

Using a life course perspective to study significant life events as contexts of development and change

by

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## Abstract

This dissertation utilizes life course theory by examining components of the theory (transitions, trajectories, durations, and turning points) and their influence on individual and relational well-being within two at risk populations. Each of the studies offers novel contributions to the literature through their use of theory, methodological advances, and implications for policy and future research. Additionally, both studies highlight differing experiences within groups.

The first study examined detailed cumulative family structure spanning birth through emerging adulthood and its influence on individual outcomes using a sample of young adults ( $N=536$ ). Latent class analysis was used to determine profiles of cumulative family structure experiences based on measures of family structure measured at five time points, duration in current family structure, the total number of parent relationship transitions, and the total number of sibling transitions. We found two distinct stable groups, two distinct mostly stable groups (i.e., experienced early instability and later stability, or experienced early stability and later instability), and one highly unstable group. Ethnic minority respondents and those with less educated mothers were most likely to have experienced family structure trajectories characterized by early instability. Current levels of depressive symptoms differed by groups such that those in the stable classes as well as those who experienced early instability reported lower levels of depressive symptoms.

The second study examines the impact of relationship education on prisoners' individual outcomes and whether change from pre- to post-test is moderated by demographic characteristics

and contextual variables using a sample of incarcerated adults ( $N=111$ ). The study found improvement in all three domains of functioning (couple, individual and parental). Specifically, results indicated change on six of the eight outcome variables examined. Overall, we find both similarities and differences among program participants at start and on changes from pre- to post-test. For the majority of outcomes, the positive impact of the program emerged regardless of the demographic and contextual variables

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## I. General Introduction

Over the last few decades, the demography of families has become increasingly complex and children are growing up in a variety of different contexts (Cherlin, 2010). The life course perspective focuses on the changing contexts of lives and offers a framework for examining the impact of these changes on human development (Elder & Johnson, 2002). This perspective considers diversity and heterogeneity in individual life courses and emphasizes the importance of timing, context and cohort when examining the impact of social structure on individual outcomes (Elder, 1974; Elder, Johnson & Crosnoe, 2003). Individual outcomes are considered dynamic and result from life-long processes that continue across the life course. Thus, prior history and experience is important to understanding current status (Elder, 1985; Macmillan & Copher, 2005). Prior history and experience may promote positive or negative trajectories. Research confirms that children from disadvantaged backgrounds (e.g., low-income, divorced parents, incarcerated parents) are more likely to accumulate risks associated with that disadvantage (Schoon & Bynner, 2003). However, we know from prior research that people do not respond to life transitions and stressors in the same way (Rutter, 1996) and there is variability in outcomes among at-risk populations. Thus, it is important to consider subgroups of populations who are considered at risk. As such, the current studies focused on two at risk populations - based on family instability and incarceration - using explicit theoretical and more rigorous methodological approaches.

The life course theory is best viewed as a theoretical orientation that guides research on human lives within context. The principles developed from and embedded in the theory reflect

the changing nature of human lives and thus offer a valuable perspective for studies examining diversity in families and relationships across the life course (Macmillan & Copher, 2005). The current studies used life course theory as a framework for examining the impact of cumulative transitions on individual well-being as well as the impact of incarceration as a transition and turning point for adults. First, basic definitions of core principles and concepts are presented. Following, the relevance of several of these and their influence on the study designs will be articulated.

The life course theory is guided by five general principles (e.g., Elder, Johnson & Crosnoe, 2003):

1. The principle of life-span development. This principle posits that human development and aging are life-long processes and we are better able to understand developmental processes by taking a long-term perspective. Thus, by examining lives over long periods of time, we increase our understanding of the potential interaction of social change with individual development.

2. The principle of agency. This suggests that individuals construct their own life course through the choices and actions they take and that the opportunities presented to individuals are bound by historical and social circumstance. The idea is that people will make choices based on the alternatives they perceive to have, and these choices can have important consequences for future trajectories and outcomes.

3. The principle of timing and place. This principle focuses on the idea that the life course of individuals is shaped by the historical times and places they experience. Individuals and cohorts of individuals are influenced by historical contexts, but the same historical event may differ in substance and meaning across different regions or nations.

4. The principle of timing. The main idea of this principle is that the impact of life transitions, events and behavioral patterns varies according to their timing in a person's life. Depending on the developmental stage of an individual, life events may have differing impacts on the overall life trajectory of an individual.

5. The principle of linked lives. This principle notes that individual lives are lived interdependently at multiple levels and socio-historical influences are expressed through this network of shared relationships. Thus, individuals are often affected by larger social changes, as well as at more micro levels. Transitions in one person's life often mean transitions for other people as well.

In addition to the guiding principles, a number of concepts have been developed within the life course theory. *Trajectories* are long-term patterns of stability and change (George, 1993) and reflect temporal involvement in roles or experiences such as school, marriage, or parenthood (Macmillan & Copher, 2005). Trajectories are marked by *transitions*, which represent a change in state or states (e.g., Elder, 1985; Elder & Johnson, 2002; Macmillan & Copher). During transitions, people move from one role to another and begin or end experiences. Transitions are embedded within trajectories and thus, the significance of a particular transition is dependent upon its role history and its place in the life course (Macmillan & Copher). The time between transitions is known as *duration*. Long durations enhance behavioral stability through acquired obligations and vested interests. Transitions often involve a change in status or identity. Thus, they open up opportunities for behavioral change or *turning points*. Turning points involve a substantial change in the direction of one's life, whether subjective or objective (e.g., Elder, Johnson & Crosnoe, 2003). The life course theory and these principles guide research away from age-specific studies and towards the understanding of changing human lives across the life

course. The principles help us gain a better understanding of human lives over time and across changing social contexts.

### **Life Course Theory and Relationships and Families**

Over the last few decades, the life course perspective has gained attention across many different disciplines and has become increasingly important to understanding how relationships vary over time (Dupre & Meadows, 2007; Elder, 1985; George, 1993; Giele & Elder, 1998; Hagestad, 1990). In addition to how relationships vary over time, a life course approach also examines the broader contexts that influence these relationships and resulting individual outcomes over time (Elder). As such, a life course perspective has particular salience for understanding the role and impact of families on development of individual well-being (e.g., Elder & Johnson, 2002; Macmillan & Copher, 2005; Mitchell, 2013).

Families are central to the life course and transitions into and out of families influence development across the life course (Macmillan & Copher, 2005) since we assume lives are linked. Life course theory assumes that significant events, such as a change in family structure, may alter an individual's developmental trajectory (e.g., Elder & Johnson, 2002; Macmillan & Copher; Mitchell, 2013). As some family structure changes may lead to unfavorable outcomes, individuals who experience these alterations to trajectories may be more at risk for negative outcomes later on; however, differing contextual influences over time may explain variations in outcomes within this more vulnerable group. As children's living arrangements continue to grow increasingly complex and the demography of families continues to change, more emphasis is being placed on the need to examine family structure and transitions as chains of events for individuals rather than static occurrences (e.g., Fomby & Cherlin, 2007; Manning & Bulanda, 2007; Mitchell). Thus, a life course approach offers a valuable framework for examining family

structure and transitions because it does not view family structure as a static event, but rather as a trajectory of cumulative processes that develop over the life span (Heard, 2007). It also considers and expects differing cumulative life experiences at the individual level.

Important to the study of family structure, therefore, are the concepts of trajectories and transitions. Trajectories are the various social roles experienced along the pathway and transitions are the links between these roles (e.g., Heard, 2007). This framework posits that individuals live in a continually changing social environment and are shaped by the timing of life events and transitions (Elder, 1998; Shanahan, 2000). Thinking about this in terms of family structure and instability, when a family experiences a change in structure they also experience a transition. Some family structure changes result in multiple transitions and alter individual trajectories (e.g., Hetherington, 1993). In addition, at what point this transition occurs in an individual's life span likely matters. By examining family instability through a lens that captures transitions, timing, and trajectories of family structure, we will more accurately capture people's experiences and be open to exploring variations within groups that are typically considered together based on a common experience at one time point.

