 during the 1994-1995 school year. A randomly selected subset of adolescents from school rosters were administered in-home surveys, resulting in a sample of 20,745 adolescents at Wave I (1995). Concurrently, in-home parent interviews were conducted. In addition to adolescents' reports of health behaviors, well-being, and a variety

of relational and contextual information, parent data provided information pertaining to socio-demographic characteristics and parental relationships.

At Wave I, 2,756 adolescents reported living in a household with a biological mother and stepfather. The current study focused on mother-stepfather families for two reasons: (a) nearly 80% of all stepfamilies in the United States are headed by biological mothers and stepfathers (Kreider & Ellis, 2011), and (b) Add Health contains a relatively small number of father-stepmother families or stepfamilies headed by same-sex couples. Participants were included in the analytical sample if (a) they indicated that their stepfather was a father figure in their life (only these adolescents were asked questions about their relationship with the stepfather), (b) they indicated that their nonresident biological father was still living, and (c) they had valid Wave I sampling weights so that representative estimates could be obtained. Thus, the final analytical sample included 1,182 adolescents (mean age: 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. Average stepfamily duration was 6.72 years ($SD = 4.11$ years).

Measures

To measure the quality of stepfamily relationships, I chose items that corresponded with recent studies in the stepfamily literature, particularly those using Add Health data (e.g., Amato et al., 2015; King, Amato, & Lindstrom, 2015; King, Boyd, & Thorsen, 2015;). Specifically, I incorporated indicators of the quality of mother-child, stepfather-child, nonresident father-child,

and stepcouple relationships. Previous studies have established evidence for the validity of the items and constructs detailed below.

Mother-child relationship quality. Mother-child relationship quality was measured from the youths' perspective with five items ($\alpha = .85$). The first two items asked participants to indicate how close they felt to their mother and how much they thought their mother cared about them. Response options for these two items ranged from 1 (*not at all*) to 5 (*very much*). The remaining three items asked participants to indicate how much they agreed or disagreed with the following statements: "Most of the time, your mother is warm and loving toward you," "You are satisfied with the way your mother and you communicate with each other," and "Overall, you are satisfied with your relationship with your mother." Response options for these items ranged from 1 (*strongly agree*) to 5 (*strongly disagree*), and were reverse coded such that higher values indicated a higher-quality relationship.

Stepfather-child relationship quality. Stepfather-child relationship quality was measured from the youths' perspective with the same five items ($\alpha = .90$) used to measure the quality of the mother-child relationship. Each item was worded such that youth were asked about the quality of the stepfather-child relationship. Higher values indicated a higher-quality relationship.

Nonresident father-child relationship quality. Nonresident father-child relationship quality was measured from the youth's perspective with three items ($\alpha = .83$). The first item asked youth how close they felt to their biological father; response options ranged from 1 (*not close at all*) to 5 (*extremely close*). The remaining two items asked youth how often in the last 12 months they stayed overnight with their nonresident biological father; and how often in the last 12 months they talked to him in person or on the telephone, or received a letter from him.

Response options for these two items ranged from 0 (*not at all*) to 5 (*more than once a week*). Thus, higher values indicated a higher-quality relationship.

Stepcouple relationship quality. Stepcouple relationship quality was measured from the biological mother's perspective with the following two items: "How would you rate your relationship with your current (spouse/partner)?" and "How much do you fight or argue with your current (spouse/partner)?" Response options for the former ranged from 1 (*completely unhappy*) to 10 (*completely happy*), and response options for the latter ranged from 1 (*a lot*) to 4 (*not at all*). Higher values indicated a higher-quality relationship.

Covariates. Consistent with previous research and a stepfamily development perspective (Hawkins, Amato, & King, 2007; Hetherington et al., 1998; Jensen & Howard, 2015; King et al., 2015; Papernow, 2013), the following socio-demographic covariates at Wave I were used to help validate the analytic solution, once estimated: youth sex (*female* [1], *male* [0]), youth age (continuous item in years), youth racial/ethnic identity (dummy codes for non-Hispanic White, non-Hispanic Black, Hispanic, and Asian/Native American/Other), mother's education (*less than high school* [1], *completed high school/GED* [2], *some college* [3], *college degree or more* [4]), stepfather's education (coded the same as mother's education), household income (continuous item in thousand-dollar units), parental marital status (*married* [1], *unmarried cohabiting* [0]), mother's past romantic relationships in the last 18 years (continuous item), stepfamily duration (continuous item in years), and household composition (continuous item representing the number of household residents).

Additional substantive items from Wave I were used to further validate the analytic solution. Stepcouple stability was measured with an item that asked the biological mother to indicate if, in the past year, she and her current spouse/partner talked to each other about

separating (*no* [1], *yes* [0]). Youth depression was measured with a 9-item version of the Center for Epidemiologic Studies Depression Scale ($\alpha = .80$; Radloff, 1977); items asked youth to indicate how often they experienced a number of depressive symptoms in the past week (e.g., felt depressed, felt sad, felt too tired to do things). Response options ranged from 0 (*never or rarely*) to 3 (*most or all of the time*); higher values indicated higher levels of depression. Youth delinquency was an 8-item scale ($\alpha = .74$) that asked youth to indicate how often in the past 12 months they engaged in various delinquent behaviors (e.g., deliberately damaged the property of another, stole items, hurt someone in a fight, threatened others). Response options ranged from 0 (*never*) to 3 (*5 or more times*); higher values indicated higher levels of delinquency. Youth self-esteem was a 6-item scale ($\alpha = .85$) that asked youth to indicate the extent to which they agreed or disagreed with statements such as “you feel loved and wanted,” “you feel socially accepted,” “you have a lot of good qualities,” and “you like yourself just the way you are.” Response options ranged from 1 (*strongly agree*) to 5 (*strongly disagree*), and were reverse coded such that higher values indicated higher levels of self-esteem.

Data Analysis

To address the central aims of the current study, I used factor mixture modeling (FMM), a form of latent variable mixture modeling. FMM is a hybrid of factor analysis (FA) and latent class analysis (LCA; Muthén, 2008). The FA portion of the analysis accounts for measurement error and imposes a factor structure on the mean vector and covariance matrix of observed variables, and the LCA portion of the analysis explores unobserved population heterogeneity by detecting subgroups within the population that appear to cluster around distinct response patterns and model parameters (Collins & Lanza, 2010). FMM allows for the estimation of class-specific

or class-invariant parameters, including factor means (α), factor covariance matrices (Ψ), factor loadings (λ), and item intercepts (ν ; Clark et al., 2013; Muthén, 2008).

I compared the fit of two FMM specifications that assumed class-invariant measurement parameters. The first of these models, known as *latent class factor analysis* (heretofore referred to as FMM-1; Clark et al., 2013), specifies a non-parametric factor distribution and only allows factor means (α) to vary across classes (Muthén, 2008). This specification; for $k = 1, 2, \dots, K$ latent classes with p observed indicators, \mathbf{y} , and m factors; is illustrated as follows:

$$\mathbf{y}_{ik} = \boldsymbol{\nu}_k + \boldsymbol{\Lambda}\boldsymbol{\eta}_{ik} + \boldsymbol{\varepsilon}_{ik}$$

$$\boldsymbol{\eta}_{ik} = \boldsymbol{\alpha}_k$$

where \mathbf{y}_{ik} represents a p vector of individual i 's observed responses in latent class k ; $\boldsymbol{\nu}_k$ is a p vector of item intercepts; $\boldsymbol{\Lambda}$ is a $p \times m$ factor-loading matrix; $\boldsymbol{\eta}_{ik}$ is an m vector of factor scores; $\boldsymbol{\varepsilon}_{ik}$ is a p vector of item residuals; and $\boldsymbol{\alpha}_k$ is an m vector of factor means. With this specification, class-specific factor covariance matrices are fixed to zero (and not shown in the equations), meaning that no within-class factor variances or inter-factor covariances are estimated.

The second FMM specification with class-invariant measurement parameters, known as *mixture factor analysis* (heretofore referred to as FMM-2; Clark et al., 2013), specifies a parametric factor distribution and allows factor covariance matrices, in addition to factor means, to be freely estimated across latent classes (Muthén, 2008). This approach is illustrated mathematically as follows:

$$\mathbf{y}_{ik} = \boldsymbol{\nu}_k + \boldsymbol{\Lambda}\boldsymbol{\eta}_{ik} + \boldsymbol{\varepsilon}_{ik}$$

$$\boldsymbol{\eta}_{ik} = \boldsymbol{\alpha}_k + \boldsymbol{\zeta}_{ik}$$

$$\boldsymbol{\zeta}_{ik} \sim N(\mathbf{0}, \boldsymbol{\Psi}_k)$$

Where $\boldsymbol{\zeta}_{ik}$ is an m vector of residuals that is assumed to have a normal distribution, mean of 0, and covariance matrix $\boldsymbol{\Psi}_k$. Thus, the factor covariance matrix, $\boldsymbol{\Psi}_k$, is estimated and class-specific.

Preliminary FA and LCA models were used to identify the best-fitting number of factors and latent classes—information to be used when selecting FMM specifications (Clark et al., 2013). In terms of comparing the fit of preliminary models and FMM specifications, models with the following were favored: lower Akaike Information Criterion (AIC), Bayes Information Criterion (BIC), and adjusted BIC (aBIC) values (Clark et al., 2013); higher entropy and mean posterior probability values; class sample-sizes larger than 30; and non-significant bootstrap likelihood ratio tests. Perhaps most important, the substantive and theoretical fit of model parameters was considered when selecting a final FMM solution (Clark et al., 2013). Because mixture-model solutions can be unreliably derived from local log-likelihood maxima, I also used recommended sets of random start values to examine whether the log likelihood of each tested model could be replicated (Muthén & Muthén, 2012).

Following the selection of a best-fitting FMM solution, I conducted a series of validation analyses to examine the extent to which socio-demographic and substantive covariates differed between latent classes. I also examined class differences with respect to relationship quality item scores. Validation analyses were conducted using the 3-step procedure, a robust approach that adjusts for classification uncertainty (Asparouhov & Muthén, 2014). Mplus 7.4 was used for all substantive analyses (Muthén & Muthén, 2012). Missing data was handled with full information maximum likelihood (Enders, 2010). A maximum likelihood estimator with robust standard errors (i.e., MLR) was used, sampling weights were incorporated to generate representative model parameters, and standard errors were adjusted for potential within-school clustering

among participants. Preliminary calculations indicated that the factor-structure specification was over-identified and sufficiently powered to assess model fit (Kline, 2011; MacCallum, Browne, & Sugawara, 1996).

Results

Model Comparisons

Table 1.1 displays model fit indices associated with all preliminary LCA/FA and FMM specifications. The log-likelihood of each model shown was successfully replicated, providing evidence that the model solutions were not produced by local log-likelihood maxima. Starting with the preliminary LCA models, information criteria indicated incremental improvement in model fit when the number of latent classes was increased from one to five; however, the five-class solution produced a class in which only 23 cases were assigned. This class sample size represented less than 2% of the total sample, and indicated that the five-class solution might be an over-extraction. Bootstrap likelihood ratio tests indicated that a higher number of classes significantly improved model fit (tests significant at $p < .05$). Taken together, results from preliminary LCA suggested that models with two to four latent classes should be examined in the context of FMM. In terms of preliminary FA, only the fit of a four-factor model was evaluated because the factor structure was hypothesized a priori, consistent with a confirmatory FA approach. Thus, all subsequent FMM specifications included a four-factor structure.

Turning to the four-factor FMM specifications, information criteria ultimately favored the four-class FMM-2 model (AIC = 41021.3; BIC = 41503.4; aBIC = 41201.7). Across FMM-2 models, the four-class solution yielded the highest entropy value (.72) and acceptable average posterior probabilities for Classes 1, 2, 3, and 4 (.84, .89, .83, and .86, respectively). The four-

class FMM-2 model also yielded a highly interpretable, substantive, and theoretically meaningful solution. Thus, the four-class FMM-2 model was selected as the best-fitting solution.

Factor-Mixture Solution

Constellations of Dyadic Relationship Quality. To optimize interpretability, Table 1.2 displays latent-class differences with respect to raw-item scores, composite-scale scores, and Z scores; Z scores are particularly helpful for assessing the practical significance of class differences and comparing findings to other studies (e.g., Amato et al., 2015). Again, class scores were estimated using the 3-step procedure, which adjusts for classification uncertainty (Asparouhov & Muthén, 2014). In Class 1, the *residence-centered* pattern ($n = 302$; 25.5%), participants reported above-average mother-child ($Z = .49$) stepfather-child ($Z = .77$), and stepcouple ($Z = .73$) relationship quality; however, youth in this class reported below-average relationship quality with the nonresident father ($Z = -.57$). In Class 2, the *inclusive* pattern ($n = 307$; 26%), participants reported above-average mother-child ($Z = .31$), stepfather-child ($Z = .28$), nonresident father-child ($Z = 1.27$), and stepcouple ($Z = .38$) relationship quality. Most notable was the extent to which nonresident father-child relationship quality deviated positively from the sample mean (about 1.3 standard deviations). Participants in Class 3, the *conflictual couple* pattern ($n = 350$; 29.6%), reported above-average mother-child relationship quality ($Z = .42$), nearly average stepfather-child relationship quality ($Z = -.07$), and below-average nonresident father-child ($Z = -.21$) and stepcouple ($Z = -1.18$) relationship quality. The very low level of stepcouple relationship quality was perhaps the most distinguishing feature of this class. In Class 4, the *disconnected* pattern ($n = 223$; 18.9%), participants reported below-average mother-child ($Z = -1.51$), stepfather-child ($Z = -1.23$), and nonresident father-child ($Z = -.31$) relationship quality; however, levels of stepcouple relationship quality were above average ($Z =$

.17). Notably, levels of mother-child and stepfather-child relationship quality were very low in this class.

In terms of significant mean differences between latent classes, results indicated that the *residence-centered*, *inclusive*, and *conflictual couple* patterns had significantly higher mother-child relationship quality than the *disconnected* pattern; and the *residence-centered* pattern had higher mother-child relationship quality than the *inclusive* pattern. The *residence-centered* pattern had significantly higher stepfather-child relationship quality than the other three groups; and the *inclusive* pattern had significantly higher stepfather-child relationship quality than the *disconnected* pattern. The *inclusive* pattern had significantly higher nonresident father-child relationship quality than the other three groups; and the *conflictual couple* pattern had significantly higher nonresident father-child relationship quality than the *residence-centered* pattern. The *residence-centered* pattern had significantly higher stepcouple relationship quality than the other groups; the *inclusive* and *disconnected* patterns had significantly higher stepcouple relationship quality than the *conflictual couple* pattern; and the *inclusive* pattern had significantly higher levels of stepcouple relationship quality than the *disconnected* pattern. Refer to Table 1.2 for more details.

Figure 1.1 charts pattern differences using composite *Z* scores (where the sample-mean equals 0 with a standard deviation of 1) for each relationship-quality construct. This approach illustrates how the quality of dyadic relationships in each class deviates from sample mean levels in standard-deviation units. Because each dyadic relationship has a different raw sample mean, comparisons across dyadic relationships in a single class is less appropriate than comparisons across classes with respect to the same dyadic relationship.

Factor Variances and Inter-Factor Covariances. Each latent class had significant within-class variance for all four factors with one exception: there was not significant variance for nonresident father-child relationship quality in the *inclusive* pattern. Moreover, each class had unique patterns of inter-factor covariance, which is represented in Figure 1.1. In the *residence-centered* group, mother-child and stepfather-child relationship quality had positive covariance. This indicated that the quality of the mother-child relationship and the quality of the stepfather-child relationship tended to increase or decrease in concert. In the *inclusive* pattern, mother-child relationship quality had positive covariance with both stepfather-child relationship quality and nonresident father-child relationship quality. In the *conflictual couple* pattern, mother-child relationship quality had positive covariance with both stepfather-child relationship quality and stepcouple relationship quality. In addition, nonresident father-child relationship quality had negative covariance with stepcouple relationship quality. This indicated that the quality of the nonresident father-child relationship tended to increase when the quality of the stepcouple relationship decreased, or vice versa. In the *disconnected* pattern, mother-child relationship quality had positive covariance with stepfather-child relationship quality, but negative covariance with nonresident father-child relationship quality. This indicated that the quality of the mother-child and nonresident father-child relationships tended to vary in opposition to each other. Details about measurement parameters and class-specific covariance matrices are available upon request.

Factor-Mixture Validation

Table 1.3 displays class-specific means/proportions, standard errors, and Z scores for all covariates used to help validate the factor-mixture solution. Results indicated that the *disconnected* pattern had a significantly larger proportion of female youth (72%) than the

residence-centered (48%), *inclusive* (44%), and *disconnected* (44%) patterns. Youth in the *disconnected* pattern ($M = 15.87$ years; $Z = .14$) were also significantly older than youth in the *inclusive* ($M = 15.20$ years; $Z = -.26$) and *disconnected* ($M = 15.29$ years; $Z = -.20$) patterns. The *inclusive* (79%) and *disconnected* (79%) patterns had a larger proportion of youth who identified as non-Hispanic White compared to youth in the *residence-centered* (68%) pattern. The *residence-centered* pattern (8%) had a larger proportion of youth who identified as Asian/Native American/Other compared to youth in the *inclusive* (1%) and *disconnected* (2%) patterns. Mothers in the *inclusive* pattern ($M = 2.76$; $Z = .21$) reported higher levels of education than mothers in the *residence-centered* pattern ($M = 2.43$; $Z = -.15$); household income was significantly higher among those in the *inclusive* pattern ($M = 58.04$ in thousands; $Z = .18$) compared to those in the *conflictual couple* pattern ($M = 45.03$ in thousands; $Z = -.11$). Mothers in the *inclusive* pattern ($M = 2.15$; $Z = .13$) also reported having more past romantic relationships in the past 18 years than mothers in the *conflictual couple* pattern ($M = 1.98$; $Z = -.10$). Stepfamily duration was significantly longer among those in the *residence-centered* ($M = 6.65$ years; $Z = -.02$), *conflictual couple* ($M = 6.80$ years; $Z = .02$), and *disconnected* ($M = 7.39$ years; $Z = .16$) patterns compared to those in the *inclusive* pattern ($M = 5.54$ years; $Z = -.29$).