### **Life Course Theory and Criminology**

While we have seen a rise in the number of children who are growing up without two-biological parents in the home for reasons such as divorce, we are also seeing this number rise for another reason – high incarceration rates (Cherlin, 2010; Pettit & Western, 2004). This is particularly prevalent for ethnic minority families as it is estimated that one in four African American children born in 1990 experienced parental incarceration by the time they were 14, compared to one in 25 for White children (Wildeman, 2009). Incarceration increases the risk for divorce or separation, as well as diminishes the availability of resources and thus puts children

and families with incarcerated members at risk for a number of negative outcomes (Wildeman & Western, 2010). Just as increased transitions and instability associated with family structure change is likely to impact individual well-being, so are the transitions and instability associated with incarceration. As such, it is important for researchers to not only address the impact that incarceration may have on families, but also to assess the mechanisms that may promote resiliency, or in this case, changes in trajectories of crime. For study two, the mechanism examined is participation in relationship education.

Similar to the study of family instability, a life course theoretical approach can also be applied to the examination of individuals whose life trajectories include incarceration. In addition to the importance of transitions, turning points are especially important to consider in relation to criminology, as is the assumption of personal agency. There is the potential for any life transition to result in a turning point (Elder & Johnson, 2002) and turning points have the potential to alter an individual's trajectory (e.g., Elder & Johnson; Laub & Sampson, 1993). Furthermore, a life course perspective suggests that there is the potential for any specific experience or event- such as participation in a relationship education class - to result in a turning point by offering new information or skills that have the potential to alter an individual's trajectory (e.g., Elder & Johnson).

A derivative of the life course theory, Laub and Sampson's (1993) age-graded theory of informal social control (also Sampson, Laub, & Wimer, 2006) emphasizes the importance of turning points and social relationships in altering the trajectory of offenders (Lilly, Cullen, & Ball, 2007). Social control theories posit that delinquency increases when people's social bonds are weak or broken. The age-graded theory of informal social control provides a theoretical basis for the assertion that a criminal life course can change (Sandifer, 2008), particularly if personal

agency is enhanced through positive social relationships that helps reestablish the individual's bonds to society. A major concept of this framework is that the interconnected nature of trajectories and transitions generates turning points which can result in a change to the life course (Elder, 1985; Rutter, 1996) at the individual level. That is, incarceration itself will not result in a turning point for everyone. But, if while incarcerated, an individual learns new skills that help strengthen relationships and social connections on the outside, then those social supports may serve as a catalyst for the individual to reintegrate successfully back into society after release thus altering their individual trajectory away from criminal behavior.

Adaptation to life events is important because the same transition followed by a different adaptation can result in different trajectories, or the same transition will have different outcomes depending on how it is perceived (Elder, 1985). Thus, regardless of the connection between childhood events and adult experiences, turning points can modify trajectories and redirect paths (Laub & Sampson, 1993; Rutter, 1996) and explain variation in outcomes within a group experiencing a similar life event. For some, turning points can be abrupt changes that separate the past from the future (Elder, 1991). For most, however, turning points are part of a process over time (Clausen, 1990; McAdam, 1989; Pickles & Rutter, 1991; Rutter, 1989). Because most turning points tend to be process-oriented in nature, Laub & Sampson suggest focusing on incremental change embedded in informal social controls.

Laub and Sampson (1993) emphasize the quality and strength of social ties during transitions more so than the occurrence or timing of discrete events. For example, while marriage does not necessarily increase social control, close emotional ties are likely to increase the social bond and mutual investment between two people. Ultimately, enhanced social bonds could lead to a reduction in criminal behavior (Laub & Sampson; Shover, 1985). Life transitions,

particularly critical events such as incarceration, may place people in new environments that may influence behavior (Adams, 1992; Elder & Johnson, 2002). The transition into or out of the experience of incarceration is a context within which behavior and individual trajectories may be altered – for better or for worse. Suggestions are that interventions at these critical times may serve to assist in establishing, maintaining, and enhancing social support and thus, alter trajectories in a positive way.

### **The Current Studies**

The current studies extend the research utilizing life course theory by examining components of the theory (transitions, trajectories, durations, and turning points) and their influence on individual and relational well-being within two at risk populations. Each of the studies offers novel contributions to the literature through their use of theory, methodological advances, and implications for policy and future research. Additionally, both studies highlight differing experiences within groups. The first study examines detailed measures of cumulative family structure spanning birth through emerging adulthood and its influence on individual outcomes. The second study examines the impact of relationship education on prisoners' individual outcomes and whether this influence is moderated by differing demographic characteristics and contextual variables.

The demography of American families continues to change and is becoming increasingly complex. As a result, the number of children growing up in non-nuclear family structures (e.g., stepfamily, single parent family) continues to rise (Cavanagh & Huston, 2008; Halpern-Meehin & Tach, 2008; Harcourt, Adler-Baeder, Erath & Pettit, 2013; Mitchell, 2013; Osborne, Berger & Magnuson, 2012). Typically, studies of family structure treat this concept as a static variable, assessed at only one time point (e.g., Cherlin, 2008; Coleman, Ganong & Fine, 2000; Mitchell;

Sweeney, 2010). Scholars, however, are increasingly pointing to the need to examine the cumulative impact of family structure and instability on individual well-being because families are in fact, dynamic systems that change over time and individuals have varying experiences in families over time even though they may be grouped together at a given time point (e.g., Cavanagh & Huston; Harcourt et al.; Manning & Bulanda, 2007; Osborne, Berger & Magnuson). Life course theory offers a theoretical framework for considering cumulative experiences of change and stability on a trajectory from birth to adulthood (Heard, 2007). Additionally, life course theory considers the significance of timing and ordering of transitions or events (e.g., Elder, 1998), which may be important to consider when examining variations in cumulative instability. Thus, the first study used life course theory as a framework for identifying trajectories or profiles of family structure over time (from birth through emerging adulthood).

Latent Class Analysis (LCA) is a statistical method for finding subtypes of related cases from multivariate categorical and continuous data. LCA was first introduced by Lazarsfeld and Henry (1968) as a way to assess the underlying association between sets of variables and was later formalized by Goodman (1974) and Clogg and Goodman (1984) who developed a maximum likelihood approach. One key component of latent class analysis is that one observed variable does not cause another observed variable. Instead, it is the relationship between observed variables that form a latent (unobserved) group of responses, known as a latent class. Latent class analysis provides two statistics to the researcher: the likelihood that a person in a certain category will identify with a given variable (item parameters) and the probable size of each class (class probability parameters) (Nylund, Asparouhov, & Muthén, 2007). After identifying the number of classes, the researcher is then able to examine whether certain characteristics predict class membership as well as whether class status predicts specific

outcomes. LCA allows for the organization of many complex variables that individually vary into more coherent groupings or classes that can be examined by the researcher. Thus, it is particularly well-suited for examining complex family structure trajectories because it reduces many experiences into a few useful categories.

Recently, Mitchell (2013) employed LCA to create family structure trajectories from birth through adolescence. Five latent trajectories were identified: (1) continuously married biological parents (55%), (2) long-term single mothers (18%), (3) married biological parents who divorce (12%), (4) a highly unstable trajectory distinguished by the entrance of at least one stepfather (11 %), and (5) cohabiting biological parents who either marry or break up (4%). Additionally, multinomial logistic regression was used to identify demographic predictors of class membership. This study was the first application of LCA to family structure trajectories and offers an initial step forward by showing that LCA can be a useful method to utilize for determining and analyzing distinct types of cumulative family experience. The study, however, included variables of family structure based only on the mother's relationship history and did not examine whether the trajectories were predictive of individual outcomes. Thus, an aim of the first study was to extend this study and add to the literature by employing LCA to identify even more nuanced classes or types of long-term family structure trajectories by including variables related to parents' relationship histories, as well as variables related to sibling presence and relatedness. Next, study one examined whether demographic characteristics (ethnicity and mother's education) predict class membership. Finally, the study examined whether there current mean level differences in individual outcomes (depressive symptoms, coping style, and conflict management skills) existed between different profiles of cumulative family structure experience.

Study two also considered several variables related to cumulative experience of another at risk population. Specifically, we examined their influence on incarcerated adults' receptivity to an intervention designed to strengthen family relationships. Life course theory posits that any life transition, such as being incarcerated, offers the opportunity for a turning point (Elder & Johnson, 2002). Turning points have the potential to alter an individual's trajectory (e.g., Elder & Johnson; Laub & Sampson, 1993; Maruna, 2001). The intervention represents a potential turning point as it may enhance incarcerated adults' sense of agency. That is, new knowledge and skills for building and maintaining relationships may assist inmates in perceiving new alternatives for their lives.