In terms of stepcouple stability, the *residence-centered* pattern (96%) had a significantly larger proportion of mothers who indicated they had not discussed separating from their partners compared to the *inclusive* (88%), *conflictual couple* (63%), and *disconnected* (83%) patterns; proportions in the *inclusive* and *disconnected* patterns were also higher than that in the *conflictual couple* pattern. Youth in the *disconnected* pattern ($M = 1.11$; $Z = .83$) reported significantly higher levels of depression than youth in the *residence-centered* ($M = .56$; $Z = -.28$), *inclusive* ($M = .57$; $Z = -.26$), and *disconnected* ($M = .61$; $Z = -.18$) patterns. Youth in the

residence-centered pattern ($M = .10$; $Z = -.27$) reported significantly lower levels of delinquent behavior than youth in the *inclusive* ($M = .16$; $Z = -.10$), *conflictual couple* ($M = .27$; $Z = .26$), and *disconnected* ($M = .17$; $Z = -.07$) patterns; youth in the *inclusive* pattern reported significantly lower levels of delinquent behavior than youth in the *conflictual couple* pattern. Youth in the *residence-centered* pattern ($M = 4.30$; $Z = .37$) reported significantly higher levels of self-esteem than youth in the *inclusive* ($M = 4.17$; $Z = .16$), *conflictual couple* ($M = 4.17$; $Z = .15$), and *disconnected* ($M = 3.53$; $Z = -.91$) patterns; youth in the *inclusive* and *conflictual couple* patterns also reported higher levels of self-esteem than youth in the *disconnected* pattern.

Discussion

Results from the current study highlight four possible stepfamily subpopulations marked by unique constellations of dyadic relationship quality and patterns of relationship-quality interdependencies. The *residence-centered* pattern illustrates a stepfamily system in which residential relationships are all high-quality and, in part, positively reinforcing. These stepfamilies could represent highly integrated, adaptable, and pattern-maintaining systems with unified goals and boundaries centered around household residents and a nuclear family model (Robbins et al., 2012). Given the low levels of nonresident father-child relationship quality, nonresident fathers associated with this stepfamily type might be absent, disengaged, or excluded from the system.

Members of the *inclusive* pattern possess above-average residential relationships, but also possess a very high-quality nonresident father-child relationship. Thus, these stepfamilies could represent highly integrated and unified systems with expanded boundaries that encompass key stepfamily dyads regardless of resident status (Robbins et al., 2012). In this context, system goals likely center around youth well-being and support, as parent-child relationships are positively

reinforcing, signaling a unified coparental regime. Moreover, these stepfamilies are marked by higher levels of mothers' education and household income—an indication that the family possesses the systemic resources needed to facilitate and sustain high-quality dyadic relationships, especially the relationship between youth and nonresident fathers, by providing the means to pay for youth travel and other coparenting expenses.

Whereas the *residence-centered* and *inclusive* patterns appear to possess goal-consensus and synergy (consistent with systems theory ideals), the *conflictual couple* and *disconnected* patterns appear to illustrate goal-divergent and conflictual systems (consistent with conflict theory; Robbins et al. 2012). Stepcouple relationships in the *conflictual couple* pattern are particularly burdened by conflict and sensitive to the quality of the nonresident father-child relationship. High-quality nonresident father-child relationships could lead stepfathers to experience role ambiguity, the negative consequences of which spilling over into the stepcouple relationship (e.g., stepcouple disagreements about parenting strategies, nonresident father involvement, and the stepparent role). Conversely, as stepcouple relationship quality improves, the stepfather might acquire greater acceptance from his stepchildren (Jensen & Shafer, 2013), resulting in stepchildren shifting time and energy away from the nonresident father in an effort to invest in the stepfather-child relationship. The *conflictual couple* pattern might possess other divergent goals, such that mothers seek to sustain strong bonds with their children whereas stepfathers primarily seek to forge a strong stepcouple bond. Cases in which there are insufficient resources to realize both of those goals, stepfamilies could display high-quality mother-child relationships and low-quality stepcouple relationships.

In the *disconnected* pattern, conflict, competition for resources, and triangulation processes might be most apparent across and between mother-child and nonresident father-child

relationships—an indication of a compromised coparental relationship. Moreover, youth in this group appear to adjust poorly to stepfamily life, perhaps as a result of their own divergent goals and systemic rebellion (e.g., youth giving priority to biological ties, peer relationships, or pre-stepfamily dynamics), leading to strained mother-child and stepfather-child relationships. This might be particularly true if mothers and stepfathers seek to attain goals that focus on developing the stepcouple relationship, as evidenced by high-quality stepcouple relationship quality. Unfortunately, youth in the *disconnected* pattern also report relatively low-quality relationships with their nonresident fathers, giving them few sources of reliable parental support. The significantly larger proportion of female stepchildren in this group compared to the other groups matches previous research suggesting that female stepchildren, on average, report lower-quality parent-child relationships in stepfamilies than male stepchildren (Jensen & Howard, 2015). The higher average age of youth is also consistent with past research suggesting that older stepchildren report lower-quality stepfamily relationships than younger stepchildren (Jensen & Howard, 2015).

The four latent classes or patterns identified in this study are partially consistent with Amato and colleagues' (2015) latent-class solution of parent-child closeness in stepfamilies. One notable point of departure is the *inclusive* pattern, which has very high-quality nonresident father-child relationships alongside above-average mother-child, stepfather-child, and stepcouple relationship quality. Another clear difference is the *conflictual couple* pattern, emphasizing the importance of including information about stepcouple relationship quality. Indeed, the quality of the stepcouple relationship was markedly different across each of the four identified patterns. Perhaps most notably, my solution highlights distinct patterns of interdependencies between dyadic relationships in each class—phenomena with little previous quantitative exploration.

Pattern differences in terms of youth racial/ethnic identity are not easily interpretable; however, the fact that youth identifying as non-Hispanic Black or Hispanic are no more or less likely to be represented in any specific pattern suggests that these youth might not be at any particular risk in terms of stepfamily relationship quality. Stepfamilies with members identifying as Asian, Native American, or as members of other racial minority groups might possess distinct strengths as they have the most representation in the *residence-centered* pattern compared to the other patterns. On the other hand, stepfamilies with youth identifying as non-Hispanic White are less represented in the *residence-centered* pattern compared to other patterns. Future research should assess racial/ethnic identity and other socio-demographic factors as they relate to complex examinations of stepfamily relationship quality.

The factor-mixture solution is further validated by predictable pattern differences across substantive covariates. Not surprisingly, the proportion of mothers who discussed ending the relationship with their partners was commensurate with the level of stepcouple relationship quality in each pattern. Differences in youth adjustment between pattern also provide tentative evidence that patterns of stepfamily processes have implications for youth well-being. A combination of below-average mother-child, stepfather-child, and nonresident father-child relationship quality (i.e., the *disconnected* pattern) is associated with the highest levels of depression among youth. In this context, youth likely have no solid parent-child relationship on which to rely when distressed or in need of support, leading to internalizing problems (Hetherington, 2003).

Despite having near- or above-average parent-child relationship quality, youth in stepfamilies marked by low-quality and conflictual stepcouple relationships (i.e., the *conflictual couple* pattern) appear to exhibit higher levels of externalizing problems, such as delinquent

behaviors. This link might be explained, in part, by emotional security theory, which focuses attention on children's regulatory response systems in the context of parental conflict or other threats to emotional security (Davies & Cummings, 1994). Youth self-esteem appears most closely connected to parent-child relationship quality, consistent with research on youth adaptation to family transitions (Hetherington, 2003). The similarity in well-being between youth in the *residence-centered* and *inclusive* patterns could stem from a compensatory phenomenon, such that youth derive psychological and behavioral benefits when the cumulative quality across parent-child relationships is high, regardless of which specific parent-child relationship is most high-quality (e.g., King, 2006).

Limitations and Future Research

Any conclusions drawn from this study should be tempered by some limitations. In the context of mixture modeling it can be challenging to actually prove whether latent classes truly exist (Bauer & Curran, 2003). Instead, latent classes should be viewed as helpful approximations of unobserved population heterogeneity, inasmuch as validation analyses and substantive interpretations warrant it. Moreover, the process of selecting a factor-mixture solution is informed by both objective information criteria and substantive interpretation. Thus, future research should seek to replicate the findings produced here, and alternative explanations for the final solution should be considered. I will note, however, that each identified typology is highly compatible with the theoretical framework used to guide and inform this study, lending confidence to the interpretation and validity of results.

I submit several additional recommendations for future research. First, future FMM specifications could include indicators of other important stepfamily relationships (e.g., sibling and coparental relationships). Second, future research should incorporate stepfamilies reared by

fathers and stepmothers or by same-sex couples. Third, although I highlight associations between stepfamily-process patterns and concurrent youth adjustment, future research should incorporate longitudinal data and assess the influence of patterns on youth adjustment over time.

Longitudinal analyses can help overcome ambiguity relating to the temporal order of associations between family processes and youth outcomes (Hawkins et al., 2007; King et al., 2015). Fourth, other substantive predictors of stepfamily-process patterns could be explored, such as neighborhood characteristics and other features of the family's environment and context that reflect a systems perspective (Noah, 2015). Future work in these areas, in combination with the results presented here, will help guide intervention development to promote youth and stepfamily well-being and increase theoretical understanding of diverse stepfamily experiences.

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Table 1.1

Model Fit Comparisons (N = 1,182)

Model	Log-Likelihood	Par.	AIC	BIC	aBIC	BLRT p - value	Size of smallest class
Latent class analysis							
One-class	-25334.436	30	50728.9	50881.1	50785.8		
Two-class	-23544.638	46	47181.3	47414.7	47268.6	0.000	353
Three-class	-22765.482	62	45655.0	45969.6	45772.7	0.000	101
Four-class	-22274.362	78	44704.7	45100.6	44852.8	0.000	101
Five-class	-21275.289	94	42738.6	43215.6	42917.0		23
Factor analysis							
Four-factor	-21027.305	51	42156.6	42415.4	42253.4		
Factor mixture analysis							
Two-class, four-factor							
FMM-1	-23544.638	46	47181.3	47414.7	47268.6		
FMM-2	-20635.509	65	41401.0	41730.9	41524.4		
Three-class, four-factor							
FMM-1	-22812.241	51	45726.5	45985.3	45823.3		
FMM-2	-20552.541	80	41264.9	41670.9	41416.8		
Four-class, four-factor							
FMM-1	-22464.309	56	45040.6	45324.8	45146.9		
FMM-2	-20415.654	95	41021.3	41503.4	41201.7		

Note: Par. = number of estimated parameters; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; aBIC = adjusted BIC; BLRT = bootstrap likelihood ratio test. All models were replicated with recommended sets of random start values. FMM-1 = Factor mixture model with class-invariant factor loadings, class-invariant intercepts, factor covariance matrices fixed at zero, class-varying factor mean vectors. FMM-2 = Factor mixture model with class-invariant factor loadings, class-invariant intercepts, class-varying factor covariance matrices, class-varying factor mean vectors.

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Table 1.2

Relationship-Quality Item Means, Standard Errors, Z Scores, and Composite-Scale Differences Between Latent Classes

Factor/Item	Full Sample (unweighted)		Residence-centered (<i>n</i> = 302)		Inclusive (<i>n</i> = 307)		Conflictual couple (<i>n</i> = 350)		Disconnected (<i>n</i> = 223)		Class differences, <i>p</i> ≤ .05
	mean Z		mean Z		mean Z		mean Z		mean Z		
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	
Mother-child relationship quality											
1 Closeness with mother	4.57		4.92 (0.02)	0.47	4.84 (0.04)	0.37	4.91 (0.03)	0.45	3.50 (0.07)	-1.43	
2 Mother cares	4.87		5.00 (0.01)	0.27	4.97 (0.01)	0.20	4.96 (0.02)	0.18	4.58 (0.05)	-0.65	
3 Mother is warm and loving	4.34		4.72 (0.04)	0.47	4.54 (0.05)	0.26	4.66 (0.03)	0.40	3.35 (0.10)	-1.22	
4 Satisfied with communication	3.98		4.51 (0.05)	0.51	4.31 (0.06)	0.32	4.41 (0.04)	0.41	2.22 (0.07)	-1.67	
5 Overall relationship satisfaction	4.28		4.65 (0.05)	0.40	4.57 (0.04)	0.31	4.61 (0.03)	0.35	2.90 (0.13)	-1.48	
Composite scale ^a	4.41	0.00	4.73 (0.02)	0.49	4.61 (0.03)	0.31	4.68 (0.02)	0.42	3.43 (0.06)	-1.51	1, 2, 3 > 4; 1 > 2
Stepfather-child relationship quality											
1 Closeness with stepfather	3.67		4.52 (0.04)	0.75	3.89 (0.10)	0.19	3.42 (0.25)	-0.22	2.73 (0.34)	-0.83	
2 Stepfather cares	4.33		4.85 (0.03)	0.55	4.39 (0.05)	0.06	4.06 (0.07)	-0.29	3.93 (0.08)	-0.43	
3 Stepfather is warm and loving	3.75		4.48 (0.04)	0.68	3.98 (0.05)	0.21	3.41 (0.07)	-0.33	3.16 (0.09)	-0.56	
4 Satisfied with communication	3.63		4.39 (0.05)	0.68	3.98 (0.09)	0.31	3.18 (0.14)	-0.39	3.04 (0.25)	-0.52	
5 Overall satisfaction	3.77		4.50 (0.04)	0.67	4.09 (0.09)	0.30	3.56 (0.33)	-0.19	2.84 (0.52)	-0.85	
Composite scale ^b	3.83	0.00	4.53 (0.03)	0.77	4.09 (0.08)	0.28	3.77 (0.26)	-0.07	2.71 (0.44)	-1.23	1 > 2, 3, 4; 2 > 4
Nonresident father-child relationship quality											
1 Closeness with father	1.23		0.56 (0.07)	-0.42	2.88 (0.12)	1.04	1.05 (0.09)	-0.12	1.03 (0.11)	-0.13	
2 Time spent overnight with father	2.39		1.22 (0.09)	-0.66	4.67 (0.03)	1.28	1.79 (0.39)	-0.34	1.99 (0.49)	-0.22	
3 Frequency of contact	2.90		2.45 (0.15)	-0.22	4.25 (0.07)	0.92	2.66 (0.14)	-0.16	2.51 (0.19)	-0.26	
Composite scale ^c	2.17	0.00	1.38 (0.09)	-0.57	3.94 (0.05)	1.27	1.88 (0.16)	-0.21	1.74 (0.22)	-0.31	2 > 1, 3, 4; 3 > 1
Stepcouple relationship quality											
1 Relationship happiness	8.50		9.68 (0.04)	0.72	9.11 (0.09)	0.37	6.48 (0.18)	-1.22	8.74 (0.12)	0.15	
2 Frequency of conflict	2.80		3.26 (0.07)	0.59	3.00 (0.07)	0.25	2.30 (0.08)	-0.65	2.91 (0.07)	0.14	
Composite scale ^d	5.65	0.00	6.44 (0.04)	0.73	6.06 (0.07)	0.38	4.37 (0.11)	-1.18	5.83 (0.08)	0.17	1 > 2, 3, 4; 2, 4 > 3; 2 > 4

Note: Means and mean differences were estimated using the 3-step procedure. Estimates were derived from weighted data and standard errors were adjusted for clustering. Means represent class-specific proportions for binary/dummy variables. Item numbers correspond with the order of items described in the Methods section. Composite-scale estimates are italicized for distinction. ^aRange: 1 to 5; ^bRange: 1 to 5; ^cRange: .33 to 5; ^dRange: 1 to 7.