Research indicates that stable, healthy relationships are important for successful reintegration into society and alteration of negative developmental pathways (e.g., Berg & Huebner, 2011). Programs are offered around the country in prison facilities focused on enhancing family relationships (e.g., Mulroy, 2012); however, only three published studies can be found that have examined the impact of relationship education (RE) programs on incarcerated individuals (Accordino & Guerney, 1998; Einhorn et al., 2008; Shamblen et al., 2013). All three included couples only samples and primarily focused on couple-focused outcomes. As such, the initial aim of study two was to extend this literature by broadly assessing change on measures of couple, individual, and parental functioning among a group of incarcerated adults participating in a RE program.

Further enhancing the extant literature on RE program effects for incarcerated adults, study two explicitly incorporated life course theory assumptions and examined whether change seen from pre to post RE class was moderated by several variables related to cumulative experience. Certain individual characteristics are believed to be especially influential in

determining how the period of incarceration is viewed by individuals. Some researchers suggest that time currently spent in prison may be a more important indicator of an individual's ability to change course directions, with less time related to more openness to change. When duration of transition is smaller, individuals have not had as much time to become embedded in the social role of prisoner (Wolff, Shi & Schumann, 2012). This is consistent with assumptions in life course theory (Elder & Johnson, 2002). Others, however, suggest that less time left is more impactful as prisoners who are close to release may begin thinking of their family relationships as more attainable (Jackson & Innes, 2000). Additionally, whether or not an individual has previously been incarcerated is also important to consider as well as demographic and social address variables (relationship status, age, gender, ethnicity and education level).

Each of the studies offers novel contributions to the field through their focus on two distinct at-risk and comparatively understudied populations and their use of explicit theory in largely atheoretical areas of study – family structure effects on individual outcomes and RE effects on prisoners' individual outcomes. In addition, empirical knowledge is enhanced through the study of (rather than control of) diversity and variation within group, and the use of methodologically more advanced approaches that allow for pictures of differing experiences within these disadvantaged groups. Study one adds to the handful of studies that consider cumulative instability, by also considering timing and type of transition, as well as including measures of family structure that account for sibling relatedness rather than parent relationship status only. Study two examined what role RE plays in promoting positive changes associated with successful reintegration into society and whether a set of individual characteristics moderate program effects. By disentangling characteristics that may impact the success of such intervention programming with this population, we can begin to understand how to improve

education programs with incarcerated individuals. Results inform policy in this area as prison programming and recidivism are areas that continue to gain attention (ASPE, 2010; White House Domestic Policy Council, 2014). Overall, considering and exploring differences in life course trajectories for disadvantaged groups, rather than overlooking or controlling complexity serves to advance both our empirical knowledge base and our applied work.

- II. Paper 1 – Determining latent classes of cumulative family structure experiences and examining demographic characteristics of membership and the influence on individual well-being in emerging adulthood

## **Introduction**

The demography of American families is changing and over the last few decades, the number of children growing up in non-nuclear family structures (e.g., stepfamily, single-parent) has continued to increase (Cavanagh & Huston, 2008; Halpern-Meehin & Tach, 2008; Harcourt, Adler-Baeder, Erath & Pettit, 2013; Mitchell, 2013; Osborne, Berger & Magnuson, 2012). Many children experience more than one family structure throughout their childhood (Cherlin, 2008; Coleman, Ganong & Fine, 2000; Mitchell; Sweeney, 2010) and it is estimated that more than one half of all children will be part of a non-nuclear family at some point during their lifetime (Bumpass, Raley, & Sweet, 1995; Cherlin, 2010; Parker, 2010). Research on family structure typically distinguishes broad groupings - those growing up in nuclear families and those growing up in other family types. Broadly speaking, indications are that individuals not living in a nuclear family (e.g., residing in single-parent or stepfamily household) are, on average, more likely to experience negative academic, behavioral, and psychological outcomes and engage in substance use, risky sexual behavior and delinquency (Cherlin; Coleman, Ganong, & Fine; Halpern-Meehin & Tach; Hetherington et al., 1999; Sweeney). The current study examined depressive symptoms, reactive coping, reflective coping, and conflict management skills. Research on divorce and family structure commonly examine indicators of well-being that tap into externalizing behavior, internalizing behavior, and social competence (Amato, 2000; Brown,

2006). High conflict in families that experience parental separation and divorce is thought to influence the development of internalizing and externalizing behaviors (Hetherington & Stanley-Hagan, 1999) in children and to negatively affect their social competence with others (Bradley, Friend, & Gottman, 2011). Depressive symptoms are often examined as indicators of internalizing behavior and measures of conflict management skills serve as an indicator of social competence. Coping style has been linked to both internalizing and externalizing behaviors, as well as specifically to depression (Clarke, 2006; Folkman & Lazarus, 1988).

Scholars, however, are increasingly recognizing the need to better understand the myriad ways that individuals experience family structure transitions and to consider, methodologically, families as dynamic systems that change over time (e.g., Cavanagh & Huston, 2008; Harcourt et al., 2013; Manning & Bulanda, 2007; Osborne, Berger & Magnuson, 2012). Understanding the meaningfulness of differing family structure experiences will also serve to better inform prevention and intervention programs and services. This approach is consistent with a life course perspective that emphasizes changing contexts and their cumulative influence over time. The current study helps move the literature on family structure and individual well-being forward by determining profiles of family structure experiences, exploring the demographic factors associated with these more complex types of experiences, and examining the influences on several indicators of current well-being (i.e., depressive symptoms, coping style and conflict management skills) among a sample of emerging adults.

Typically, family structure is measured at a single time point and defined by the parent-child relationship (single-parent, two-biological-parent family, and stepfamily). A few studies (e.g., Gennetian, 2005; Ginther & Pollak, 2004; Halpern-Meehin & Tach, 2008; Harcourt et al., 2013) have provided evidence to suggest the importance of considering sibling relationships

when examining family structure and instability. Indications are that the presence of a half-sibling may be a risk factor regardless of parents' marital status. That is, some recent research has found biological children in step-nuclear hybrid families to be more at risk for behavioral and educational outcome than biological children in nuclear families (e.g., Evenhouse & Reilly, 2004; Halpern-Meehin & Tach; Harcourt et al.). The complexities of timing and of cumulative family experience are less often considered (e.g., Brown, 2006; Lichter, Turner, & Sassler, 2010; Manning & Bulanda, 2007; Mitchell, 2013). When they are, studies find that number, type, and timing of transitions are all significant predictors of many different measures of well-being (e.g., Cavanagh et al., 2006; Cavanagh & Fomby, 2012; Cavanagh & Huston, 2006, 2008; Heard, 2007; Manning & Bulanda; Mitchell; Osborne & McLanahan, 2007). Furthermore, while a handful of recent studies have examined cumulative instability (e.g., Fomby & Cherlin; Manning & Bulanda; Mitchell; Raley & Wildsmith, 2004), they have generally focused on smaller portions of the life course rather than examining the broader span of experiences from birth until emerging adulthood (i.e., when the child is likely to move out of the parental home) (e.g., Cavanagh & Huston; Fomby & Cherlin; Manning & Bulanda).

Experience over time is critical information. Research indicates that children who experience one transition are at higher risk for experiencing multiple transitions (e.g., Hetherington, Bridges, & Insabella, 1998; Manning & Bulanda, 2007); however, there are clearly varying experiences for individuals who experience a family transition. Although the disruptions and stress caused by family transitions are usually temporary, families that experience multiple transitions may not experience a given family structure for enough time to return to or develop a sense of "normal" (Osborne & McLanahan, 2007). Viewing transitions as chains of events with varying duration and family member entrances and exits is important for

gaining a better picture of the diversity of experiences and each type of cumulative experience's impact (e.g., Hetherington, 1993; Mitchell, 2013).