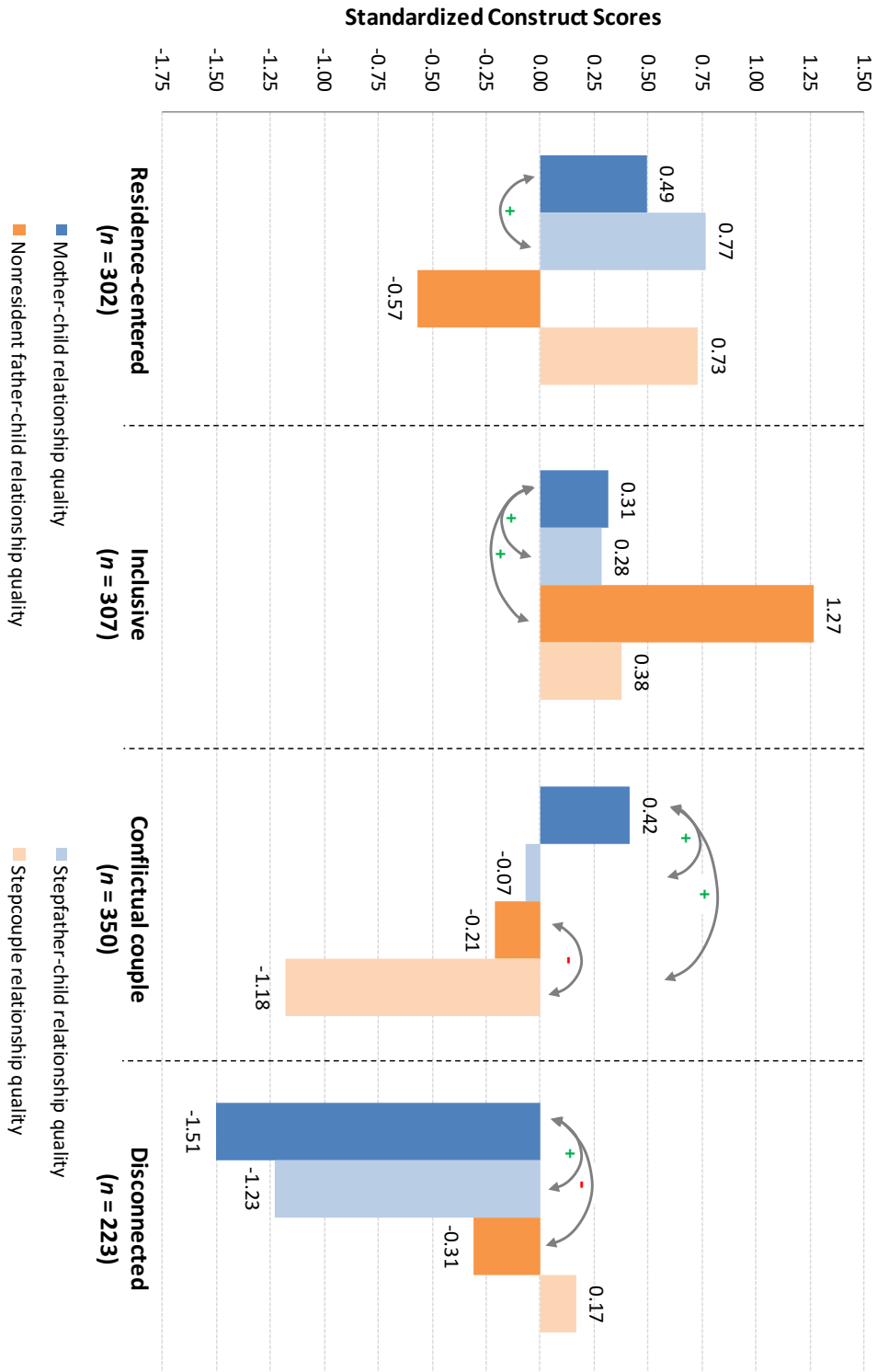
Table 1.3
Covariate Means, Standard Errors, Z Scores, and Differences Between Latent Classes

Covariate	Full Sample (unweighted) mean Z		Residence-centered (n = 302) mean Z		Inclusive (n = 307) mean Z		Conflictual couple (n = 350) mean Z		Disconnected (n = 223) mean Z		Class differences, $p \leq .05$
	M	SE	M	SE	M	SE	M	SE	M	SE	
Youth is female	0.53		0.48 (0.04)		0.44 (0.04)		0.44 (0.05)		0.72 (0.05)		4 > 1, 2, 3
Youth age	15.64	0.00	15.49 (0.23)		15.20 (0.20)		15.29 (0.22)		15.87 (0.17)		4 > 2, 3
Youth racial/ethnic identity											
White	0.62		0.68 (0.05)		0.79 (0.04)		0.70 (0.05)		0.79 (0.05)		2, 4 > 1
Black	0.19		0.14 (0.03)		0.10 (0.03)		0.15 (0.04)		0.13 (0.04)		
Hispanic	0.14		0.10 (0.03)		0.07 (0.02)		0.12 (0.03)		0.06 (0.02)		
Asian/Native American/Other	0.04		0.08 (0.03)		0.01 (0.01)		0.02 (0.01)		0.02 (0.01)		1 > 2, 4
Mother education	2.57	0.00	2.43 (0.09)		2.76 (0.09)		2.55 (0.09)		2.51 (0.14)		2 > 1
Stepfather education	2.59	0.00	2.47 (0.11)		2.69 (0.11)		2.52 (0.09)		2.64 (0.11)		0.04
Household income (in thousands)	50.02	0.00	50.40 (3.72)		58.04 (4.61)		45.03 (2.64)		49.15 (4.36)		2 > 3
Married (vs. cohabiting)	0.87		0.87 (0.03)		0.90 (0.03)		0.88 (0.03)		0.91 (0.03)		
Mother's past relationships	2.05	0.00	2.14 (0.09)		2.15 (0.06)		1.98 (0.06)		2.20 (0.09)		2 > 3
Stepfamily duration	6.73	0.00	6.65 (0.44)		5.54 (0.34)		6.80 (0.35)		7.39 (0.46)		1, 3, 4 > 2
Household composition	3.77	0.00	3.85 (0.19)		3.65 (0.11)		3.56 (0.13)		3.61 (0.12)		-0.11
Stepcouple stability	0.81		0.96 (0.02)		0.88 (0.02)		0.63 (0.03)		0.83 (0.03)		1 > 2, 3, 4; 2, 4 > 3
Youth depression ^a	0.70	0.00	0.56 (0.03)		0.57 (0.03)		0.61 (0.05)		1.11 (0.09)		4 > 1, 2, 3
Youth delinquency ^a	0.19	0.00	0.10 (0.02)		0.16 (0.02)		0.27 (0.04)		0.17 (0.04)		2, 3, 4 > 1; 3 > 2
Youth self-esteem ^b	4.08	0.00	4.30 (0.05)		4.17 (0.05)		4.17 (0.04)		3.53 (0.07)		1 > 2, 3, 4; 2, 3 > 4

Note: Means and mean differences were estimated using the 3-step procedure. Estimates were derived from weighted data and standard errors were adjusted for clustering. Means represent class-specific proportions for binary/dummy variables. Mean Z scores are only presented for continuous items. ^aRange: 0 to 3. ^bRange: 1 to 5.

FIGURES: PAPER I

Figure 1. 1
Standardized Factor Means and Inter-Factor Correlations for Each Latent Class



Note: The values shown are standardized scores for each relationship-quality scale; the full-sample mean for each standardized scale is equal to 0 with a standard deviation of 1. Estimates were derived from weighted data.

PAPER II

A TYPOLOGY OF STEPFAMILY PROCESSES AND ADOLESCENTS' SHORT-TERM AND LONG-TERM ADJUSTMENT

Families are a proximal and dynamic social context in which youth develop. In the United States, families have become increasingly diverse with respect to how they are defined, conceptualized, and structured. This growing diversity can be linked to a number of demographic trends, including high or increasing rates of relationship dissolution, non-marital childbearing, cohabitation, repartnership, and multiple-partner fertility (Cherlin, 2010; Manning, Brown, & Stykes, 2014). As a result of these trends, children experience an average of one family structural transition by age 13 (Brown, Stykes, & Manning, 2016).

The transition to stepfamily life has become particularly common, as nearly one-third of youth live in a stepfamily household at some point before reaching legal adulthood (i.e., age 18; Pew Research Center, 2011). Stepfamilies are formed when one or both adults in a new committed relationship bring a child or children from a previous relationship (Ganong & Coleman, 2017). In addition to being increasingly common, stepfamilies can face unique challenges and opportunities, warranting efforts to identify factors that promote stepfamily resilience and youth well-being (Ganong & Coleman, 2017).

Family processes have been widely identified as the primary pathway by which family structural transitions exert influence on youth adjustment (Hetherington, Bridges, & Insabella, 1998). In other words, what families *do* appears to influence youth outcomes more directly than what families *look like*. Consistent with this notion, researchers have sought to identify beneficial

processes in the context of central stepfamily dyads, including resident parent-child, stepparent-child, nonresident parent-child, and stepcouple relationships (Coleman, Ganong, & Russell, 2013; Hetherington & Elmore, 2003). Researchers have also applied holistic analyses of dyadic processes in stepfamilies and identified distinct typologies that might have implications for stepchildren's adjustment over time. The purpose of the current study was to examine one recently identified stepfamily-process typology (Jensen, 2017) and its association with youth adjustment over the early life course. Another purpose was to examine typology-adjustment associations in the context of youth sex, as male and female youth might respond in different ways to stepfamily processes (Hetherington & Elmore, 2003). To properly situate this study, I begin with a review of relevant literature, followed by the presentation of a theoretical framework to guide hypotheses.

Stepfamily Challenges and Opportunities

Stepfamilies experience challenges that are generally not faced by biological nuclear families—a fact that makes stepfamilies an important focus for researchers, educators, policymakers, and practitioners. Common stepfamily challenges include uncertainty about who is in and who is out of the family (i.e., family boundary ambiguity), ongoing conflict between co-parents, children resisting the influence of new stepparents, stepcouple disagreements about parenting, conflicting family cultures, family relocation, and declines in parent-child relationship quality (Brown & Manning, 2009; Coleman et al., 2013; Hetherington et al., 1998; Jensen & Shafer, 2013; King, 2009; Papernow, 2013; 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 pre-existing family processes. As a result,

stepfamilies must establish new “middle ground,” or normative and predictable patterns of family interaction and dynamics (Papernow, 2013).

Efforts to form new “middle ground” can present stepfamilies with important opportunities (Papernow, 2013). Indeed, stepfamilies can mobilize positive family processes involving multiple parental figures in an effort to optimize family functioning and youth well-being (Coleman et al., 2013; Hetherington et al., 1998). Because nearly 80% of stepfamilies are headed by a biological mother and stepfather (Kreider & Ellis, 2011), positive family processes are commonly derived from resident mother-child, stepfather-child, nonresident father-child, and stepcouple dyads (although other important relationships include the coparental relationship, relationships with grandparents and extended kin, and relationships between siblings; Coleman et al., 2013; Dunn, 2002; Manning et al., 2014).

Dyadic Processes in Stepfamilies and Youth Adjustment

With respect to parent-child relationships, positive processes often include warmth, affection, closeness, good communication, authoritative involvement, and emotional engagement (Hetherington et al., 1998). In stepfamily contexts, high-quality resident parent-child relationships have been linked to reductions in youth stress and fewer internalizing and externalizing problems (Dunn, 2002; Jensen & Harris, 2016; Jensen, Shafer, & Holmes, 2015; 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 et al., 2015).

Stepparent-child relationship quality is another important component of stepfamily life, and a powerful antecedent to stepfamily stability (Bray & Berger, 1993; Coleman, Fine, Ganong, Downs, & Pauk, 2001). Although stepparent-child relationships take on many forms and often

require significant amounts of time to develop (Papernow, 2013), high-quality stepparent-child relationships can 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, 2016; Jensen, Lippold, Mills-Koonce, & Fosco, 2017).

Nonresident parent-child relationship quality is another correlate of youth adjustment in stepfamilies. Because a majority of children reside primarily with their biological mother following the dissolution of a parental relationship, nonresident parents are often fathers (Dunn, 2002; Kreider & Ellis, 2011). Researchers have noted that the extent to which youth feel close to their nonresident fathers, along with fathers' authoritative parenting practices, 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 stepcouple relationship is also important, and commonly measured with respect to overall stability, frequency and type of conflict, communication, and relational satisfaction. Youth exposed to parental conflict can become distressed, imitate the aggression and hostility they have been exposed to, and experience adjustment problems over time (Cummings, Koss, & Davies, 2015; Dunn, 2002). Conversely, research has shown that high-quality or non-conflictual relationships between a parent and stepparent is associated with concurrent decreases in youth internalizing and externalizing problems (Dunn, 2002; Dunn, O'Connor, & Cheng, 2005), and decreases in youth depression in emerging and young adulthood (Jensen & Harris, 2016).

Typologies of Dyadic Processes in Stepfamilies

Most existing studies provide insights about the role of specific dyadic relationship in shaping youth well-being. Far less is known about how patterns of dyadic processes take form and the implications of such patterns for stepfamilies and youth. This dearth of research is unfortunate, as family life is complex, and no individual or dyadic relationship exists in a vacuum. Thus, theorists and researchers have advocated (Dunn, 2002) and conducted holistic analyses of dyadic processes in stepfamilies and identified distinct typologies that can aid in understanding stepchildren's adjustment over time. For example, Amato, King, & Thorsen (2015) 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 in which youth were either (a) not close to resident parents, (b) moderately close to resident parents, (c) close to resident parents but didn't know the nonresident father, or (d) close to all parents. In terms of youth adjustment, patterns marked by greater closeness between youth and their resident mother and stepfather were associated with lower levels of youth depression, smoking, and marijuana use concurrently and in young adulthood. Patterns with close mother-child and stepfather-child relationships were also associated with lower levels of youths' concurrent delinquency compared to classes with non-close mother-child and stepfather-child relationships.

Building on this work, Jensen (2016) used a representative sample of adolescents residing in mother-stepfather families and employed factor mixture modeling (FMM) to identify patterns with respect to the quality of mother-child, stepfather-child, nonresident father-child, and stepcouple relationships. Because stepcouple relationship quality is an important correlate of stepfamily stability and youth adjustment (Dunn, 2002; Jensen & Harris, 2016), the addition of

this relationship was noteworthy. Moreover, FMM is a sophisticated form of mixture modeling, allowing for more precise construct measurement and the estimation of pattern-specific correlations between constructs (Clark et al., 2013).

Results yielded four distinct patterns of stepfamily processes. The *residence-centered* pattern was marked by above-average mother-child, stepfather-child, and stepcouple relationship quality. The nonresident father-child relationship had below-average quality, and mother-child and stepfather-child relationship quality had positive covariance. The *inclusive* pattern was marked by above-average mother-child, stepfather-child, nonresident father-child, and stepcouple relationship quality; with an especially high-quality nonresident father-child relationship. Mother-child relationship quality had positive covariance with stepfather-child and nonresident father-child relationship quality. The *conflictual couple* pattern had above-average mother-child relationship quality, near-average stepfather-child and nonresident father-child relationship quality, and very low stepcouple relationship quality. Mother-child relationship quality had positive covariance with stepfather-child and stepcouple relationship quality, but nonresident father-child and stepcouple relationship quality had negative covariance. The *disconnected* pattern had very low mother-child and stepfather-child relationship quality, below-average nonresident father-child relationship quality, and slightly above-average stepcouple relationship quality. Mother-child and stepfather-child relationship quality had positive covariance, but mother-child and nonresident father-child relationship quality had negative covariance. Refer to Table 2.1 for a detailed summary of each pattern.

Patterns of stepfamily processes were associated with youths' concurrent adjustment in the context of bivariate validation analyses. Specifically, youth in the *disconnected* pattern reported the highest levels of concurrent depression. Youth in the *residence-centered* pattern

reported the lowest levels of concurrent delinquency, whereas youth in the *conflictual couple* pattern reported the highest levels of concurrent delinquency. Finally, youth in the *residence-centered* pattern reported the highest levels of concurrent self-esteem, whereas youth in the *disconnected* pattern reported the lowest levels of concurrent self-esteem. Associations between these patterns and youth adjustment across the early life course await empirical investigation—a gap I seek to fill with the current study.

Youth Sex as a Moderating Influence

Another important question is whether female and male youth differ in their adjustment responses to stepfamily processes. Scholars have noted that individual characteristics, including youth sex, can moderate the link between family processes and youth adjustment (Hetherington et al., 1998; Hetherington & Elmore, 2003; Dunn, 2002), although the moderating influence of youth sex in stepfamily contexts is not well studied. From a stress reactivity perspective, some past research has shown that female youth exhibit higher levels of maladjustment than male youth in the face of the same interpersonal stressors (Hankin, Mermelstein, & Roesch, 2007). Moreover, male and female youth often 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). Taken together, I hypothesized that female youth would experience more severe maladjustment than male youth, particularly in the form of depression, as a consequence of exposure to stepfamily-process patterns marked by low-quality and conflictual dyadic relationships. I also hypothesized that male youth would exhibit more externalizing problems than female youth as a consequence of exposure to stepfamily-process patterns marked by low-quality dyadic relationships.

Theoretical Framework

In addition to past research, several theoretical perspectives can be integrated to frame investigations of stepfamily processes and youth adjustment over time. For one, family systems theory posits that individual adjustment consists of adaptive responses to proximal social environments, such as the dynamic family system in which the individual is embedded (Cox & Paley, 1997; Cox, Mills-Koonce, Propper, & Gariepy, 2010). Moreover, a systems perspective favors an inclusive approach to conceptualizing family systems, such that subsystems and interdependencies between subsystems are appropriately acknowledged in relation to individual adjustment (Cox & Paley, 1997). In addition, the Family Adjustment and Adaptation Response (FAAR) model posits that families adapt well and optimize functional performance (e.g., facilitating the physical, psychological, and behavioral well-being of children) when they have sufficient family capabilities to meet family demands (Patterson, 2002). Family capabilities can include psychosocial resources and coping behaviors, such as high-quality dyadic and family relationships and processes.

In terms of what patterns of stepfamily processes in stepfamilies are most facilitative of youth adjustment over time, predictions can vary. A stress and support perspective would highlight the positive influence of patterns marked by high-quality and cooperative parent-child relationships, including mother-child, stepfather-child, and nonresident father-child dyads (Sheeber, Hops, & Davis, 2001). Indeed, youth who possess numerous high-quality relationships with parental figures will be less likely to experience stress, and will have more sources from which to draw support in times of need. Similarly, a social capital perspective would highlight the value of numerous high-quality parent-child relationships through which social capital can be propagated, fostering youths' human capital and positive adjustment (Coleman, 1988; Rose,

Woolley, & Bowen, 2013). A *primacy-of-residence* perspective would favor the influence of residential relationships on youth adjustment (i.e., the *residence-centered* or *disconnected* patterns; King, 2006), whereas a *primacy-of-biology perspective* would favor the influence of biological relationships, such as those between youth and their resident biological mothers and nonresident biological fathers (i.e., the *inclusive* pattern; King, 2006).

Emotional security theory, on the other hand, would emphasize the role of the couple relationship and frequency of parental conflict on predicting youth adjustment (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, stepfamily processes distinctly marked by a high- or low-quality stepcouple relationship (i.e., the *conflictual couple* pattern) might be most predictive of youth adjustment over time.

Consistent with a life course perspective, any links between stepfamily-process typologies and youth adjustment should be examined longitudinally. Indeed, life course theory frames human development as a dynamic trajectory, emphasizing the role of time, timing, and linked lives (Elder, Shanahan, & Jennings, 2015). Thus, associations between family processes and youth adjustment should be contextualized with respect to distinct and formative stages of development, including adolescence, emerging adulthood, and young adulthood.

Adolescence—roughly ages 10 to 19—is marked by youths’ pursuit for greater autonomy, ongoing sensitivity to social determinants of health, social and biological changes, and brain plasticity (Sawyer et al., 2012; World Health Organization, 2016). Adolescent youth can be heavily influenced by family processes (Sheeber et al., 2001), and adjustment problems that emerge during adolescence can cascade into subsequent stages of development (Cox et al.,

2010). Emerging adulthood (i.e., roughly ages 18 to 25) introduces other development tasks, including the exploration of self-identity; examination of life possibilities with respect to work, love, and world-views; and the pursuit of experiences not previously available due to parental monitoring (Arnett, 2000). Thus, processes within one's family-of-origin can continue to shape the contours of development during emerging adulthood as individuals manage these tasks. By or around age 30, many experience the transition to young adulthood. General tasks and features associated with young adulthood include self-identifying as an adult, settling into a long-term committed couple relationship, starting a family, and securing long-term employment (Arnett, 2000). At this point in development, individuals can still be sensitive to family-of-origin experiences (Sadowski, Ugarte, Kolvin, Kaplan, & Barnes, 1999), particularly as they attempt to make sense of their own role transitions (e.g., spouse, parent) and establish interactional patterns within their family of procreation.

Current Study

Together, past research and theory point to links between stepfamily processes and youth adjustment over time, yet few studies have applied a holistic view of stepfamily processes or examined associations longitudinally. The emergence of stepfamily-process typologies provides valuable opportunities to explore complex and dynamic constellations of stepfamily processes and their implications for youth adjustment across the early life course. Ongoing work in this area is warranted as a sizeable proportion of youth in the United States will spend time residing in a stepfamily household before reaching legal adulthood. Moreover, understanding nuances with respect to constellations of stepfamily processes and youth adjustment over time can guide researchers, educators, policymakers, and practitioners in their efforts to develop effective interventions and ensure healthy development for all youth. Consistent with previous research, I

call attention to three facets of youth adjustment—depression, delinquency, and self-esteem (Dunn et al., 2005; Dunn, 2002)—and I reiterate the following study aims: to examine the extent to which distinct patterns of stepfamily processes (Jensen, 2017) were associated with youth adjustment across the early life course, and to examine the extent to which youth sex moderated associations between stepfamily processes and adjustment.

Method

Data and Sample

Data for this study came from the National Longitudinal Study of Adolescent to Adult Health (Add Health). I used information from in-home youth interviews and parent questionnaires at Wave I (1994 to 1995), as well as youth in-home interviews at Waves II (1996), III (2001 to 2002; ages 18 to 26 [emerging adulthood]), and IV (2008 to 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 youth peer relationships, family dynamics, health behaviors, and other well-being indicators. In-home interviews with respondents at subsequent waves used similar interview procedures. Parent data at Wave I were collected using interviewer-assisted, op-scanned questionnaires that were issued primarily to resident mothers. Questionnaires included questions about household income, education, employment, and parents' romantic relationships.

The analytical sample from which the patterns of stepfamily processes were originally identified consisted of adolescents who reported living with their biological mother and a stepfather at Wave I, and who had a living nonresident father ($n = 1,182$; 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 sub-samples were specified for the current study: one to analyze the influence of stepfamily-process patterns on youths' short-term adjustment, and the other to analyze the influence of stepfamily-process patterns on youths' concurrent and long-term adjustment, or adjustment growth curves. Adolescents with adjustment information collected at Wave II comprised the first sub-sample 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 sub-sample for the analysis of concurrent and long-term adjustment ($n = 758$; mean age = 15.55 years, $SD = 1.69$; 56% female; 65% non-Hispanic White).

Measures

Patterns of Stepfamily Processes. The focal independent variable was youths' membership in one of four patterns of stepfamily processes (summarized in the Introduction section), labeled (a) *residence-centered*, (b) *inclusive*, (c) *conflictual couple*, and (d) *disconnected*. As noted earlier, these patterns were originally estimated using FMM with four latent factors representing mother-child, stepfather-child, nonresident father-child, and stepcouple relationship quality; each pattern had unique inter-factor correlations (refer to Jensen, 2017 for details about the analysis and specific measurement items). Each pattern was dummy coded.

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 four-point scale (0 = never or rarely, 3 = most or all of time) how frequently during the last week they (a) felt bothered by things that don't usually bother them, (b) felt that they could not shake off the blues, (c) felt that they were as good as other people, (d) had trouble keeping their mind on what they were doing, (e) felt depressed, (f) felt that they were too tired to do things, (g) enjoyed life, (h) felt sad, and (i) felt that people disliked them. Higher values indicated higher levels of depression. The analysis of youths' short-term adjustment incorporated items from Wave II ($\alpha = .81$), whereas the analysis of youths' concurrent and long-term adjustment incorporated items from Waves I ($\alpha = .82$), III ($\alpha = .82$), and IV ($\alpha = .83$).

Self-Esteem. Self-esteem was a dependent latent construct measured with six items that asked respondents to indicate their level of agreement along a five-point scale (1 = strongly agree, 5 = strong disagree) with respect to the following statements: (a) you feel like you are doing everything just about right, (b) you feel loved and wanted, (c) you feel socially accepted, (d) you have a lot of good qualities, (e) you have a lot to be proud of, and (f) 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; $\alpha = .85$).

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 (a) deliberately damaged property that didn't belong to them, (b) stole something worth more than \$50, (c) went

into a house or building to steal something, (d) used or threatened to use a weapon to get something from someone, (e) sold marijuana or other drugs, (f) stole something worth less than \$50, or (g) took part in a group fight. Consistent with other recent studies (e.g., Amato et al., 2015), 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' concurrent and long-term adjustment incorporated the count index from Waves I, III, and IV.

Covariates. To more fully isolate the influence of stepfamily-process patterns on youth adjustment, all analyses incorporated several socio-demographic 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., 2015). To control for the potential influence of stepfamily dissolution on youth adjustment over time, a dichotomous covariate was included 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.

Grouping variable. 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. Structural equation modeling (SEM) was used to estimate associations between stepfamily-process patterns and youths' short-term adjustment, net the influence of covariates. Three separate models were estimated. Model 1 included a latent endogenous construct for depression at Wave II, Model 2 included a latent endogenous construct for self-esteem at Wave II, and Model 3 included an observed endogenous variable for delinquency at Wave II. Because items used to measure depression and self-esteem were ordinal, a mean- and variance-adjusted weighted least squares (WLSMV) estimator and polychoric input correlation matrix was used for Models 1 and 2 (Bovaird & Koziol, 2012). Because delinquency was a count variable and significantly over-dispersed (per preliminary analyses), a negative-binomial specification and maximum likelihood estimator with robust standard errors (MLR) were used for Model 3. Multiple-group comparison analyses between male and female youth were conducted to assess measurement invariance for latent constructs in Models 1 and 2, and structural invariance for Models 1, 2, and 3.

Concurrent and Long-Term Adjustment. In terms of concurrent and long-term depression, the suitability of second-order latent-growth curve modeling (LGCM) was assessed. The following preliminary steps were performed: (a) examination of a correlation matrix with depression items across Waves I, III, and IV; (b) estimation of longitudinal confirmatory factor analysis models with auto-correlated errors; (c) tests of measurement invariance over time, and (d) estimation of a second-order LGCM (Wickrama, Lee, O'Neal, & Lorenz, 2016). Growth-

curve estimation yielded a non-significant slope mean and variance for depression, meaning that a latent growth curve model was not appropriate for depression outcomes. Thus, longitudinal SEM with auto-correlated errors was used in place of second-order LGCM (Wickrama et al., 2016), and associations between stepfamily-process patterns and depression at Waves I, III, and IV were estimated, net the influence of covariates. Because items used to measure depression were ordinal, a WLSMV estimator and polychoric input correlation matrix was used. Multiple-group comparison analyses were also conducted to assess measurement and structural invariance between male and female youth.

In terms of concurrent and long-term delinquency, a negative-binomial latent growth curve model fit the data well and was used to estimate latent intercept and slope parameters, as well as to assess associations between stepfamily-process patterns and growth-curve parameters, net the influence of covariates. Multiple-group comparison analyses were conducted to assess structural invariance between male and female youth.

In all models, the referent stepfamily-process pattern was rotated so that significant differences between patterns could be determined. For models using the WLSMV estimator, 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% confidence interval less than or equal to .06; West, Taylor, & Wu, 2012). For negative-binomial models, the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) were used to assess relative model fit (Liu & Powers, 2007).

Metric (i.e., invariant factor loadings) and scalar (i.e., invariant thresholds) measurement invariance was indicated if measurement parameters could be constrained to equality between

male and female youth without significantly increasing the model CFI (i.e., $\Delta\text{CFI} < .01$; Cheung & Rensvold, 2002). Wald tests were used to assess structural invariance, 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 over-identified 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).

Results

Short-Term Adjustment

Depression. Table 2.2 displays results associated with Models 1, 2, and 3. Model 1 estimated associations between latent-class membership at Wave I and depression at Wave II, while holding constant model covariates. Model 1 yielded acceptable fit based on pre-specified criteria ($\chi^2[183] = 293.873, p < .001$; 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 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 models (measurement results are available upon request).

Results indicated that patterns of stepfamily processes at Wave I were significantly associated with depression at Wave II. Specifically, youth in the *residence-centered* pattern

reported lower levels of depression at Wave II compared to youth in the *conflictual couple* pattern ($b = -.32$) and the *disconnected* pattern ($b = -.68$); youth in the *inclusive* pattern reported lower levels of depression at Wave II compared to youth in the *conflictual couple* ($b = -.24$) and *disconnected* ($b = -.59$) patterns; and youth in the *conflictual couple* pattern reported lower levels of depression at Wave II than youth in the *disconnected* pattern ($b = -.34$). Findings remained consistent even when depression at Wave I was entered into the model as a covariate, suggesting that stepfamily processes exerted influence on changes in youth depression over time, above and beyond the influence of earlier levels of depression.

In terms of covariates, youth whose parent and stepparent remained together by Wave II reported lower levels of depression at Wave II compared to youth whose parent and stepparent were no longer together by Wave II ($b = -.18, p < .10$). Youth also reported lower levels of depression at Wave II when their mothers had completed at least a college degree compared to youth whose mothers only finished high school ($b = -.25, p < .10$). Both non-Hispanic Black ($b = .19, p < .10$) and Hispanic ($b = .28, p < .10$) youth reported higher levels of depression at Wave II compared to non-Hispanic White youth. In all, Model 1 explained approximately 11% of the variance in depression at Wave II.

Self-Esteem. Model 2 specified associations between patterns of stepfamily processes at Wave I and self-esteem at Wave II while holding constant model covariates. Model 2 also yielded acceptable fit ($\chi^2[120] = 258.926, p < .001$; CFI = .95; TLI = .95; RMSEA = .036 [upper 90% CI: .042]). Similar to Model 1, measurement and structural invariance tests indicated that item factor loadings, item thresholds, and all structural parameters were statistically indistinguishable between male and female youth. Model 2 parameters were estimated with male and female youth combined together.

Results indicated significant associations between patterns of stepfamily processes at Wave I and self-esteem at Wave II. Youth in the *residence-centered* pattern reported higher levels of self-esteem at Wave II compared to youth in the *conflictual couple* ($b = .23$) and the *disconnected* ($b = .57$) patterns; youth in the *inclusive* pattern reported higher levels of self-esteem at Wave II compared to youth in the *disconnected* pattern ($b = .43$); and youth in the *conflictual couple* pattern reported higher levels of self-esteem at Wave II compared to youth in the *disconnected* pattern ($b = .34$). Findings remained consistent even when self-esteem at Wave I was entered into the model as a covariate, suggesting that stepfamily processes exerted influence on changes in youth self-esteem over time, above and beyond the influence of earlier levels of self-esteem.

With respect to model covariates, youth reported higher levels of self-esteem at Wave II when their mothers had completed at least a college degree compared to youth whose mothers had only completed high school ($b = .20, p < .10$). Moreover, non-Hispanic Black youth reported higher levels of self-esteem at Wave II compared to non-Hispanic White youth ($b = .24$). Model 2 explained nearly 10% of the variance in self-esteem at Wave II.

Delinquency. Model 3 specified associations between patterns of stepfamily processes at Wave I and delinquency at Wave II while holding constant model covariates. Structural invariance tests indicated that all parameters could be constrained to equality between male and female youth, except for parameters linked to two covariates: mothers' education and youth age. Because Model 3 used a negative-binomial function to handle the over-dispersed, count form of delinquent behavior, raw coefficients represented a change in the log count of delinquency per unit change in an independent variable. For the sake of interpretation, I exponentiated the model

coefficients to produce incidence rate ratios, which indicate a percentage change in the expected count per unit change in an independent variable.

Results indicated significant associations between patterns of stepfamily processes at Wave I and delinquency at Wave II. Youth in the *residence-centered* pattern had a 32% ($\exp[b] = .68$) and 44% ($\exp[b] = .56$) lower expected count of delinquent behaviors at Wave II compared to youth in the *conflictual couple* and *disconnected* patterns, respectively. Moreover, youth in the *inclusive* pattern had a 37% lower expected count of delinquent behavior at Wave II compared to youth in the *disconnected* pattern ($\exp[b] = .37$). These findings were attenuated when delinquency at Wave I was entered as a model covariate, suggesting that earlier delinquency might have been a more salient antecedent of subsequent delinquency than stepfamily processes.

For both males and females, youth who identified as Hispanic had a 60% higher expected count of delinquent behavior at Wave II compared to youth who identified as non-Hispanic White ($b = 1.60$). For female youth only, higher levels of mothers' education was associated with decreases in the expected count of delinquent behavior at Wave II. Further, a one-unit increase in female youth age was associated with a 19% decrease in the expected count of delinquent behavior at Wave II ($b = .81$).

Concurrent and Long-Term Adjustment

Depression. Table 2.3 displays results from the auto-correlated longitudinal SEM with depression at Waves I, III, and IV regressed on stepfamily-process patterns 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 stepfamily-process patterns to depression at Wave I. Thus, Table 2.3 highlights male- and female-specific parameters for associations between stepfamily-process patterns and depression at Wave I. The final model yielded acceptable fit ($\chi^2[1564] = 1803.947$, $p < .001$; CFI = .95; TLI = .95; RMSEA = .020 [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* ($b = -.46$, $p < .10$), *conflictual couple* ($b = -.73$), and *disconnected* ($b = -.52$) patterns; whereas female youth in the *residence-centered*, *inclusive*, and *conflictual couple* patterns reported lower levels of depression at Wave I than female youth in the *disconnected* pattern ($b = -1.18$, -1.01 , and $-.92$, respectively). Thus, for male youth, membership in the *residence-centered* pattern was particularly important in terms of psychological well-being. For female youth, simply not being in the *disconnected* pattern was most important. For both males and females, household composition ($b = .07$), mothers completing some ($b = -.34$) or all ($b = -.39$) of college versus only completing high school, identifying as non-Hispanic Black versus non-Hispanic White ($b = .26$, $p < .10$), and age ($b = .06$) were all associated with youth depression at Wave I. The model explained 15% and 19% of depression at Wave I for males and females, respectively.

Turning to depression long-term, youth in the *residence-centered* pattern reported lower levels of depression at Wave III compared to youth in the *conflictual couple* ($b = -.37$) and *disconnected* ($b = -.31$) patterns. Youth in the *inclusive* pattern also reported lower levels of

depression at Wave III compared to youth in the *conflictual couple* ($b = -.28$) and *disconnected* ($b = -.21, p < .10$) patterns. In terms of covariates, youth whose mothers completed some ($b = -.21$) or all ($b = -.45$) of college reported lower levels of depression at Wave III than youth whose mothers only completed high school; youth who identified as non-Hispanic Asian/Other reported higher levels of depression at Wave III than youth who identified as non-Hispanic White ($b = .34$); older age was associated with lower levels of depression at Wave III ($b = -.05$); and increases in mothers' relationships during the past 18 years was associated with higher levels of depression at Wave III ($b = .09$). The model explained 8% and 13% of depression at Wave III for males and females, respectively. Youth in the *residence-centered* and *inclusive* patterns reported lower levels of depression at Wave IV compared to youth in the *conflictual couple* pattern ($b = -.31$ and $.28$, respectively). More education among mothers was associated with decreases in depression at Wave IV. The model explained 9% and 7% of depression at Wave IV for males and females, 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 2.4 displays results associated with the unconditional and conditional latent-growth curve model for males. With respect to unconditional growth-curve parameters, the average initial expected count of delinquent behaviors for males was .96 ($b = -.04, \exp[b] = .96$), with significant inter-individual variance. The expected count of delinquent behavior decreased across waves by an average of 54% per wave ($b = -.77, \exp[b] = .46$), with significant inter-individual variance. The mean intercept and mean slope parameters had positive covariance, such that higher initial expected counts were associated with less severe downward trends in the expected count over time.