Overall, the majority of family structure and individual outcome studies provide an understanding of specific circumstances that occurred at one point over the life course and their effects, rather than a deeper understanding of the full experience across time and the complexity and variation inherent in a more detailed and inclusive approach to family structure experience. The emerging literature that attempts to dive deeper validates these efforts by revealing important subgroups of family experiences (e.g., Cavanagh, 2008; Fomby & Bosick, 2013; Manning & Bulanda, 2007; Mitchell, 2013). Pieces of additional family structure experience are the focus of several of these studies (i.e., relationship transitions, timing of transitions, duration, and presence of half siblings). The aim of the current study was to consider several elements together and identify trajectories or profiles of family structure and instability over time (from birth through emerging adulthood). Further, we examined characteristics that predict group membership and explored differences between groups on current measures of depressive symptoms, coping style, and conflict management skills.

### **Theoretical Background**

A life course perspective considers the changing contexts of lives - while emphasizing the importance of timing - and how these changes impact human development (Elder, 1974; Elder & Johnson, 2002). Studying cumulative family instability is in line with a life course perspective (Clausen, 1986; Elder, 1994) due to the examination of the full sequence of changes over time rather than the effect of a single event or circumstance (Mitchell, 2013). This perspective incorporates the whole of children's family experience including family structure

statuses across the life span, transitions into and out of these statuses, the tempo and timing of change, as well as the duration of each experience (Elder, 1998).

Important to the study of family structure are the concepts of role trajectories, transitions and duration. Role trajectories are the various social roles experienced along the pathway and transitions are the links between these roles (e.g., Heard, 2007). They are made up of many individual transitions (Elder, 1985; Zollinger & Elder, 1998) and offer a more comprehensive understanding of life experiences, making them a crucial component to understanding cumulative instability and family experience. Another important consideration is the length of time between family structure changes (i.e., duration). The longer that people remain in the same environment and the social roles embedded in that environment, the more committed to the role and others in the role they become (Becker, 1961; Elder & Johnson, 2002). Thus, long durations enhance stability (e.g., Elder, Johnson, & Crosnoe, 2003) and therefore may be an important variable to consider when assessing family instability. Since transitions are embedded within role trajectories, the significance of a particular transition depends on its role history and its place in the life course (i.e., timing) (Macmillan & Copher, 2005).

Applying these concepts to family structure and instability, when individuals in a family experience a structural change they also experience a transition, perhaps multiple (e.g., Hetherington, 1993). Transitions often involve a change in status or identity (e.g., Elder, Johnson, & Crosnoe, 2003) and may alter individual role trajectories (e.g., Hetherington). For example, if a child experiences the divorce of their parents, they transition from a two-parent to a single parent household. This could result in reduced resources which could result in transitioning to a new house, neighborhood and school district. For the child, this could mean a change in roles that involves more responsibilities or less parental monitoring, among other

things. If one or both adults decide to repartner, then additional transitions arise as well. The child may be placed differently in the new family in regards to birth order, or may take on the role of stepsibling and half-sibling if there are children present or born into the new family. Thus, examining only one transition and one type of transition is not sufficient to understand the impact of changing family structure on individual outcomes across the life course. By examining family instability through a lens - and method - that captures transitions, trajectories, and duration of family structure, we will increase our understanding of the cumulative impact of stability and instability on individual outcomes.

### **Dimensions of Cumulative Family Structure Experience**

Using life course theory as a theoretical framework, the current study examined multiple components of family structure pathways or experiences (i.e., number, type, timing, and duration of family structure transitions). As previously noted, a handful of studies have examined the independent influence of these concepts (e.g., Albrecht & Teachman, 2003; Brown, 2006; Cavanagh & Huston, 2008; Cavanagh, 2008; Fomby & Bosick, 2013; Osborne & McLanahan, 2007; Teachman, 2008). In regards to number, the majority of previous research has found a higher number of transitions to be associated with more instability and poorer outcomes (e.g., Cavanagh & Huston; Fomby & Cherlin; Osborne & McLanahan; Wu, 1996). While it is important for researchers to have an accurate estimate of the number of family structure transitions that occurred, some recent research has noted that simply counting transitions does not account for the possibility that different types account for different effects (Osborne et al., 2012). While all transitions are likely to result in some type of stress, particular types of transitions may differ in their impact on family and individual well-being. According to Osborne and colleagues, transitions differ along three dimensions: (1) the degree to which the transition is

planned, (2) the resulting changes in resources (economic and social), and (3) the level of interpersonal conflict created by the transition. For example, the entrance of a new adult partner to the family may result in more resources that will reduce stress; and the exit of an adult partner could result in diminished resources that add stress to the situation. Alternately, the entrance of a new parent could introduce conflict and stress in the family, while the exit of an adult could reduce the conflict level in the family. In addition to the entrance and exits of adults in relationships, transitions that include siblings will likely have a different impact than those that do not. Thus, distinguishing between types of transitions, even in a basic way (such as distinguishing parent partner transitions and sibling transitions) is important to consider because the influence on pathways and current functioning may differ.

In regards to timing, most research has focused on the timing of divorce or marital dissolution. This research on the timing of divorce generally argues that marital dissolution might result in negative outcomes for children of any age, depending on the outcome examined (e.g., Amato, 2010). For example, Lansford and colleagues (2006) found that early parental divorce/separation is more negatively associated with trajectories of internalizing and externalizing behavior problems, but later parental divorce/separation is more negatively associated with grades. As opposed to only considering marital dissolutions, family instability refers to all parental relationship transitions (i.e., includes cohabiting unions) and often considers not only the transition out of relationships, but also the transition into different types of relationships as well. While the research on the timing of instability is more limited, the findings have been mixed. Scholars have found that early family instability (i.e., prior to school years) is associated with externalizing behaviors in middle childhood (Ryan & Claessens, 2013) and marijuana use in adolescence (Cavanagh, 2008; Cavanagh & Huston, 2008). Later family

instability (i.e., from the start of school years to high school) is associated with weaker school attainment (Cavanagh, 2006), problem behaviors (Heard, 2007), diminished social protection (Fomby, Mollborn, & Sennott, 2010), and delinquency, depression and school engagement (Brown, 2006). Most research examining timing of transitions has focused on one developmental period rather than focusing on cumulative impact from birth to emerging adulthood (e.g., Cavanagh; Cavanagh & Huston; Fomby, 2013; Heard; Ryan & Claessens). While these findings are important to understanding the impact of family structure during specific developmental time points of the life course, it may be that looking only at current status or one developmental time period may give us limited information, but including a cumulative report can provide a more thorough understanding of the influence of family instability.

More recently, a few studies examined cumulative impact of transitions across a longer portion of the lifespan rather than during specific periods (Cavanagh, 2008; Fomby & Bosick, 2013; Manning & Bulanda, 2007; Mitchell, 2013). The studies typically examine cumulative family instability from birth to age 14 and findings suggest that over one third of participants experience at least one family transition by the age of 14 (Cavanagh; Fomby & Bosick; Manning & Bulanda). The studies find that both early and later instability are linked with poor outcomes (Cavanagh; Fomby & Bosick) but that the overall measure of cumulative family structure was more predictive of outcomes than looking at one developmental time point (Cavanagh; Manning & Bulanda).

Mitchell (2013) reconstructed family structure histories based on mother's marital or cohabiting transitions from birth until 2006 at which time the participants were between the ages of 14 and 19 years old. Mitchell expanded on previous work by employing latent class analysis to create children's family structure trajectories from birth through adolescence. Five latent

trajectories were identified using solely mothers' relationship status at each year: (1) continuously married biological parents (55%), (2) long-term single mothers (18%), (3) married biological parents who divorce (12%), (4) a highly unstable trajectory (i.e., marked by periods of marriage, cohabitation, and single mothers) with the entrance of at least one stepfather (11%), and (5) cohabiting biological parents who either marry or break up (4%). Multinomial logistic regression was then utilized to estimate class membership based on demographic characteristics of the mother and child gender. Results indicated that mother's education, mother's race, mother's age at first birth, mother's family structure at age 14, and mother's poverty status during youth were important predictors of class membership. This was the first study to use latent class analysis to identify trajectories of cumulative family structure and instability based on a parent's relationship status over time and to explore some parent demographic predictors of these distinct family structure experiences. The study, however, did not investigate the influence of the family structure groups on current indicators of well-being.

Overall, none of the studies included sibling relatedness in measures of family structure or instability but instead used parent relationship transitions only. In addition, very few studies (Cavanagh, 2008; Hao & Xie, 2002) have considered duration. Cavanagh found that duration in current family structure was a significant predictor of outcomes, such that longer durations in married stepparent families were associated with less drug use, but longer durations in cohabiting stepparent families were associated with increased drug use. Hao and Xie also found duration of current family structure to be important and suggest that assessing current family structure duration precisely captures stability versus instability. Thus, duration in current family structure is likely important to consider when examining current levels of well-being.

Although the extant body of research on children's family structures suggests that the number of family structure transitions, the type of transitions, and the timing of these transitions are associated with individual well-being, research in this area is still sparse. Currently, our knowledge of the impact of cumulative instability is limited to measures that capture family structure over shorter periods of time or those that consider only parent relationship status without accounting for sibling relatedness within families. Recently, researchers (e.g., Manning & Bulanda, 2007; Mitchell, 2013) have called for new measures that not only capture more detailed information about family structure, but also account for cumulative instability through examining family structure histories across longer periods of time. Scholars also emphasize the need for new methodological approaches (e.g., Mitchell) to better capture full histories that include detailed information on parent relationship status, entrance and exit of siblings, and duration of family structure experience. Although Mitchell offers the initial step forward to identifying more nuanced groupings of family structure experience, the study included categories of family structure based only on the mother's relationship history, was more descriptive in nature, and did not examine whether youth outcomes and characteristics (with the exception of youth gender) were predictive of class membership.

### **The Current Study**

Guided by a life course perspective, the current study aimed to build on the emerging family structure research, particularly the study by Mitchell (2013) that organized family structure experiences based on parents' marital history, and add to the literature by employing latent class analysis (LCA) to identify even more nuanced classes or types of long-term family structure trajectories by including variables related to both parents' married and cohabiting relationship histories, as well as variables related to sibling presence and relatedness at key time

points from birth to current age. LCA is a statistical method for finding subtypes of related cases from multivariate categorical and continuous data. One key component of latent class analysis is that one observed variable does not cause another observed variable. Instead, it is the relationship between observed variables that form a latent (unobserved) group of responses, known as a latent class. Researchers have noted that due to the complexity of family structure, identifying unique experiences results in large numbers of categories that are unmanageable in many analyses (Raley & Wildsmith, 2004). LCA can be a useful method to utilize for determining and analyzing the outcomes and characteristics associated with differing cumulative family experience because it can reduce the large number of categories into fewer, more useful classes.

Specifically, the current study identified latent classes or pathways of cumulative family structure experience using 4 categories of variables: (1) family structure categories that incorporate information on relatedness to parents and siblings (i.e., nuclear [no half-siblings], biological child in step-nuclear hybrid family [half-sibling present], stepchild in step-nuclear hybrid family [half-sibling present], simple stepfamily [no half-siblings], or single-parent family [may or may not be a half-sibling present]) coded at five time points (birth, age 5, age 10, age 15, and current age), (2) duration of current family structure, (3) total number of parent partner transitions (married and cohabiting) from birth to young adulthood, and (4) total number of sibling transitions from birth to young adulthood (biological, stepsibling, and half-sibling). We chose to use five year intervals that roughly represent school transitions (i.e., start of kindergarten, start of 6<sup>th</sup> grade/middle school, start of high school, and current age (average age of participants was 19.70, indicating most are likely in their freshman or sophomore year of college). Based on theoretical assumptions and previous empirical evidence, we expected that these different aspects of cumulative family structure experience would result in distinct classes

or pathways with at least one class trajectory remaining stable across time, one highly unstable trajectory and two or more classes with less stable trajectories, likely distinguished by stability vs. instability post initial parent partner transition, shorter versus longer duration in current family structure, and by types and/or number of sibling transitions (H1).

Next, extant research suggests certain demographic characteristics, such as ethnicity and parent education level, increase the likelihood of experiencing certain family structure experiences (e.g., Bianchi & Casper, 2000; McLanahan, 2004; Morgan et al., 1988). Research indicates that minority children are more likely to be born to unmarried parents (e.g., Bianchi & Casper), which in turn is associated with increased family instability (Raley & Wildsmith, 2004). In addition, children who have less educated parents are more likely to grow up in non-nuclear households (e.g., McLanahan, 2004). For the current study, mother's educational attainment was used rather than father's due to research indicating that children are more likely to live with their mother than father after a separation or divorce (Kelly, 2007). As such, we expected that minorities and those with less educated mothers would have higher probabilities of belonging to less stable classes than whites and those with higher educated mothers (H2).

Finally, while some recent research has examined the impact of cumulative family instability on child and adolescent outcomes, very few studies have examined the cumulative impact on outcomes in emerging adults. The current study examined three outcomes of emerging adults' current functioning: (1) depressive symptoms, (2) coping style, and (3) conflict management skills. These can be considered indicators of current well-being. Clearly, lower levels of depressive symptoms are indicators of more positive well-being (Antonucci, Lansford, & Hiroko, 2001) and are associated with higher levels of relationship quality and stability (Dehle & Weiss, 1998). Skills for healthy conflict management are a key dimension of interpersonal

competence (Buhrmester et al., 1988) and are associated with healthy relationships (Bradley, Friend, & Gottman, 2011) and greater educational and economic attainment (Mahoney, Cairns, & Farmer, 2003). Research also suggests that people are more likely to build and utilize social support networks if they have better conflict management skills (e.g., Buhrmester et al.). Positive coping style (more reflective and less reactive) refers to one's ability to problem-solve and work through stressful situations and is associated with enhanced physical and mental health (Friedman, 1992; Snyder & Ford, 1987). Coping style is also associated with support-seeking, better handling of stressful situations (Coyne & Downey, 1991), and is related to healthy, stable relationships (Bodenmann, 2005).

Those who have experienced at least one parent partner transition are at higher risk for negative outcomes in these areas than those who have not experienced family instability (e.g., Cherlin, 2008; Coleman, Ganong, & Fine, 2000; Sweeney, 2010). Thus, depressive symptoms, coping style (reactive and reflective), and conflict management skills can serve as indicators of individual well-being in the context of family structure experiences. For the current study, we expected to find small but significant differences between those in less stable classes and those in the stable class on all three outcomes (H3). Guided by life course theory, we expect the differences to be small given that historical context and demographic trends indicate that the experience of living in complex families is becoming more common and, perhaps more normative, than in years past (e.g., Cherlin, 2010).

Thus, the current study addressed the following hypotheses:

H1: We expected that methodologically and conceptually distinct classes of cumulative family structure experience would emerge, with at least one class trajectory remaining stable across time, one highly unstable trajectory and two or more classes with less stable

trajectories, likely distinguished by stability vs. instability post initial parent partner transition, shorter versus longer duration in current family structure, and by types and/or number of sibling transitions.

H2: Child ethnicity and mother's education level will predict class membership such that minorities and those with less educated mothers would have higher probabilities of belonging to less stable classes than whites and those with higher educated mothers.

H3: Small but significant differences between those in less stable classes and those in the stable class will be found on current levels of depressive symptoms, coping style, and conflict management skills, controlling for ethnicity and mother's education level, such that those in less stable classes will report higher levels of depressive symptoms, poorer coping skills, and poorer conflict management skills than those in the stable class.

## **Methods**

### **Sample**

Utilizing a convenience sample of individuals from five classes at a Southeastern University ( $N=536$ ), participants were recruited and offered extra credit by their professors for measurement completion. Participants were assigned codes and all materials and identifying information are kept in locked files at the institution. All procedures for informed consent are guided by a human subjects protocol approved by the Institutional Review Board (IRB).

Eighty-seven percent of the sample identified as European American, 8% as African American, 1% as Latino, and 4% as Biracial or Other. The average age of participants was 19.70 (Median=19; Range 17 to 33). Gender composition was 93% female and 7% male. Participants were asked about their parent's education. For mothers, 1% did not complete high school, 7% completed high school only, 16% completed some college, 8% completed a 2-year college

program, 46% completed 4 years of college and 22% had post college education. For fathers, 1% did not complete high school, 10% completed high school only, 13% completed some college, 6% completed a 2-year college program, 44% completed 4 years of college and 26% had post college education.