In terms of conditional growth-curve parameters, male youth in the *residence-centered*, *inclusive*, and *disconnected* patterns had lower expected initial counts of delinquent behavior than male youth in the *conflictual couple* pattern ($b = -.73, -.42$, and $-.40$, respectively). Moreover, decreases in the expected count of delinquent behavior over time was less negative for male youth in the *residence-centered* pattern compared to male youth in the *conflictual couple* ($b = .63$) and *disconnected* ($b = .50$) patterns. The expected-count decrease over time was also less negative for male youth in the *inclusive* pattern compared to male youth in the *conflictual couple* pattern ($b = .33$). The relatively less negative slopes for male youth in the *residence-centered* and *inclusive* groups likely reflects the fact that initial expected counts of delinquent behavior were also relatively lower, leaving less room for meaningful decreases in delinquent behavior over time. Refer to Table 2.3 for information about significant covariates.

Table 2.5 displays results associated with both the unconditional and conditional latent-growth curve model for females. With respect to unconditional growth-curve parameters, the average initial expected count of delinquent behaviors for females was .42 ($b = -.86$, $\exp[b] = .42$), with significant inter-individual variance. The expected count of delinquent behavior decreased across waves by an average of 81% per wave ($b = -1.65$, $\exp[b] = .19$), with significant inter-individual variance. The mean intercept and slope parameters had positive covariance, such that higher initial expected counts were associated with less severe downward trends in the expected count over time.

In terms of conditional growth-curve parameters, female youth in the *residence-centered* and *inclusive* patterns had lower expected counts of delinquent behavior compared to female youth in the *disconnected* pattern ($b = -.97$ and $-.70$, respectively). Female youth in the *residence-centered* pattern also had a lower expected count of delinquent behavior compared to

female youth in the *conflictual couple* pattern ($b = -.65$). Patterns of stepfamily processes were not significantly associated with change in the latent-slope parameter for females. Refer to Table 2.5 for information about significant covariates.

Discussion

Overall, results from this study indicate that Jensen's (2016) stepfamily-process typology has implications for youth adjustment over time. Turning to short-term adjustment outcomes (i.e., one year past baseline), male and female youth appear to display similar adjustment reactions when experiencing the same patterns of stepfamily processes. This finding ran counter to hypotheses, challenging the stress reactivity perspective with respect to the adjustment of female youth in stepfamily contexts. Indeed, both male and female youth appear to benefit most from membership in the *residence-centered* pattern. Thus, stress and support and primacy-of-residence perspectives are particularly relevant for understanding adjustment in the short-term for male and female youth in mother-stepfather families.

Importantly, youth in the *inclusive* pattern exhibit similar levels of short-term adjustment. This could indicate a compensatory phenomenon, such that youth adjustment is promoted when parental support is adequately provided across several potential sources of support, whether from parents residing in the home or from nonresident biological parents. Because both *residence-centered* and *inclusive* patterns possess high-quality stepcouple relationships, positive interactions between resident parents and stepparents might also bolster youths' emotional security, leading to positive adjustment. Moreover, both of these patterns display positive correlations between at least two dyadic relationships, indicating mutually reinforcing processes and more unified family systems (Jensen, 2017).

Turning to concurrent levels of depression, male and female youth appear to respond differently to stepfamily processes (Hankin et al., 2007). What appears to matter most for male youth is membership in the *residence-centered* pattern; male youth in every other pattern reported higher levels of depression. What appears to matter most for female youth is not being in the *disconnected* pattern; female youth in every other pattern reported substantially lower levels of depression. From a stress reactivity standpoint, female youth appear quite reactive to stepfamily contexts marked by very low-quality parent-child relationships, particularly with the resident mother and stepfather. This finding is consistent with past research suggesting that female youth are more likely than male youth to exhibit depressive symptoms when faced with interpersonal stressors, particularly in family contexts (Hankin et al., 2007). An alternative interpretation is that female youth simply experience fewer immediate detriments to psychological well-being in a variety of stepfamily-process constellations, as long as they do not experience very low-quality relationships with their resident parental figures. Thus, although past research has indicated that female youth are at greater risk of maladjustment in mother-stepfather families than male youth (Hetherington & Elmore, 2003), this heightened risk might be isolated to stepfamilies distinctly marked by low-quality parent-child relationships as opposed to other constellations of stepfamily processes (e.g., low-quality stepcouple relationship).

Similar to short-term depression, both male and female youth exhibit similar adjustment outcomes during emerging adulthood in response to earlier stepfamily processes. Membership in *residence-centered* and *inclusive* patterns appears to produce 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 et al., 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 *conflictual couple* pattern 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 *conflictual 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.

Male and female youth exhibited different delinquency trajectories over time, as well as disparate associations between stepfamily-process patterns and delinquency. Male youth in the *conflictual couple* pattern reported the highest initial count of delinquent behavior, whereas female youth in the *disconnected* pattern 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 (Kruttschnitt, 2013). Importantly, patterns of stepfamily processes did not influence delinquency trajectories for females, whereas male youth in groups with higher-quality stepfamily relationships had less steep declines in delinquency over time. This could simply reflect the fact that male youth surrounded by high-quality stepfamily relationships also had lower levels of delinquency to begin with, leaving less room for meaningful declines in delinquency over time.

Limitations and Future Research

In terms of study limitations, analyses necessarily omitted information about other dyadic processes in stepfamilies, including the quality of the coparental relationship and sibling relationships; Add Health does not possess information about these processes. In addition, 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. In terms of concurrent associations between stepfamily-process patterns and youth adjustment, child effects are possible; that is, youth adjustment could be driving the formation of stepfamily-process patterns. For example, highly depressed youth might withdraw from their parental figures and report low-quality parent-child relationships. Highly delinquent youth might stir up conflict between parents and stepparents as they discuss how to engage in discipline. Fortunately, the longitudinal analyses clarify the temporal ordering of constructs and provide some evidence for youth adjustment being a response to stepfamily processes.

Moving forward, researchers should examine other factors that might moderate associations between stepfamily-process patterns and youth adjustment. With respect to the

contextual model of family stress (Boss, Bryant, & Mancini, 2016), plausible moderators could include features of the family's external environment, such as the quality of their neighborhood or community. There are also opportunities for researchers to explicitly examine underlying mechanisms that link earlier stepfamily-process experiences and adjustment outcomes later in life. Moreover, researchers could focus on the extent to which stepfamily-process patterns 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).

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TABLES: PAPER II

Table 2.1
Patterns of Stepfamily Processes

Patterns	Relationship quality					Positive Correlations	Negative Correlations
	Mother-child	Stepfather-child	Nonresident father- child	Stepcouple			
1 Residence-centered	Above average	Above average	Below average	Above average	MC and SFC		
2 Inclusive	Above average	Above average	Very above average	Above average	MC and SFC MC and NFC		
3 Conflictual couple	Above average	Average	Average	Very below average	MC and SFC	NFC and S	
4 Disconnected	Very below average	Very below average	Below average	Average	MC and SFC	MC and NFC	

Note: MC = mother-child relationship; SFC = stepfather-child relationship; NFC = nonresident father-child relationship; S = stepcouple relationship. "Above average" indicates that relationship quality was more than one-fourth of a standard deviation above the sample mean; "below average" indicates that relationship quality was more than one-fourth a standard deviation below the sample mean; "average" indicates that relationship quality was within one-fourth a standard deviation above or below the sample mean; "very above average" indicates that relationship quality was at least one standard deviation above the mean; "very below average" indicates that relationship quality was at least one standard deviation below the mean. Methodological details associated with the generation of this pattern are available in Jensen (under review).

Table 2.2

Youth Adjustment at Wave II Regressed on Latent-Class Membership and Covariates by Youth Sex (N = 881)

Variable	Model 1: Depression (Wave II) ^a						Model 2: Self-Esteem (Wave II) ^b						Model 3: Delinquency (Wave II) ^c					
	b		b		b		b		b		b		b		b		b	
	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)	exp(b)
Patterns of Stepfamily Processes																		
Residence-centered	-0.68 ***	-0.32 *	-0.09	ref	0.57 ***	0.23 *	0.12	ref	0.56 **	0.68 *	0.88	ref						
Inclusive	-0.59 ***	-0.24 *	ref	0.09	0.43 ***	0.10	ref	-0.12	0.63 **	0.77	ref	1.13						
Conflictual couple	-0.34 *	ref	0.24 *	0.32 *	0.34 ***	ref	-0.10	-0.23 *	0.82	ref	1.29	1.47 *						
Disconnected	ref	0.34 *	0.59 ***	0.68 ***	ref	-0.34 ***	-0.44 ***	-0.57 ***	ref	1.22	1.58 **	1.79 *						
Covariates																		
Stepcouple intact (at Wave II)	-0.18 +				0.04				1.09									
Household composition	0.01				-0.01				0.99									
Less than high school	0.18				0.03				0.96								1.88 *	
Some college	-0.10				0.09				0.85								1.28	
College degree or more	-0.25 +				0.20 +				1.23								0.37 *	
High school	ref				ref				ref								ref	
Household income (logged)	-0.05				0.06				1.19									
Non-Hispanic Black	0.19 +				0.24 **				1.06									
Non-Hispanic Asian/Other	0.00				-0.12				0.74									
Hispanic	0.28 +				-0.10				1.60 **									
Non-Hispanic White	ref				ref				ref									
Youth age	-0.02				0.00				0.95								0.81 **	
Mother's relationships in past 18 years	-0.04				-0.03				1.07									
Stepfamily duration	0.01				0.00				1.01									
R ²	0.11		0.10		0.10		NA		NA		NA		NA		NA		NA	

Note: ***p ≤ .001; **p ≤ .01; *p ≤ .05; +p ≤ .10. Coefficients are unstandardized. ^aModel 1: longitudinal SEM; metric, scalar, and structural invariance confirmed between male and female youth; WLSMV estimator used; Parameters were estimated with the full sample combined. ^bModel 2: longitudinal SEM; metric, scalar, and structural invariance confirmed between male and female youth; WLSMV estimator used; Parameters were estimated with the full sample combined. ^cModel 3: negative-binomial model; MLR estimator used. Only parameters that were significantly different for females are shown; empty cells indicate that parameters were not significantly different between males and females. exp(b) = incidence rate ratio values.

Table 2.3
Autocorrelated Longitudinal SEM With Youth Depression at Waves I, III, and IV Regressed on Latent-Class Membership and Covariates by Youth Sex (N = 758)

Variable	Depression (Wave I)												Depression (Wave III)						Depression (Wave IV)			
	Male (n = 334)						Female (n = 424)															
	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
Patterns of Stepfamily Processes																						
Residence-centered	-0.52 *	-0.73 ***	-0.46 †	ref	-1.18 ***	-0.32	-0.21	ref	-0.31 **	-0.37 **	-0.09	ref	-0.18	-0.31 *	0.00	ref						
Inclusive	-0.04	-0.26	ref	0.46 †	-1.01 **	-0.09	ref	0.22	-0.21 †	-0.28 *	ref	0.08	-0.19	-0.28 †	0.00	ref						
Conflictual couple	0.17	ref	0.26	0.72 ***	-0.92 **	ref	0.08	0.30	-0.02	ref	0.271 *	0.31 **	0.03	ref	0.27 †	0.27 *						
Disconnected	ref	-0.17	0.05	0.53 *	ref	1.03 **	1.04 **	1.24 ***	ref	0.01	0.243 †	0.32 **	ref	-0.08	0.20	0.18						
Covariates																						
Stepcouple intact (at Wave II)	-0.06								0.01				-0.15									
Household composition	0.07 *								0.00				0.02									
Less than high school	0.13								-0.09				0.40 *									
Some college	-0.34 **								-0.21 *				-0.19 †									
College degree or more	-0.39 *								-0.45 ***				-0.25 †									
High school	ref												ref									
Household income (logged)	0.00								-0.01				0.04									
Non-Hispanic Black	0.26 †								0.10				-0.01									
Non-Hispanic Asian/Other	0.39								0.34 *				0.17									
Hispanic	0.15								0.02				-0.07									
Non-Hispanic White	ref								ref				ref									
Youth age	0.06 *								-0.05 *				-0.04									
Mother's relationships in past 18 years	-0.03								0.09 *				0.00									
Stepfamily duration	0.01								0.00				0.00									
Male R ²	0.15								0.08				0.09									
Female R ²									0.19				0.13									

Note: *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; † $p \leq .10$. Coefficients are unstandardized. Metric and partial scalar (only 6 thresholds could not be constrained to equality) was confirmed for the depression constructs at each wave. 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. 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.

Table 2.4
Youth Delinquency Latent-Growth Curve Across Waves I, III, and IV Regressed on Latent-Class Membership and Covariates, Males Only (n = 334)

	Unconditional Model				Conditional Model							
	Intercept		Slope		Intercept				Slope			
	b	exp(b)	b	exp(b)	b	b	b	b	b	b	b	b
Growth-curve parameters												
Mean	-0.04	0.96 ***	-0.77 ***	0.46 ***								
Variance	0.28 ***		0.08 ***		0.47 †				0.00			
Intercept-slope covariance	0.14 ***				0.01							
Patterns of Stepfamily Processes												
Residence-centered					-0.33	-0.73 **	-0.305	ref	0.50 *	0.63 **	0.30	ref
Inclusive					-0.02	-0.42 *	ref	0.31	0.21	0.33 †	ref	-0.30
Conflictual couple					0.40 †	ref	0.42 *	0.73 **	-0.12	ref	-0.34 †	-0.63 **
Disconnected					ref	-0.40 †	0.02	0.33	ref	0.13	-0.21	-0.50 *
Covariates												
Stepcouple intact (at Wave II)					-0.49 **				0.45 ***			
Household composition					0.01				-0.03			
Less than high school					0.74 *				0.08			
Some college					0.07				0.47 **			
College degree or more					0.29				-0.01			
High school					ref				ref			
Household income (logged)					-0.06				-0.14			
Non-Hispanic Black					-0.15				0.35 †			
Non-Hispanic Asian/Other					0.43				-0.32			
Hispanic					0.77 *				-0.21			
Non-Hispanic White					ref				ref			
Youth age					-0.05				-0.01			
Mother's relationships in past 18 years					0.28 *				0.06			
Stepfamily duration					0.01				0.02			

Note: *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; † $p \leq .10$. Coefficients are unstandardized.

Table 2.5
Youth Delinquency Latent-Growth Curve Across Waves I, III, and IV Regressed on Latent-Class Membership and Covariates, Females Only (n = 424)

	Unconditional Model				Conditional Model					
	Intercept		Slope		Intercept		Slope			
	b	exp(b)	b	exp(b)	b	b	b	b	b	b
Growth-curve parameters										
Mean	-0.86 ***	0.42 ***	-1.65 ***	0.19 ***						
Variance	0.55 ***		0.77 ***		0.70 †		0.69 **			
Intercept-slope covariance	0.40 ***				0.02					
Patterns of Stepfamily Processes										
Residence-centered					-0.97 ***	-0.65 *	-0.27	ref	-0.09	-0.46
Inclusive					-0.70 *	-0.38	ref	0.27	0.34	-0.03
Conflictual couple					-0.32	ref	0.38	0.65 *	0.37	ref
Disconnected					ref	0.32	0.70 *	0.97 ***	ref	-0.37
									0.34	-0.43
									0.43	ref
									0.46	0.03
									0.09	ref
										0.34
Covariates										
Stepcouple intact (at Wave II)					-0.11				-0.27	
Household composition					-0.03				-0.09	
Less than high school					0.31				0.35	
Some college					0.23				-0.32	
College degree or more					0.14				-0.34	
High school					ref				ref	
Household income (logged)					-0.21				-0.03	
Non-Hispanic Black					0.59 *				0.10	
Non-Hispanic Asian/Other					-0.13				0.68	
Hispanic					0.84 ***				-0.75 †	
Non-Hispanic White					ref				ref	
Youth age					-0.21 ***				-0.17 **	
Mother's relationships in past 18 years					0.31 **				-0.12	
Stepfamily duration					0.02				0.01	

Note: *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; † $p \leq .10$. Coefficients are unstandardized.

PAPER III

STEPFAMILY PROCESSES AND ADOLESCENT ADJUSTMENT: THE ROLE OF NEIGHBORHOOD COLLECTIVE EFFICACY

Healthy youth development is cultivated in numerous social environments. Families are generally considered the most proximal context in which such development unfolds (e.g., Cox & Paley, 1997). Yet, the United States has seen a proliferation of family structural transitions and complexity. This phenomenon is due, in part, to persistently high rates of relationship dissolution and repartnership, along with increasing rates of cohabitation, non-marital child-bearing, and multiple-partner fertility (Brown, Stykes, & Manning, 2016; Cherlin, 2010). As a result of these trends, youth experience an average of one family structural transition by age 13 (Brown et al., 2016). Family instability is even more prevalent among families who experience socioeconomic disadvantage (Manning, Brown, & Stykes, 2014).