### **Administration Procedure**

In addition to completing a paper and pencil survey that assesses multiple demographic and outcome measures, participants were instructed to draw or “map” their living arrangements history through a series of transitions, starting with birth and ending with their current age (Harcourt et al., 2013). Participants were given a set of verbal instructions accompanied by a PowerPoint example of a family map. Respondents self-determined transition points based on a significant family event (e.g., marriage, marital disruption, and birth of a sibling) and visually depicted households, labeled members and included their current age to enhance clarity regarding which family member it is, and labeled the transition. The participants included the ages they were and duration of time spent in each family structure. Maps were coded by the researchers and acceptable inter-rater reliability ( $k > .80$ ) was established using 25% of all surveys (Cohen, 1960). Because the use of mapping differs from standard survey methods, a procedure for respondent checking was also utilized, a technique typically used in qualitative research (Torrance, 2012). The researcher contacted respondents for verification of any information provided that was in any way unclear. In 99% of the cases ( $n=31$ ), the code assigned was accurate.

### **Measures**

**Latent class variables.** Latent classes were identified using: (1) family structure categories at each time point, (2) length of time in current family structure, (3) total number of

parent partner transitions from birth to young adulthood, and (4) total number of sibling transitions from birth to young adulthood. Participants were coded into one of five possible family structure categories at each time point that consider biological relatedness to both parents and siblings: (1) nuclear (both biological parents with no half-siblings), (2) biological in step-nuclear hybrid (both biological parents with one or more half-sibling(s)), (3) stepchild in step-nuclear hybrid (stepfamily with one or more half-sibling(s)), (4) stepchild in simple stepfamily (stepfamily with no half-siblings), and (5) single parent family (single parent family where half-sibling(s) may or may not be present). Duration of current family structure represents the number of years the participant had been in his or her current family structure. Total number of parent partner transitions was coded as the sum of all parent partner transitions experienced by the residential parent (i.e., cohabitation and marital unions or separations). Total number of sibling transitions was coded as the total number of sibling entrances and exits experienced by the participant (e.g., birth of a biological sibling, birth of a half-sibling, entrance of a step-sibling).

**Demographic variables.** Participants completed items on the survey indicating their age, gender and ethnic background. Age was coded as a continuous variable and represents the actual age in years reported. Gender was not considered in the current study due to limitations of a homogenous sample (primarily female). Ethnic background was also dummy coded, with 1 indicating White and 0 indicating Non-White. Participants were asked to circle one of the following in regards to their parent's education level: less than high school, completed high school, some college, 2 year college/Technical school degree, 4 year college degree, or post college degree (e.g., Master's, Ph.D., M.D., Ed.D.). Responses were coded as a continuous variable from 1 to 6; higher values indicate a higher level of education and relatedly, as a proxy for higher socio-economic status.

## Well-being Indicators

**Depressive symptoms.** *Depressive symptoms* (from the Center for Epidemiological Studies; Radloff, 1977) were measured using three items on a four-point Likert scale from 0 (rarely or none – less than 1 day) to 3 (most of the time – 5 to 7 days). Questions included such items as “I felt depressed” and “I felt sad.” The Cronbach’s alpha reliability for the current study was  $\alpha = .76$ .

**Reactive coping.** *Reactive coping* (PF-SOC; Heppner et al., 1995) was measured using two items on a five-point Likert scale from 1 (almost never) to 5 (almost all of the time). Questions included items such as “My old feelings get in the way of solving current problems.” The Cronbach’s alpha reliability for the current study was  $\alpha = .65$ . While reliability of .70 or higher is generally most desirable, values between .60 and .70 are not unacceptable (DeVellis, 1991).

**Reflective coping.** *Reflective coping* (PF-SOC; Heppner et al., 1995) was measured using five items on a five-point Likert scale from 1 (almost never) to 5 (almost all of the time). Questions included items such as “I consider the short-term and long-term consequences of each possible solution to my problems.” The Cronbach’s alpha reliability for the current study was  $\alpha = .68$ .

**Conflict management skills.** *Conflict management skills* (Burhmester et al., 1988) were measured using four items on a five-point Likert scale from 1 (not at all like me) to 5 (very much like me). Questions included items such as, “I am able to put bitter feelings aside when having a fight” and “In a fight, I am able to see the other person’s point of view and really understand his/her point.” The Cronbach’s alpha reliability for the current study was  $\alpha = .77$ .

## Analytic Strategy

In order to determine latent classes or profiles of cumulative family structure experience (family structure, length of time in current family structure, total number of parent partner transitions, and total number of sibling transitions), LCA was applied in Mplus Version 7.2 (H1). Next, the study used multinomial logistical regression to examine the influence of demographic characteristics (ethnicity and mother's education level) on class membership (H2). Finally, the study utilized analysis of covariance (ANCOVA) to examine the current mean level differences in depressive symptoms, coping style, and conflict management skills between different profiles of cumulative family structure experience, controlling for ethnicity and mother's education level (H3).

## **Results**

### **Preliminary Analyses**

Prior to testing specific hypotheses, initial descriptive statistics for the outcomes were computed and assessed and are presented in Table 1. Preliminary assumption testing was also conducted to check for normal distribution, skewness, kurtosis, independence, normality, and sphericity/equality in variance, reliability and homogeneity. Assumptions were supported for most variables with the exception of depressive symptoms. Using the guideline that if the skewness is great than 1.0 or less than -1.0, the distribution is markedly skewed and it would be sensible to transform the variable (Morgan, Leech, Gloeckner, & Barrett, 2013). Although analysis of covariance (ANCOVA) is reasonably robust to violations of this assumption, given the small sample size of some of the classes (Stevens, 2002), depressive symptoms was transformed using the square root transformation to adjust for minor violations of normality. For each hypothesis, the inclusion of covariates (i.e., controls) was guided by the relationship

between covariates and the outcomes, which was determined using the Pearson Correlation procedure (Table 1).

### **Hypothesis 1: Determining Latent Classes of Cumulative Family Structure Experience**

Latent class analysis (LCA) in Mplus (version 7.2) was utilized to determine latent classes or profiles of cumulative family structure experience (based on family structure codes that consider relationship to parent and siblings at five time points, length of time in current family structure, total number of parent partner transitions, and total number of sibling transitions). Following procedures similar to those used in Amato et al. (2008), LCA was run on models specifying 1–12 latent classes so that all possible solutions for the data were tested. As a precaution against depending on a local maxima that might lead to a false solution instead of a global maxima, many different parameter start values were used for many iterations in multiple runs of the analysis (Hagenaars and McCutcheon, 2002; McCutcheon, 1987). Results were consistent across models. The results presented here are based on a model using 750 iterations for each of 50 random starting values.

Four statistical criteria were used to determine the best solution and offered competing evidence. First, the Bayesian Information Criterion (BIC) declined as the number of classes was increased. Lower values suggest better solutions, but statistical research indicates that the BIC may overestimate the optimum number of classes (Nylund et al., 2007). In this case, the BIC leveled off to a low point at the 5-class solution, which was eventually determined to be the best solution, based also on the meaningful differences between classes.

Second, entropy was used as a way to determine unambiguous classification into a particular number of separated groups (Wedel and Kamakura, 2000). The entropy values measure certainty in classification, with better certainty represented by entropy values closer to

1.00. Entropy reached a maximum of 1.00 in the 6-class model, and reached a .997 (the second highest value) in the 5-class solution, indicating that the 5-class solution was among the best.

Third, the Lo–Mendell–Rubin (L–M–R) likelihood ratio test of model fit (Lo et al., 2001) compares the fit of each model to the data with the solution with one fewer class. The L–M–R did not suggest a significant improvement ( $p > .05$ ) from the 4-class solution to the 5-class solution. However, an additional statistic, the bootstrap likelihood ratio test (McLachlan & Peel, 2000), has been shown to outperform the L-M-R likelihood ratio test in the selection of the correct number of classes (Nylund, Asparouhov, & Muthén, 2007). The bootstrap likelihood ratio test suggested a perfectly significant improvement ( $p = .000$ ) from the 4-class to the 5-class solution. The p-values for both the L-M-R and the bootstrap likelihood test were non-significant for models beyond the 5-class model. Additionally, the 5-class model captured greater diversity in cumulative family experience than the 4-class model by distinguishing early instability from later instability as well as distinguishing a difference between two stable profiles, nuclear and stable remarried. Thus, taking into account all four tests and a consideration of model practicality, the 5-class solution emerged as the most theoretically valid and empirically sound (See Table 2 for more detailed information on model fit).

Individuals were assigned to the class to which they had the highest probability of belonging. That is, they were assigned to a class based on mean values of the continuous variables (length of time in current family structure, relationship transitions, and sibling transitions) and whether they had a high or low probability of experiencing each family structure type at each time point. Nagin (2005) recommends that the posterior probabilities for specific trajectories be above .70. The posterior probabilities for the current study ranged from .760 to

1.00, with the vast majority falling above .950. The resulting class membership variable was exported from MPlus to SPSS in order to proceed with additional analyses.

The five trajectories as identified by the 5-class solution are shown in Table 3. Class 1 (n = 364, 69%) was the most common family structure pathway and describes what we characterize as a *highly stable nuclear/long duration* family structure trajectory. This class includes individuals whose probability of living with both biological parents from birth to current age was 1. On average, individuals in this class experienced no parental relationship transitions, a moderate amount of sibling transitions (M = 1.56), and had been in their current family structure for a long period of time (M = 19.61 years).

Class 2 (n = 28, 5%) describes a *highly stable hybrid/long duration* family structure trajectory. This class includes individuals whose probability of living with both biological parents and at least one half-sibling from birth to current age was 1. Members of this class are biological children in nuclear-step hybrid families (i.e., their biological parents are in a committed relationship but one or both of them has a child from a previous relationship). On average, individuals in this class experienced no parental relationship transitions, a moderate to high amount of sibling transitions (M = 1.86), and had been in their current family structure for a long period of time (M = 19.43 years).

Class 3 (n = 39, 7%) describes a *highly unstable repartnered/short duration* family structure trajectory. This class was marked by high instability with high probability of spending time in a married or cohabiting stepfamily. Individuals in this class had a high probability (.75) of being born into a nuclear family but by age 5 the probability of being in a nuclear family had diminished to .46. By age 10, the probability of living in a nuclear family was only .25 with a .46 probability of living in a single parent family. By age 15, the probability of living in a nuclear

family was 10% and the possibility of living in a stepfamily increased to .49 (.18 stepchild in a step-nuclear hybrid family; .31 in a simple stepfamily). By current age, the probability of living in a nuclear family was 0 with a .73 probability of living in a stepfamily (.19 stepchild in a step-nuclear hybrid family; .54 in a simple stepfamily). This class included members who experienced more instability than any other class, with a high number of parental relationship transitions ( $M = 2.81$ ), high number of sibling transitions ( $M = 2.08$ ), and a short duration in their current family structure ( $M = 3.41$  years).

Class 4 ( $n = 53$ , 10%) describes a family structure trajectory marked by *early instability/later stability/moderate-long duration*. Individuals in this class had a high probability (.71) of being born into a nuclear family but by age 5 the probability of living in a nuclear family had diminished to .19 and the probability of being in a single parent family was .51. By age 10, the probability of living in a nuclear family was 0 with a .57 probability of living in a single parent family and a .43 probability of living in a stepfamily (.22 stepchild in a step-nuclear hybrid family; .21 in a simple stepfamily). After age 10, the probabilities of each family structure remained similar. On average, members in this class this class experienced a moderate number of parental relationship transitions ( $M = 1.20$ ), low number of sibling transitions ( $M = 1.34$ ), and had been in their current family structure for a moderate to long period of time ( $M = 13.75$  years), suggesting that their trajectories became more stable after the age of 10.

Class 5 ( $n = 47$ , 9%) describes a family structure trajectory marked by *later instability/short duration*. Individuals in this class had a high probability (.83) of being born into a nuclear family that remained stable until age 15. At age 15, the probability of living in a nuclear family was .55 with a .41 probability of living in a single parent family. By current age, the probability of living in a nuclear family had dropped to .09 and the probability of living in a

single parent family rose to .89. On average, members in this class experienced a low number of parental relationship transitions ( $M = .80$ ), a moderate number of sibling transitions ( $M = 1.65$ ), and had been in their current family structure for a short period of time ( $M = 4.21$  years).

## **Hypothesis 2: Demographic Predictors of Class Membership**

It was expected that minorities and those with less educated mothers would have higher probabilities of belonging to less stable classes than whites and those with higher educated mothers. Multinomial logistic regression models were employed to estimate the log odds of membership in one of the five identified latent classes (Table 4). Because it was the largest class, the reference group is Class 1, *highly stable nuclear/long duration*. In order to attain stability in the multinomial logistic regression analyses, there must be a minimum of 10 cases to every variable (Petrucci, 2009). Mother's education did not meet these criteria in each of the five latent classes. As such, mother's education was dichotomized where 1 = college degree, and 0 = no college degree. This distinction was chosen as research indicates that distinctions in divorce rates are commonly seen between those who have a college degree and those who have less than a college degree (e.g., Copen et al., 2012).

The overall model was significant, and both ethnicity and mother's education had significant global effects on trajectory class membership. Non-white individuals were more likely to be in the *highly stable hybrid/long duration*, *highly unstable repartnered/short duration*, or *early instability/later stability/moderate-long duration* family structure trajectories than in the *highly stable nuclear/long duration* family structure trajectory. Mother's education was a significant predictor of class membership for both the *highly unstable repartnered/short duration* and *early instability/later stability/moderate-long duration* family structure trajectories, such that individuals in these two classes were more likely to have a mother who did not graduate from

college than individuals who were in the *highly stable nuclear/long duration* family structure trajectory. Neither ethnicity nor mother's education significantly predicted membership of the *later instability/short duration* family structure trajectory. Thus, the hypothesis was only partially supported.

### **Hypothesis 3: Differences in Individual Well-Being between Different Classes of Cumulative Family Structure Experience**

It was expected that small but significant differences between those in less stable classes and those in the stable class would be found on current levels of depressive symptoms, coping style, and conflict management skills, controlling for ethnicity and mother's education level, such that those in less stable classes would report higher levels of depressive symptoms, poorer coping skills, and poorer conflict management skills than those in the stable class. ANCOVA was conducted to compare the mean level differences in measures of depressive symptoms, coping style, and conflict management skills between different classes of cumulative family structure trajectories (Table 5). There was a significant difference based on classes for *depressive symptoms*,  $F(4, 522) = 2.62, p = .034, \text{partial eta squared} = .020$  (Figure 1). Least significant difference (LSD) post hoc tests indicated a difference between individuals in the *highly stable nuclear/long duration* family structure trajectory ( $M = .16, SD = .01$ ) and individuals in both the *highly unstable repartnered/short duration* ( $M = .21, SD = .02$ ) and *later instability/short duration* ( $M = .21, SD = .02$ ) family structure trajectories. On average, individuals in the *highly stable nuclear/long duration* family structure trajectory indicated lower current levels of depression than those in *highly unstable repartnered/short duration* or *later instability/short duration* family structure trajectories.

Similarly, post hoc analyses indicated a trend towards significant differences between those in the *highly stable hybrid/long duration* family structure trajectories ( $M = .14$ ,  $SD = .03$ ) and individuals in both the *highly unstable repartnered/short duration* ( $M = .21$ ,  $SD = .02$ ) and *later instability/short duration* ( $M = .21$ ,  $SD = .02$ ) family structure trajectories. On average, individuals in the *highly stable hybrid/long duration* family structure trajectory indicated lower current levels of depression than those in *highly unstable repartnered/short duration* or *later instability/short duration* family structure trajectories. Additionally, post hoc analyses indicated a trend towards significant differences between those in the *early instability/later stability/moderate-long duration* family structure trajectories ( $M = .16$ ,  $SD = .02$ ) and individuals in both the *highly unstable repartnered/short duration* ( $M = .21$ ,  $SD = .02$ ) and *later instability/short* ( $M = .21$ ,  $SD = .02$ ) family structure trajectories. On average, individuals in the *early instability/later stability/moderate-long duration* family structure trajectory indicated lower current levels of depression than those in *highly unstable repartnered/short duration* or *later instability/short duration* family structure trajectories. No difference was found between individuals in *highly stable nuclear/long duration*, *highly stable hybrid/long duration*, and *early instability/later stability/moderate-long duration* family structure trajectories. Thus, the hypothesis was only partially supported.