Stepfamily formation has become one of the most common transitions for families (Teachman & Tedrow, 2008). Stepfamilies are formed when one or both adults in a new committed relationship bring a child or children from a previous relationship (Ganong & Coleman, 2016). Nearly one-third of all youth will reside in a stepfamily household at some point before reaching legal adulthood (Pew Research Center, 2011). Importantly, stepfamilies often grapple with coparental conflict, disagreements between parents and stepparents on parenting strategies, conflict between youth and new stepparents, declines in parent-child relationship quality, and other challenges (Coleman, Ganong, & Russell, 2013; Jensen & Shafer, 2013; Papernow, 2013). Consequently, youth in stepfamilies are at a heightened risk of

experiencing maladjustment across indicators of psychological and behavioral well-being (Hoffman, 2002, 2006; Jeynes, 2006; Tillman, 2007). Thus, stepfamilies are an important focus of ongoing scholarly and clinical work.

Family processes have been widely identified as a primary mechanism by which family structural transitions exert influence on youth well-being; this certainly holds true for stepfamilies (Coleman et al., 2013; Hetherington, Bridges, & Insabella, 1998). One glaring gap in the literature, however, is a dearth of research by which stepfamilies are examined in the context of their larger social environments, such as neighborhoods. This gap is notable, as neighborhood quality has plausible implications for stepfamily functioning and youth well-being. Neighborhood collective efficacy, or “social cohesion among neighbors combined with their willingness to intervene on behalf of the common good,” might be a particularly influential feature of stepfamilies’ neighborhood environment (Sampson et al., 1997, p. 918). Because stepfamilies often must navigate coparental relationships and legal custody arrangements—issues that transcend single households and environments—neighborhood quality might exert distinct influence on stepfamilies in comparison to biological nuclear families. Although shared custody arrangements following union dissolution have become increasingly common, mothers continue to retain sole, primary, or majority custody of their children (Cancian, Meyer, Brown, & Cook, 2014). Thus, the quality of mothers’ neighborhoods might be especially worthy of focus when examining links between neighborhood quality, family processes, and youth adjustment in mother-stepfather families—the makeup of nearly 80% of all stepfamilies (Kreider & Ellis, 2011).

Consistent with ecological theory, families operate in overlapping social contexts (Bronfenbrenner, 1986). The quality of these social contexts and the connections between them

can influence the probability that families and individuals will experience desirable outcomes over time (Mancini & Bowen, 2013). Indeed, individuals engage in ongoing transactional and “proximal processes” in and with their social environments, including neighborhoods and communities (Bronfenbrenner, 2005). Consequently, family scholars have admonished researchers to “put families into place” by overtly modeling various neighborhood effects (Mancini & Bowen, 2013; Noah, 2015).

The purpose of the current study was to examine three plausible functions of neighborhood collective efficacy with respect to stepfamily life: an ability to (a) *prevent* maladaptive patterns of stepfamily processes, (b) *promote* stepchildren’s adjustment beyond the influence of stepfamily processes, and (c) *protect* stepchildren’s adjustment when faced with maladaptive patterns of stepfamily processes (i.e., moderating influence). With respect to the first function, I use the term “prevent” loosely and do not intend to imply causality. Figure 3.1 displays each of the three plausible functions. To begin, I highlight central stepfamily processes and summarize research connecting those processes to youth adjustment. I then review research and theory to support the investigation of each of the three proposed functions of neighborhood collective efficacy summarized above.

Stepfamily Processes and Youth Adjustment

The literature highlights the primacy of at least four central dyadic relationships in stepfamilies: resident parent-child, stepparent-child, nonresident parent-child, and stepcouple relationships. Processes within each of these relationships have been linked to stepfamily functioning and youth well-being. With respect to youth and their resident parent, high-quality parent-child relationships can provide youth a sense of stability and support amid the transition to stepfamily life, reduce youths’ stress, bolster youths’ psychological well-being, and create a

safe place from which to explore a relationship with a new stepparent (Jensen & Harris, 2016; Jensen & Shafer, 2013; Jensen, Shafer, & Holmes, 2015).

Stepparent-child relationships are often viewed as the crux of stepfamily stability; however, these relationships are highly variable and take time to develop (Ganong, Coleman, & Jamison, 2011; Papernow, 2013). When high-quality and mutually satisfying stepparent-child relationships are acquired, they can be very rewarding for stepparents and youth (Papernow, 2013). Close and affectionate stepparent-child relationships are also associated with fewer youth internalizing problems, externalizing problems, and physical health problems (Bzostek, 2008; Jensen & Harris, 2016; Jensen, Lippold, Mills-Koonce, & Fosco, 2017; King, 2006).

Youth well-being is also promoted when they perceive high levels of closeness with a nonresident parent, often fathers (Amato & Gilbreth, 1999). Importantly, complications in nonresident parent-child relationships can arise in connection to legal custody arrangements and the quality of the coparental relationship (Sobolewski & King, 2005). Youth appear to fare best when all parental figures are cordial and avoid overt conflict (Dunn, O'Connor, & Cheng, 2005).

The quality of the stepcouple relationship is also central to establishing stepfamily stability and youth well-being. Conflictual stepcouple relationships have been linked to youth internalizing and externalizing problems (Dunn et al., 2005). Conversely, high-quality stepcouple relationships marked by infrequent conflict and agreement on parenting strategies have been linked to youth well-being and a greater willingness among youth to form a relationship with a new stepparent (Jensen & Harris, 2016; Jensen & Shafer, 2013).

Although the importance of each of the dyadic relationship just reviewed has been acknowledged, relatively little is known about common patterns or constellations of dyadic relationship quality in stepfamilies. As a result, researchers have recently applied a holistic

perspective to the investigation of central dyadic relationships in stepfamilies. These investigations have yielded meaningful typologies that help capture the complex realities of stepfamily relationships (Amato, King, & Thorsen, 2015; Jensen, 2017a). One recently identified typology highlighted four distinct patterns of relationship quality and interdependencies across mother-child, stepfather-child, nonresident father-child, and stepcouple relationships (see Jensen, 2017a for methodological details). The four patterns were *residence-centered*, *inclusive*, *conflictual couple*, and *disconnected*. The *residence-centered* pattern was marked by high-quality relationships across dyads in the residence; that is, mother-child, stepfather-child, and stepcouple relationships. This pattern also yielded a positive correlation between the quality of the mother-child and stepfather-child relationships. The *inclusive* pattern was marked by high-quality relationships across all four dyads, with an especially high-quality relationship between youth and their nonresident fathers. Some residential relationships in this pattern were positively correlated. The *conflictual couple* pattern was marked by a very low-quality stepcouple relationships and a negative correlation between nonresident father-child and stepcouple relationship quality. The *disconnected* pattern was marked by low quality parent-child relationships, with especially low-quality relationships between youth and their mothers and stepfathers. This pattern also yielded a negative correlation between the quality of mother-child and nonresident father-child relationship. Importantly, youth embedded in either the *conflictual couple* or *disconnected* patterns reported higher levels of depression, higher levels of delinquency, and lower levels of self-esteem concurrently and over time—from adolescence to young adulthood (Jensen, 2017a, 2017b). These four patterns are the focus of the current study. Refer to Table 3.1 for a detailed summary of each pattern.

Neighborhood Collective Efficacy and Stepfamily Processes

The environmental-stress model posits that the quality of the neighborhood environment exerts influence on parenting and family processes (Noah, 2015). Neighborhood collective efficacy, which comprises elements of both social control and social cohesion, might be particularly influential in shaping family processes. Consistent with this view, Mancini and Bowen (2013) highlight the concept of “family connections,” which posits that families are strengthened and supported when they have close ties to their neighbors and neighborhoods, or strong neighborhood social cohesion. Past research has linked this component of neighborhood collective efficacy to indicators of family cohesion, lower levels of parent-child conflict, and parents’ ability to engage in supportive parenting (G. Bowen, N. Bowen, & Cook, 2000; N. Bowen, G. Bowen, & Ware, 2002; Deng et al., 2006). Moreover, higher levels of neighborhood social control and social cohesion (as captured in an index of neighborhood social capital) have been linked to lower levels of neglectful parenting, psychologically harsh parenting, and domestic violence (Zolotor & Runyan, 2006). Thus, neighborhood collective efficacy can promote positive interactional processes within both parental and parent-child subsystems.

On the other hand, non-cohesive, instable, or negative neighborhood environments can exacerbate family stress, increase parental burden, stir up parental conflict, induce more negative exchanges between parents and their children, and prompt parents to reduce involvement with other external institutions—further diminishing social support (G. Bowen et al., 2000; Brodsky, 1996; Riina, Lippert, & Brooks-Gunn, 2016). Suboptimal neighborhood environments might also prompt parents to assert additional control over their adolescent children in an effort to protect them. This dynamic can generate additional family stress and parent-child conflict, as adolescent youth tend to strive for greater levels of autonomy (N. Bowen et al., 2002). Taken together, I

hypothesized that higher levels of collective efficacy would be associated with stepfamily-process constellations marked by higher-quality parent-child and couple relationships, such as those represented in the *residence-centered* and *inclusive* patterns reviewed earlier.

Neighborhood Collective Efficacy and Youth Adjustment

Social disorganization theory posits that youth adjustment and behavior are influenced directly by the characteristics of the neighborhood environment, such as features of collective efficacy (Furstenberg, & Hughes, 1997; Nash & Bowen, 1999; Sampson et al., 1997). For example, socially disorganized neighborhoods can (a) generate more opportunities for youth to engage in delinquent behaviors and (b) fail to effectively activate informal social control due to a lack of social cohesion and collective trust (Nash & Bowen, 1999; Sampson et al., 1997). Conversely, socially organized and cohesive neighborhoods can generate a social climate optimal for promoting youth behavioral health (Edwards & Bromfield, 2009). From a social capital perspective (J. Coleman, 1988), youth can accrue significant social capital from positive relationships in the neighborhood environment that serve to promote their psychological well-being, “above and beyond the effects of social capital within the family alone” (Derauf et al., 2016; N. Bowen et al., 2002, p.471). Consistent with this view, past research has linked higher levels of neighborhood collective efficacy with higher levels of youth self-efficacy, lower levels of youth internalizing problems, and decreased risk for youth symptoms of attention deficit hyperactivity disorder (Derauf et al., 2016; Dupéré, Leventhal, & Vitaro, 2012).

Moreover, the Search Institute has explicated key building blocks of healthy adolescent development, or developmental assets, that help youth grow up as healthy, caring, and responsible individuals (Search Institute, 2007). These assets include neighborhoods in which youth possess caring relationships with neighbors (i.e., caring neighborhood) and neighbors take

responsibility for monitoring youth behavior (i.e., neighborhood boundaries; Search Institute, 2007)—core features of collective efficacy. Amid family structural transitions, such as the transition to stepfamily life, a high-quality neighborhood environment might be an especially salient resource for youth. Indeed, youth might benefit from the support and stability generated from informal social control and social cohesion in the neighborhood environment as they experience the disruptions in family functioning that often accompany family structural changes (Amato, 2000). High-quality neighborhood environments might confer upon youth significant adjustment benefits, independent of the influence of stepfamily processes. Thus, I hypothesized that higher levels of collective efficacy would exert positive and direct influence on youth adjustment, even beyond the influence of the various stepfamily-process constellations in which youth might be embedded.

Neighborhood Collective Efficacy as a Moderator

In the wake of family structural transitions, the divorce-stress-adjustment perspective highlights factors that can attenuate (i.e., moderate) the extent to which stressful family processes exert negative influence on youth adjustment (Amato, 2000). Moderating factors include interpersonal resources, such as positive relationships with neighbors and members of the community. Thus, individuals embedded in neighborhoods with high levels of collective efficacy might be protected, in part, against the negative influence of maladaptive family processes. Indeed, research has shown that neighborhood involvement and social cohesion buffer the link between hostile parenting and youth externalizing problems (Silk, Sessa, Morris, Steinberg, & Avenevoli, 2004). Families in which interactional processes are negative, stressful, or demanding, might draw on resources external to the family to assist them in fulfilling key functions, such as caregiving responsibilities for youth (Patterson, 2002). Moreover, although

dysfunctional families might be less able to monitor youth behavior and promote youth adjustment, being embedded in neighborhoods with high levels of social control and social cohesion might compensate and buffer negative outcomes for youth. Thus, I hypothesized that higher levels of neighborhood collective efficacy would buffer the negative influence of stepfamily-process constellations marked by low-quality and conflictual dyadic relationships (i.e., *conflictual couple* and *disconnected* patterns) on youth adjustment.

Current Study

Although a growing body of literature highlights the influential role of neighborhood contexts in shaping family experiences, I fill gaps in the literature by taking this investigation into the lives of a fast-growing family form: stepfamilies. Rooted in several theoretical perspectives and past research, I hypothesized that higher levels of neighborhood collective efficacy would (a) be associated with a greater likelihood of stepfamilies exhibiting higher-quality relationships in both parental and parent-child dyads (such as features of the *residence-centered* or *inclusive* patterns; Path A in Figure 3.1), (b) exert positive and direct influence on youth adjustment, even beyond the influence of stepfamily processes (Path B in Figure 3.1), and (c) buffer the negative influence of the *conflictual couple* and *disconnected* patterns on youth adjustment (Path C in Figure 3.1). Importantly, various socio-demographic characteristics could potentially confound or obfuscate any one of these hypothesized associations. Moreover, youth in stepfamilies are embedded in other social environments beyond the neighborhood context. These additional environments include youths' peer groups and relationships with teachers and schools. Thus, I examined the substantive associations in this study net the influence of socio-demographic characteristics and youths' associations with peers and teachers.

Methods

Data and Sample

Data for this study came from the National Longitudinal Study of Adolescent to Adult Health (Add Health). I used information from in-home youth interviews and parent questionnaires at Wave I (1994 to 1995), as well as youth in-home interviews at Waves II (1996; approximately one year later). 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 youth peer relationships, family dynamics, neighborhood characteristics, health behaviors, and other indicators of development and well-being. In-home interviews with respondents at subsequent waves used similar interview procedures. Parent data at Wave I were collected using interviewer-assisted, op-scanned questionnaires that were issued primarily to resident mothers. Questionnaires included items about neighborhood quality, household income, education, employment, and parents' romantic relationships.

The analytical sample from which the four patterns of stepfamily processes were originally estimated consisted of adolescents who reported living with their biological mother and a stepfather at Wave I, and who had a living nonresident father ($n = 1,182$; Jensen, 2016a). 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).

This original sample was used to examine concurrent associations between neighborhood collective efficacy and patterns of stepfamily processes. Another analytical sub-sample was used to assess the longitudinal influence of neighborhood collective efficacy as a direct predictor of adolescent adjustment and as a moderator of associations between patterns of stepfamily processes and youth adjustment outcomes. Adolescents with adjustment information collected at Wave II comprised the second analytical sample ($n = 881$; mean age = 15.41 years, $SD = 1.60$; 52% female; 62% non-Hispanic White).

Measures

Neighborhood Collective Efficacy. Nine items were used to measure the social control and social cohesion components of mothers' neighborhood collective efficacy (Duncan et al., 2003; Sampson et al., 1997). Four of the nine items came from parent reports, as follows: "If you saw a neighbor's child getting into trouble, would you tell your neighbor about it?", "If a neighbor saw your child getting into trouble, would your neighbor tell you about it?", "In this neighborhood, how big a problem is litter or trash on the streets and sidewalks?", and "How much would you like to move away from this neighborhood?" The remaining five items came from youth reports, as follows: "You know most of the people in your neighborhood," "In the past month, you have stopped on the street to talk with someone who lives in your neighborhood," "People in this neighborhood look out for each other," "On the whole, how happy are you with living in your neighborhood," and "If, for any reason, you had to move from here to some other neighborhood, how happy or unhappy would you be?" For uniformity, and consistent with recent studies (Derauf et al., 2016), all items were recoded to have binary response options, such that respondents would be indicating either an affirmative or non-affirmative response to each of the nine items. Then, a one-parameter item response theory (IRT)

model was used to construct a continuous measure of neighborhood collective efficacy across the nine items (StataCorp, 2015). IRT models are generally more flexible than models derived from classical test theory, and provide item-level weights that can more accurately reflect the operationalization of a latent construct (Edwards, 2009).

Patterns of Stepfamily Processes. Another focal independent variable was membership within one of four patterns, representing distinct constellations of dyadic relationship quality in mother-stepfather families (summarized in the Introduction section), labeled (a) *residence-centered*, (b) *inclusive*, (c) *conflictual couple*, and (d) *disconnected*. The patterns were originally estimated using factor mixture modeling with four latent factors representing mother-child, stepfather-child, nonresident father-child, and stepcouple relationship quality; each latent profile or pattern had unique inter-factor correlations (refer to Jensen, 2016 for details about the analysis and specific measurement items). For the current study, participants were assigned membership into patterns of stepfamily processes on the basis of their most likely pattern (as indicated by posterior probability values), and patterns were dummy coded.

Depression. Depression was a latent variable measured with nine items ($\alpha = .81$), collected at Wave II, from the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The items asked respondents to indicate along a four-point scale (0 = never or rarely, 3 = most or all of time) how frequently during the last week they (a) felt bothered by things that don't usually bother them, (b) felt that they could not shake off the blues, (c) felt that they were as good as other people, (d) had trouble keeping their mind on what they were doing, (e) felt depressed, (f) felt that they were too tired to do things, (g) enjoyed life, (h) felt sad, and (i) felt that people disliked them. Higher values indicated higher levels of depression.

Self-Esteem. Self-esteem was a latent variable measured with six items ($\alpha = .85$), collected at Wave II, that asked respondents to indicate their level of agreement along a five-point scale (1 = strongly agree, 5 = strong disagree) with respect to the following statements: (a) you feel like you are doing everything just about right, (b) you feel loved and wanted, (c) you feel socially accepted, (d) you have a lot of good qualities, (e) you have a lot to be proud of, and (f) you like yourself just the way you are. The items were reverse-coded such that higher values indicated higher levels of self-esteem.

Delinquency. Delinquency was measured with seven items that asked respondents to indicate how often in the past 12 months they had (a) deliberately damaged property that didn't belong to them, (b) stole something worth more than \$50, (c) went into a house or building to steal something, (d) used or threatened to use a weapon to get something from someone, (e) sold marijuana or other drugs, (f) stole something worth less than \$50, or (g) took part in a group fight. Consistent with other recent studies (e.g., Amato et al., 2015), the seven items were dichotomized (0 = never, 1 = at least once) and summed to create a count index of delinquent behaviors (range: 0 – 7).

Covariates. In all models, the following covariates were included: 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), youth sex (1 = female, 0 = male), mothers' education (dummy-coded variables representing less than high school, high school completion [reference], some college, and college degree or more), household composition (a continuous indicator of the number of household residents), household income (continuous measure in thousand-dollar units; natural-logged to adjust for positive skew). 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. Two items that assessed the extent to which youth felt that their teachers and friends cared about them were also included as covariates; response options ranged from 1 (not at all) to 5 (very much). For models assessing Path A, an item was included that asked parents to indicate if they had grown up in the current neighborhood (1 = yes, 0 = no). For models assessing Paths B and C, an item was included that asked parents to indicate if they had moved since Wave I (1 = yes, 0 = no).

Data Analysis

The analysis was partitioned into three steps. First, multinomial logistic regression was used to assess associations between neighborhood collective efficacy and patterns of stepfamily processes (Path A in Figure 3.1). Second, structural equation modeling (SEM) was used to estimate associations between neighborhood collective efficacy and youth adjustment (Path B in Figure 3.1), net the influence of covariates and stepfamily processes. Three sets of models were estimated at this step. The first set of models included a latent endogenous construct for depression at Wave II (Model 1). The second set of models included a latent endogenous construct for self-esteem at Wave II (Model 2). The third set of models included an observed endogenous variable for delinquency at Wave II (Model 3). All three sets of models compared results before and after including patterns of stepfamily processes to determine if neighborhood collective efficacy retained its influence on youth adjustment. Because items used to measure depression and self-esteem were ordinal, a mean- and variance-adjusted weighted least squares (WLSMV) estimator and polychoric input correlation matrix were used for Models 1 and 2 (Bovaird & Koziol, 2012). Because delinquency was a count variable and significantly over-

dispersed (per preliminary analyses), a negative-binomial specification and maximum likelihood estimator with robust standard errors (MLR) were used for Model 3.

Third, a series of multiple-group comparison analyses were conducted to assess neighborhood collective efficacy as a moderator of the association between patterns of stepfamily processes and youth adjustment (Path C in Figure 3.1). Per preliminary assessments, neighborhood collective efficacy was dichotomized such that individuals with below-average levels were coded as “low” and participants with average or above-average levels were coded as “high.” This dichotomized item was used as the grouping variable for moderation analyses, which included patterns of stepfamily processes as dummy-coded independent variables. Three models, one for each adjustment outcome, were estimated in the same manner as described in step-two of the analysis plan. Likelihood ratio tests and Wald tests were used to assess measurement and structural invariance, or whether measurement and structural parameters were significantly different between participants in the low- and high-collective efficacy groups (Chou & Huh, 2012).

For models using the WLSMV estimator, the following criteria were indicative of acceptable model fit: Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) values greater than or equal to .90 (values at or above .95 were indicative of excellent fit), and a root mean square error of approximation (RMSEA) value less than or equal to .06 (with the upper bound of the 90% confidence interval less than or equal to .06; West, Taylor, & Wu, 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 over-identified and sufficiently powered for testing hypotheses about 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. Results from Little's test provided evidence that missing observations were Missing Completely at Random (MCAR; Little, 1988; χ^2 distance = 46.36, $df = 39$, $p = .19$). Thus, missing data was handled using a Full Information Maximum Likelihood estimator (Enders, 2010).

Results

Neighborhood Collective Efficacy and Stepfamily Processes

Table 3.2 displays results from multinomial logistic regression models. Results indicated that higher levels of neighborhood collective efficacy were associated with a greater likelihood that families would exhibit patterns of stepfamily processes marked by higher-quality dyadic relationships. Specifically, a one-unit increase in neighborhood collective efficacy was associated with a 57% increase in the odds of stepfamilies exhibiting the *residence-centered* pattern versus the *disconnected* pattern ($RRR = 1.57$, $p < .05$); a one-unit increase in neighborhood collective efficacy was also associated with a 67% increase in the odds of stepfamilies exhibiting the *residence-centered* pattern versus the *conflictual couple* pattern ($RRR = 1.67$, $p < .01$). Moreover, a one-unit increase in neighborhood collective efficacy was associated with a 54% increase in the odds of stepfamilies exhibiting the *inclusive* pattern versus the *disconnected* pattern ($RRR = 1.54$, $p < .05$); a one-unit increase in neighborhood collective efficacy was also associated with a 63% increase in the odds of stepfamilies exhibiting the *inclusive* pattern versus the *conflictual couple* pattern ($RRR = 1.63$, $p < .001$).

Neighborhood Collective Efficacy and Youth Adjustment

Table 3.3 displays results from three models, each relating to a specific form of youth adjustment at Wave II. Turning to Model 1, results indicated that increases in neighborhood

collective efficacy were associated with decreases in youth depression at Wave II ($b = -.09, p < .10, \beta = -.08$); however, this association became non-significant when patterns of stepfamily processes were added to the model. With respect to Model 2, results indicated that increases in neighborhood collective efficacy were associated with increases in youth self-esteem at Wave II, even after including patterns of stepfamily processes in the model. In terms of magnitude, a one standard-deviation increase in neighborhood collective efficacy was associated with .17-unit standard deviation increase in youth self-esteem at Wave II ($b = .16, p < .001, \beta = .17$). Interestingly, neighborhood collective efficacy was not significantly associated with youth delinquency at Wave II (Model 3), neither before nor after the inclusion of stepfamily-process patterns.

Neighborhood Collective Efficacy as a Protective Factor

Results from multiple-group comparison analyses indicated that levels of neighborhood collective efficacy did not significantly moderate associations between patterns of stepfamily processes and youth adjustment at Wave II. Thus, no results associated with these analyses are reported.

Discussion

The purpose of the current study was to examine three plausible functions of neighborhood collective efficacy with respect to stepfamily life: an ability to (a) *prevent* maladaptive patterns of stepfamily processes, (b) *promote* stepchildren's adjustment beyond the influence of stepfamily processes, and (c) *protect* stepchildren's adjustment when faced with maladaptive patterns of stepfamily processes (i.e., moderating influence). My first hypothesis was that higher levels of neighborhood collective efficacy would be associated with a greater likelihood of stepfamilies exhibiting features of the *residence-centered* or *inclusive* patterns,

representing high-quality and positively correlated parental and parent-child relationships. This hypothesis was supported. Stepfamilies embedded in neighborhoods with higher levels of collective efficacy might experience reductions in parental burden and family stress, resulting in more adaptive and positive family processes. Indeed, neighbors providing support to one another and engaging in the monitoring of youth behavior can help ease tension in couple and parent-child relationships by distributing, at least in part, the load of child-rearing and other responsibilities.

From an environmental-stress perspective, stepfamilies who perceive high-quality relationships with neighbors might also worry less about the welfare of their children in the larger environment and ease control over the behavior of adolescent youth (Noah, 2015). This could result in more positive parenting and family processes, such as those exhibited by the *residence-centered* and *inclusive* patterns. Moreover, a socially cohesive neighborhood might cultivate an environment in which nonresident parents are more inclined and able to re-enter when maintaining close connections to their children—features of the *inclusive* pattern. In all, adapting a term from Mancini and Bowen (2013), the results of the current study support the concept of “[step]family connections,” or the notion that stepfamilies are strengthened and supported when they have close ties to their neighbors and neighborhoods. Importantly, the possibility remains that the association between neighborhood quality and positive stepfamily processes is bidirectional, such that higher quality stepfamily relationships enable stepfamilies to engage in the process of cultivating a socially supportive and cohesive neighborhood environment.

My second hypothesis was that higher levels of collective efficacy would exert positive and direct influence on youth adjustment, even beyond the influence of stepfamily processes.

This hypothesis was partially supported. Across youth adjustment outcomes, neighborhood collective efficacy was only positively associated with youth self-esteem over time, net the influence of stepfamily-process patterns. From a social capital perspective (J. Coleman, 1988), youth might accrue significant social capital from positive relationships in the neighborhood environment that serve to promote their psychological well-being in the form of self-esteem. This finding is consistent with a past study in which neighborhood quality was positively associated with youth self-efficacy, a concept parallel to self-esteem (Dupéré et al., 2012).

A lack of significant associations between neighborhood collective efficacy and youth depression and delinquency over time was surprising. Indeed, past research has emphasized the role of social organization (i.e., informal social control and social cohesion) in curbing youth externalizing problems, such as delinquency (Leventhal & Brooks-Gunn, 2000). It is interesting to note that across all three adjustment outcomes, youth perceiving the presence of caring teachers in their lives reported higher levels of adjustment. Perhaps during adolescence, and among youth who experience family structural transitions, connections with teachers and schools become particularly salient with respect to internalizing and externalizing problems (Hetherington & Elmore, 2003). There is some evidence of this in the literature. Indeed, caring teachers can take on parent-like responsibility for vulnerable youth, provide mentorship, facilitate healing spaces or offer refuge, engage in advocacy, and express positive regard, among other things (Brooks, 2006; Theron & Engelbrecht, 2012). Thus, the influence of neighbors and neighborhoods with respect to youth adjustment in stepfamilies might be dwarfed by the influence of caring teachers. This possibility should be explored in greater depth moving forward.

My third and final hypothesis was that higher levels of collective efficacy would buffer the negative influence of the *conflictual couple* and *disconnected* patterns on youth adjustment. This hypothesis was not supported. I offer two possible explanations for this. First, the one-year time delay between measures of stepfamily processes and youth adjustment might have diminished the influence of neighborhood collective efficacy as a moderator. It might be worth exploring the moderating influence of neighborhood quality cross-sectionally, such that reports about stepfamily processes, neighborhood quality, and youth adjustment temporally overlap. In the current study, it was important to provide a sense of temporal order between constructs, so I retained use of longitudinal data. Second, youth spending some time with nonresident parents (in different neighborhoods) might attenuate the protective influence of high-quality neighborhood environments in which the primary residence is embedded. In other words, youth bouncing back and forth between households might limit the protective influence of neighborhood collective efficacy in the mother-stepfather residence/neighborhood. Because youth were residing primarily with the mother and stepfather, however, it is reasonable to assume that youth received the most neighborhood exposure in the context of their primary residence. In all, these issue should be explored further, and future studies should attempt to include information about neighborhood quality with respect to both biological parents.

The conclusions of the current study should be tempered by some limitations. For one, the sample used in the current study only included stepfamilies headed by mothers and stepfathers. Thus, results might not generalize to stepfamilies headed by fathers and stepmothers or same-sex couples. Importantly, nearly 80% of all stepfamilies in the United States are headed by a mother and stepfather (Kreider & Ellis, 2011), so this study serves as a reasonable starting point. Another limitation is that associations between neighborhood collective efficacy and

patterns of stepfamily processes were necessarily cross-sectional. As a result, the temporal order of these constructs is ambiguous and causal inferences should be avoided; however, theory and past research were used to hypothesize the direction of associations and the findings appear to cohere predictably with the hypotheses. Despite limitations, to my knowledge, this is the first study to explicitly examine associations between neighborhood collective efficacy, stepfamily functioning, and stepchildren's adjustment over time. The findings should encourage ongoing exploration of contextual influences in shaping outcomes associated with family structural transitions, particularly the transition to stepfamily life. Indeed, researchers should continue to put "[step]families into place" in an effort to expand understanding of stepfamily resilience and youth well-being (Noah, 2015).

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TABLES: PAPER III

Table 3.1
Patterns of Stepfamily Processes

Patterns	Relationship quality					Positive Correlations	Negative Correlations
	Mother-child	Stepfather-child	Nonresident father-child	Stepcouple			
1 Residence-centered	Above average	Above average	Below average	Above average		MC and SFC	
2 Inclusive	Above average	Above average	Very above average	Above average		MC and SFC MC and NFC	
3 Confictual couple	Above average	Average	Average	Very below average		MC and SFC	NFC and S
4 Disconnected	Very below average	Very below average	Below average	Average		MC and SFC	MC and NFC

Note: MC = mother-child relationship; SFC = stepfather-child relationship; NFC = nonresident father-child relationship; S = stepcouple relationship.
 "Above average" indicates that relationship quality was more than one-fourth of a standard deviation above the sample mean; "below average" indicates that relationship quality was more than one-fourth a standard deviation below the sample mean; "average" indicates that relationship quality was within one-fourth a standard deviation above or below the sample mean; "very above average" indicates that relationship quality was at least one standard deviation above the mean; "very below average" indicates that relationship quality was at least one standard deviation below the mean. Methodological details associated with the generation of this pattern are available in Jensen (under review).

Table 3.2

Multinomial Logistic Regression With Patterns of Stepfamily Processes Regressed on Neighborhood Collective Efficacy (N = 1,182)

Variables	Residence-centered vs.			Inclusive vs.		
	Disconnected	Conflictual couple	Inclusive	Disconnected	Conflictual couple	Conflictual couple vs.
	RRR	RRR	RRR	RRR	RRR	RRR
Independent Variable						
Neighborhood collective efficacy	1.57 *	1.67 **	1.02	1.54 *	1.63 ***	0.94
Covariates						
Youth racial/ethnic identity						
Black	1.21	1.07	1.51	0.81	0.71	1.13
Hispanic	1.55	0.90	1.40	1.10	0.64	1.72
Asian/Native American/Other	4.92 *	3.06 *	6.18 **	0.80	0.50	1.61
White	ref					
Youth age	0.91	1.08	1.09	0.83 **	0.98	0.84 *
Youth is female	0.36 ***	1.05	1.16	0.31 ***	0.90	0.34 ***
Mother's education						
Less than high school	0.71	0.95	0.92	0.77	1.03	0.75
Some college	0.74	0.67	0.65	1.13	1.03	1.10
College degree or more	0.30 **	0.43 **	0.36 **	0.85	1.20	0.71
High school	ref					
Household composition	1.06	1.12	1.04	1.02	1.08	0.95
Mother's relationships in past 18 years	0.88	1.29	0.99	0.89	1.30 †	0.68 *
Household income (logged)	1.17	1.28	0.95	1.23	1.34 †	0.92
Parent grew up in current neighborhood	0.49 †	1.06	1.00	0.49 *	1.07	0.46 *
Teachers caring	2.01 ***	1.48 ***	1.34 *	1.51 **	1.11	1.36 *
Friends caring	1.37 *	1.09	1.20	1.14	0.91	1.25

Note: *** $p \leq .001$, ** $p \leq .01$, * $p \leq .05$; † $p \leq .10$. RRR = relative risk ratio.

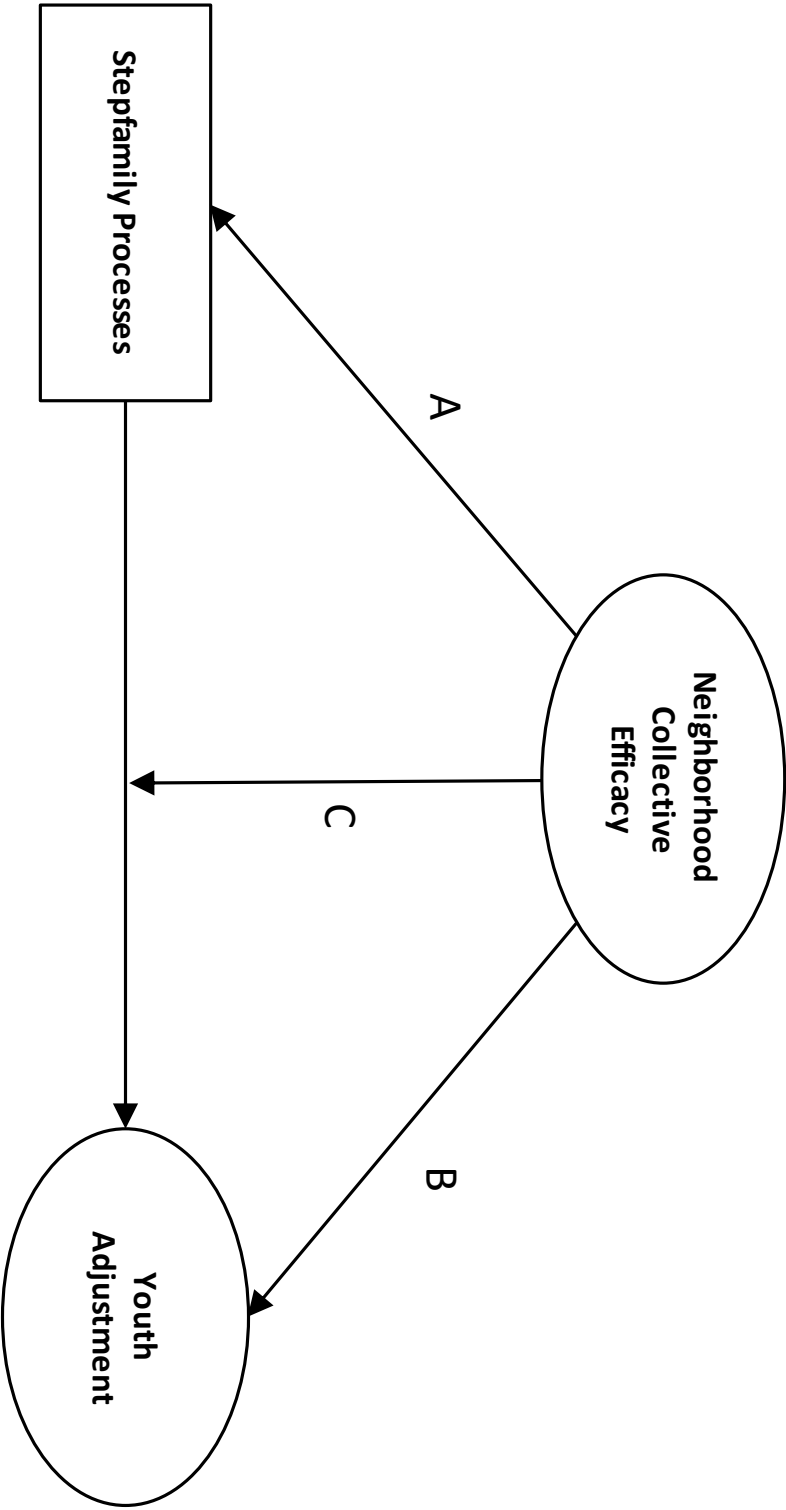
Table 3.3
Adolescent Adjustment Regressed on Neighborhood Collective Efficacy Before and After Including Patterns of Stepfamily Processes (N = 881)

Variables	Model 1: Depression (Wave 1) ^a				Model 2: Self-esteem (Wave 1) ^b				Model 3: Delinquency (Wave 1) ^c			
	Without patterns of stepfamily processes		With patterns of stepfamily processes		Without patterns of stepfamily processes		With patterns of stepfamily processes		Without patterns of stepfamily processes		With patterns of stepfamily processes	
	b	β	b	β	b	β	b	β	b	exp(b)	b	exp(b)
Independent Variable												
Neighborhood collective efficacy	-0.09 †	-0.08	-0.05	-0.04	0.18 ***	0.20	0.16 **	0.17	-0.13	0.88	-0.10	0.90
Patterns of Stepfamily Processes												
Residence-centered			-0.57 ***	-			0.47 ***	-			-0.44 *	0.64
Inclusive			-0.45 ***	-			0.33 ***	-			-0.29 †	0.75
Conflictual couple			-0.22	-			0.29 ***	-			-0.13	0.88
Disconnected			ref									
Covariates												
Youth racial/ethnic identity												
Black	0.18 †	-	0.21 *	-	0.26 **	0.12	0.23 **	-	0.06	1.07	0.08	1.08
Hispanic	0.27 †	-	0.27 †	-	-0.05	-0.01	-0.07	-	0.57 **	1.77	0.56 **	1.75
Asian/Native American/Other	-0.05	-	0.06	-	-0.05	-0.02	-0.11	-	-0.51 †	0.60	-0.42	0.66
White	ref											
Youth age	0.01	0.01	-0.01	-0.01	0.00	-0.01	0.01	0.02	-0.13 **	0.88	-0.13 **	0.88
Youth is female	0.47 ***		0.43 ***		-0.14 *	-0.11	-0.10		-0.74 ***	0.48	-0.79 ***	0.45
Mother's education												
Less than high school	0.12	-	0.12	-	0.05	0.03	0.06	-	0.34	1.40	0.32	1.38
Some college	-0.09	-	-0.09	-	0.08	0.05	0.08	-	-0.01	1.00	-0.01	0.99
College degree or more	-0.23	-	-0.28 *	-	0.16	0.08	0.19 †	-	-0.14	0.87	-0.16	0.85
High school	ref											
Household composition												
Mother's relationships in past 18 years	0.00	0.00	0.01	0.02	-0.01	-0.02	-0.01	-0.03	-0.02	0.98	-0.01	0.99
Household income (logged)	-0.05	-0.04	-0.06	-0.05	-0.02	-0.03	-0.02	-0.02	0.07	1.08	0.08	1.08
Moved since Wave 1	-0.07	-0.05	-0.06	-0.04	0.06	0.06	0.06	0.05	0.10	1.10	0.12	1.13
Teachers caring	0.30 **		0.27 *	-	-0.16 †	-0.08	-0.12	-	-0.19	0.83	-0.19	0.83
Friends caring	-0.20 ***	-0.19	-0.16 ***	-0.16	0.14 ***	0.18	0.11 **	0.14	-0.20 **	0.82	-0.17 **	0.84
	-0.11 †	-0.08	-0.09	-0.07	0.13 **	0.13	0.12 **	0.12	0.05	1.05	0.05	1.05
R-squared	0.17		0.20		0.15		0.18					

Note: ****p* ≤ .001; ***p* ≤ .01; **p* ≤ .05; †*p* ≤ .10 ^aLongitudinal SEM; WLSMV estimator used. Standardized coefficients are shown for continuous variables. ^bLongitudinal SEM; WLSMV estimator used. Standardized coefficients are shown for continuous variables. ^cNegative-binomial model; MLR estimator used. exp(b) = incidence rate ratio values.

Figure 3.1

Hypothesized Functions of Neighborhood Collective Efficacy



CONCLUSION

ENSURING THE HEALTHY DEVELOPMENT OF YOUTH IN THE CONTEXT OF FAMILY TRANSITIONS AND STRUCTURAL DIVERSITY

All three dissertation papers reflect the perspective that families are a primary context in which youth develop. The proliferation of family transitions and structural diversity has made vital the efforts of researchers and practitioners to attend to the specific needs of families of all types and structures. Because family transitions are even more common among families who already experience various forms of socioeconomic disadvantage and stress, these efforts are integral to the social justice mission of the social work profession. As discussed, stepfamilies are the fastest growing family form in the United States (Teachman & Tedrow, 2008)—one in which one-third of all youth will reside at some point before age 18 (Bumpass, Raley, & Sweet, 1995; Pew Research Center, 2011). Thus, it is increasingly likely that the individuals with whom social workers and other practitioners engage in practice will be embedded in family environments with a blend of biological and social relationships that transcend single households. Due to a pile-up of demands and stressors that often accompany family transitions, youth in stepfamily contexts experience a maladjustment-rate twice that of youth in biologically intact families (Hetherington & Elmore, 2003). Evidence also suggests that youth in stepfamilies experience, on average, greater levels of maladjustment than their counterparts in single-parent families (Jeynes, 2006). These well-being disparities are costly to youth, families, and society. To ensure healthy development for all youth, ongoing research is warranted whereby processes in stepfamilies are

identified that facilitate the well-being of youth, ultimately informing intervention development for these families.

Turning to the results of Paper 1, I zoomed in on a nationally representative sample of adolescents residing in stepfamilies headed by a biological mother and stepfather—the most common stepfamily structure (about 80% of all stepfamilies; Kreider & Ellis, 2011). A growing body of research has identified processes within mother-child, stepfather-child, nonresident father-child, and stepcouple dyads that exert influence on youth well-being (Coleman, Ganong, & Russell, 2013; Hetherington & Elmore, 2003; Jensen & Harris, 2016; Jensen, Shafer, & Holmes, 2015). Paper 1 extended the boundaries of knowledge in this area by examining the quality of these four relationship holistically, with attention to patterns of both relationship-quality levels and inter-relationship correlations. The results of Paper 1 yielded four dynamic patterns of stepfamily processes, namely *residence-centered* (high-quality residential relationship), *inclusive* (high-quality relationships across all four dyads), *conflictual couple* (very low quality stepcouple relationship), and *disconnected* patterns (low quality relationships between youth and all three parental figures). Consistent with tenets of both family systems theory and conflict theory, each pattern exhibited a unique constellation of relationship quality across dyads and inter-relationship correlations. To my knowledge, this is the first study to quantitatively explore population heterogeneity with respect to relationship quality and inter-relationship correlations in stepfamilies. The findings highlight a disparate set of experiences in mother-stepfather families in the United States, with tentative implications for youth well-being. Moreover, results from Paper 1 showcase socio-demographic differences across patterns, with evidence for the influence of racial/ethnic identity, youth sex, household income, and mother's education.

Paper 2 builds on Paper 1 by tracking the contours of youth adjustment across the early life course, from adolescence to young adulthood, in response to membership in each of the four stepfamily-process patterns. This longitudinal view, in addition to the rich exploration of stepfamily processes as represented in each of the four patterns, represents a notable departure from previous research. Indeed, few studies have sought to explain variation in youth well-being exclusively in stepfamily contexts, and even fewer have done so longitudinally. The results from Paper 2 indicate that youth in mother-stepfather families fare best over time when they are surrounded by high-quality and positively correlated relationships, such as those in the *residence-centered* and *inclusive* patterns. Moreover, a compensatory phenomenon appears evident, such that youth yield high levels of adjustment when accumulative quality is adequately high across youths' relationships with each parental figure. This suggests that one-size does not necessarily fit all, and a variety of stepfamily processes might work well for youth depending on the needs, culture, and preferences of individual stepfamilies.

Youth residing in the *conflictual couple* and *disconnected* patterns during adolescence, however, reported lower levels of adjustment over time. Membership in the *disconnected* pattern, in particular, appears to be linked to higher levels of depression, even years later as youth transition to emerging and young adulthood. In terms of differences in concurrent adjustment by youth sex, male youth seem to benefit most from membership in the *residence-centered* pattern, whereas female youth seem to benefit most from not being embedded in the *disconnected* pattern.

Following the admonitions of scholars to “put families into place,” Paper 3 examined these youth and stepfamilies in their neighborhood contexts (Mancini & Bowen, 2013; Noah, 2015). Specifically, I examined three plausible functions of neighborhood collective efficacy

with respect to stepfamily life: an ability to (a) *prevent* maladaptive patterns of stepfamily processes, (b) *promote* youths' adjustment beyond the influence of stepfamily processes, and (c) *protect* youths' adjustment when faced with maladaptive patterns of stepfamily processes (i.e., moderating influence). To my knowledge, this was the first study to explore ecological links between the larger social environment, stepfamily processes, and youth outcomes. The results point to an association between high levels of neighborhood collective efficacy and stepfamily processes marked by high-quality and positively correlated relationships. Neighborhood collective efficacy also appears to promote youth self-esteem, above and beyond the influence of stepfamily processes.

Together, all three papers fill gaps in the literature and tell a compelling story: youth experiences in stepfamilies are quite diverse, stepfamily experiences intersect with racial/ethnic identity and socioeconomic status, patterns of stepfamily processes matter for youth adjustment across the early life course, and the quality of larger social environments influences and overlaps with processes that occur in stepfamilies. This storyline begs a question: to what extent are educators, practitioners, and policymakers equipped with the knowledge and competencies they need to ensure healthy development among youth in stepfamilies—the country's fastest growing family form? Prominent scholars and practitioners have noted that many professions are ill equipped (e.g., Papernow, 2015). As informed by this dissertation, below I highlight implications for social work practice, social work education, and future directions for research.

Social Work Practice

Foremost, the overall findings encourage a nuanced approach to assessing and intervening with stepfamilies. Practitioners should examine stepfamily relationships inclusively and carefully, with close attention to observable and distinct patterns of dyadic relationship

quality and relationship interdependencies. Assessment tools should be developed and implemented that can assist practitioners in acquiring sufficient information about these relationships (e.g., Harcourt & Adler-Baeder, 2015). Assessments should also incorporate information about the quality of the neighborhood environment in which stepfamilies are embedded. Importantly, advancements in assessment will only be as useful as the intervention tools available to accommodate the needs of the families being assessed.

Most existing stepfamily intervention programs focus on couple enrichment (for reviews, see Lucier-Greer & Adler-Baeder, 2012; Whitton, Nicholson, & Markman, 2008); however, only about 29% of the stepfamilies in my sample had below-average stepcouple relationship quality (i.e., the *conflictual couple* pattern). Although efforts to assist these stepfamilies are certainly warranted, other stepfamilies face different challenges, particularly regarding youths' relationships with their various parental figures (i.e., the *disconnected* pattern). Because youth appear to fare worst when embedded in the *disconnected* pattern, new interventions should be adapted or developed that focus on bolstering mother-child, stepfather-child, and nonresident father-child relationships. Unfortunately, this might not be as straightforward as it seems. Stepfamilies resembling characteristics of the *disconnected* pattern might experience negative correlations between mother-child and nonresident-father child relationship quality, suggesting that gains in one relationship might compromise gains in the other. These types of challenges deserve thoughtful attention by intervention developers and practitioners.

Programs produced by the Oregon Social Learning Center show particular promise, and could provide opportunities for the development or adaptation of stepfamily interventions. Specifically, the *Marriage and Parenting in Stepfamilies* program incorporates social interaction learning theory and targets parenting skills and behaviors to improve youth outcomes (Forgatch,

DeGarmo, & Beldavs, 2005). One of the targeted parenting cores is positive involvement. This element could be expanded, and greater focus could be placed on the quality of mother-child, stepfather-child, and nonresident father-child relationships. Additional adjustments could be made that accommodate complex interrelationships between these three dyadic relationships. Moreover, new interventions should be developed in ways that acknowledge the role of neighborhood collective efficacy, particularly in the form of social control and social cohesion, in facilitating adaptive stepfamily processes.

Practitioners and intervention developers should also attend to possible differences between male and female youth in mother-stepfather families. Male youth might be more reactive to the stepcouple relationship in terms of delinquent behavior, whereas female youth might act out in response to low-quality parent-child relationships. However, with respect to depression and self-esteem, there exists a similar theme for male and female youth: high-quality parent-child relationships, particularly between youth and their resident mother and stepfather, appear to facilitate youth well-being concurrently and over time.

Importantly, the studies in this dissertation focused on adolescent youth with an average stepfamily duration of over 6 years. Scholars and practitioners have noted that adolescent youth tend to experience greater challenges in response to stepfamily life than their younger counterparts (Jensen & Howard, 2015). Thus, a critical time-point for intervening with stepfamilies could be when focal youth are in middle childhood. During this developmental stage, youth and their families might be especially amenable to acquiring knowledge and skills that could help them tactfully navigate the demands of stepfamily life. In many ways, this approach embodies a prevention perspective (Biglan, 2016), as stepfamilies could foster competencies via programs or education that help them prevent the development of low-quality

dyadic relationships and youth maladjustment later in adolescence. Taking the prevention perspective one step further, researchers and practitioners should consider how newly generated knowledge about stepfamily resilience and youth well-being can be effectively propagated such that families have valuable information about stepfamily life before they even need it.

Social Work Education

As noted by Papernow (2015), few professional training and education programs adequately address the nuances associated with stepfamily life and diverse family structures. As a result, many training programs rely on understandings of nuclear-family dynamics. This approach can be counterproductive, as many intervention strategies that work well in biological nuclear families do not translate well (and can even cause harm) in other family structures (Papernow, 2015). Thus, efforts to enrich social work curricula are warranted. Specifically, courses could be adapted or developed that infuse content on families with nuance and an appreciation for the rich diversity of family structures and transitions that are increasingly common. At the generalist level, courses on Human Behavior in the Social Environment could incorporate information about family transitions and the demands they can pose for youth and families. Moreover, at the specialization level, advanced practice courses focused on families and couples could introduce students to treatment modalities and theories that reflect the complexities of stepfamily dynamics, as well as dynamics inherent in other complex family structures. New certifications and continuing education courses could be developed that enable students and practitioners to acquire expertise in family-level intervention and prevention, allowing them to work effectively with families of all types.

Future Directions

To build a strong foundation for the recommendations presented above, I propose several directions for future research. First, researchers should continue striving to understand associations between stepfamily processes and youth outcomes. This work could incorporate other indicators of adjustment, including substance use, sexual behavior, and academic performance. In addition, this work could investigate the implications of earlier stepfamily processes on youths' subsequent interpersonal relationships and family formation in adulthood (e.g., Amato & Patterson, 2016). This would provide information about the intergenerational dynamics associated with stepfamily life.

Second, researchers should continue to examine stepfamily processes holistically. In that effort, researchers should strive to collect and analyze data that incorporates information about sibling and stepsibling relationships, the quality of the coparental relationship, and youths' relationships with other extended kin and stepkin. Although the complexity of family systems render such efforts challenging, the efforts are warranted nonetheless. And, as shown by the analyses in this dissertation, advancements in quantitative methods are making it increasingly possible to model complex family dynamics with greater precision and ease.

Third, future research should attend to the correlates and antecedents of adaptive stepfamily processes and stepchildren's well-being. Consistent with Paper 3, future research could continue to place families in context and explore the facilitative influence of other social environments, such as religious or educational institutions, on stepfamily processes and youth well-being (Boss, Bryant, & Mancini, 2016; Noah, 2015). Future research should especially attend to correlates and antecedents that are malleable, or subject to influence and change, such

that newly generated knowledge can be effectively incorporated into the intervention-development process (Fraser & Galinsky, 2010).

Fourth and lastly, ongoing investigations of stepfamily processes and youth well-being should be viewed through a social justice lens. Particular attention should be paid to stepfamilies that experience various forms of socioeconomic disadvantage, discrimination, or oppression—experiences that can exacerbate the normative stressors of family life and family transitions (Peters & Massey, 1983). Specifically, future research should focus on the unique experiences of stepfamilies that possess racial/ethnic minority status, are predominately low-income, have immigrated, or that are headed by same-sex parents. This dissertation project offers a nationally representative view and starting point, which can serve as a solid foundation upon which a nuanced examination of these subpopulations can be conducted.

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