## Discussion

With the increasing complexities of family structure, it has been suggested that capturing and assessing the cumulative impact of experiences is preferable to viewing family structure as a static variable at a given time point (Cavanagh, 2008; Fomby & Bosick, 2013; Manning & Bulanda, 2007; Mitchell, 2013). Strategies used in the name of simplification and parsimony also

serve to mask diversity. In the current study, using a life course perspective, we sought to contribute to the recent efforts to uncover and label differing family structure experience trajectories. Recently, there has been more empirical focus on family instability over time (e.g., Fomby, 2013; Fomby & Bosick; Mitchell). Most instability studies, however, typically consider only the mother's relationship transitions and do not examine variation within these transitions that accounts for siblings. Additionally, the majority of research in this area has focused on specific developmental time periods such as childhood or adolescence and tends to focus on outcomes during these time periods as well (e.g., Cavanagh; Cavanagh & Huston, 2008; Heard, 2007; Ryan & Claessens, 2013).

Thus, the current study advances the study of family structure in several ways. We determined more nuanced patterns of cumulative family structure experience than have been delineated in previous work, based on variables related to their residential parent(s)' relationship histories, as well as variables related to sibling presence and relatedness while also accounting for number of transitions, timing, and duration of current family context. Additionally, we explored two demographic variables as predictors of class membership, and class-level differences on current levels of depressive symptoms, coping style, and conflict management skills with a sample of emerging adults. We found two distinct stable groups, two distinct mostly stable groups (i.e., experienced early instability and later stability, or experienced early stability and later instability), and one highly unstable group. Ethnic minority respondents and those with less educated mothers were most likely to have experienced family structure trajectories characterized by early instability. Current levels of depression differed by groups and coping style differences were seen. Although the homogeneity of this initial sample limited our ability to further explore predictors of class membership and to find larger or more meaningful variations

in outcomes between classes, more nuanced profiles of cumulative family structure profiles emerged than previous work identified and these can serve as a jumping off point for future research that utilizes more diverse populations.

### **Determining Latent Classes of Cumulative Family Structure Experience**

The current study builds on the existing family structure research, particularly the study by Mitchell (2013), and adds to the literature by employing latent class analysis (LCA) to identify more detailed classes of long-term family structure trajectories. The LCA revealed five distinct classes of cumulative family structure experiences: (1) highly stable nuclear/long duration, (2) highly stable hybrid/long duration, (3) highly unstable repartnered/short duration, (4) early instability/later stability/moderate-long duration, and (5) later instability/short duration.

As we expected, various stable and unstable cumulative family structure trajectories emerged. Interestingly, in addition to the stable nuclear class, there was also a distinct stable hybrid class. Meaning, even though individuals in this class were born into a family type that included both of their biological parents, it was a remarriage/repartnering for one or both parents and at least one half-sibling was present. Generally, research associates remarriage or stepfamilies with instability. Here, however, we see a distinct trajectory of individuals who were born into a step-nuclear hybrid family that remained stable from birth through emerging adulthood. Although other classes also had a high probability of living in a stepfamily, the high number of relationship transitions in the other classes indicated these classes as less stable. The distinction of a stable hybrid family group that includes the presence of a half-sibling is an important one to make since very recent research demonstrates differing outcomes for children and adolescents in differing types of current stepfamily and step-nuclear hybrid situations (Halpern-Meehin & Tach, 2008; Harcourt et al., 2013; Strow & Strow, 2008). Subgroups within

broader nuclear family and stepfamily categories have been frequently ignored and overshadowed in previous studies of family structure.

Additionally, the classes provide us with distinctions between early versus later instability. Those who experienced later instability were more likely to currently reside in a single parent family structure and had spent the least amount of time in their current family structure compared to those in other classes. Those who experienced early instability were likely to enter a single parent family or a stepfamily at some point during adolescence, and had a high probability of remaining in these family structures until current age. Future research using LCA with a larger, more diverse sample may reveal further distinctions between these two trajectories post early instability (i.e., early instability and later stable stepfamily, early instability and later stable single parent family). Previous research that examines only one time point, or simply counts the number of transitions, does not capture the timing dimension. Although Mitchell (2013) identified trajectories in which stability happened at some point during childhood, there was no clear distinction between early instability and later instability. Here, the analyses reveal a distinction between those who experience the separation or divorce of their parents prior to age 10 and those who experienced this after age 15.

Finally, in addition to type and timing, the classes offer insight into the importance of number and duration as well. The more stable classes experienced lower numbers of transitions and longer durations than other classes and variability within these contexts is also evident for the less stable classes as well. Duration emerged as a particularly important dimension in distinguishing the classes, such that even when classes experienced similar numbers of transitions, duration in current family structure determined whether the class was considered stable or unstable. By examining a combination of factors, we are better able to distinguish

between types of experience. Future research can consider other potential factors associated with instability (e.g., residential and non-residential family relationships) and may provide even more descriptive classes and/or additional latent classes. The data collection method used for the current study, Family Mapping, efficiently taps information on both residential and non-residential households as well as a number of other potential useful variables (e.g., time spent in each household; percentage of time spent with siblings; parent ages at first birth and relationship union). Although the variability in these measures were limited in our sample, a next step will be to examine the possibility of even more nuanced classes with a larger, more diverse sample of individuals.

### **Demographic Predictors of Class Membership**

As expected, both ethnicity and mother's education level were predictors of class membership. Previous studies have demonstrated the importance of demographic variables in influencing family structure (e.g., Bianchi & Casper, 2000; McLanahan, 2004; Morgan et al., 1988). The results of this study support the findings of Mitchell (2013) and demonstrate that demographic characteristics also increase the likelihood of experiencing certain long-term family structure trajectories. Participant's ethnicity was most strongly associated with membership in the early instability/late stability/moderate-long duration, such that non-white individuals were significantly more likely to be in this class than in the highly stable nuclear/long duration class. This is consistent with previous research that indicates divorce rates are higher for African Americans than for whites (Amato, 2010; Bramlett & Mosher, 2002; Copen et al., 2012), particularly in the early years of marriage. Specifically, Bramlett and Mosher find that 47% of African American women divorce within the first 10 years of marriage, compared to 32% of white women. African American women are also less likely to remarry than women of other

ethnicities (Bramlett & Mosher). Given that the non-white population was predominantly African American, these results are consistent with our expectations.

Mother's education was most strongly associated with membership in the early instability/late stability/moderate-long duration or highly unstable repartnered/short duration class, such that individuals in these classes were significantly more likely to have a mother who did not graduate from college than individuals in the highly stable nuclear/moderate sibling transitions class. This is consistent with demographic trends that indicate the divorce rate, particularly in the first 10 years of marriage, is lowest among women with a college degree (Copen et al., 2012) and highest among those with only some college education (Gibbs & Payne, 2011) or lower (Cherlin, 2010; Martin, 2006). By the 10-year mark, 46% of lower educated women have divorced, compared to 16% of college-educated women (Cherlin; Martin).

Neither ethnicity nor mother's education level were significant predictors of membership in the later instability/short duration class. One possible reason for this is the demographic characteristics of this subgroup. Individuals in this class were predominantly white (89%) and had mothers who were highly educated (61% had a college degree or higher). Since the comparison group for the multinomial logistic regression analyses was the highly stable nuclear/long duration class (also predominantly white and highly education), it is likely that comparatively, those in the later instability/moderate sibling transitions class were not significantly different. We tested this in post hoc analyses and found that when the reference group was the highly stable hybrid/long duration, early instability/late stability/moderate-long duration, or highly unstable repartnered/short duration class, both ethnicity and education level were significant predictors of membership in the later instability/short duration class. Overall, there is very little research that has examined the predictors of early versus later instability. We

suggest future research examine these two distinct groups more closely to better understand the influence of potential factors such as ethnicity and education.

Given the limited variability of the demographic variables within this sample, it is important for future research to examine these findings with more diverse populations. However, the current findings are similar to those seen in Mitchell (2013), who used a more diverse sample (52% white). Results of the Mitchell study indicated that ethnicity influenced class membership such that non-white individuals were more likely to belong in classes other than the continuously married trajectory. Similarly, those who had mothers with a high school education or less were more likely to belong to classes that were not associated with marriage. It is also likely that several other variables (e.g., parent age at first birth, parent age at first relationship union, paternal education, income level, or religious beliefs) may predict class membership as well. As such, a recommendation is for future work to further examine the predictors of class membership for these more nuanced, detailed classes of family structure experience.

### **Differences in Individual Well-Being between Different Classes of Cumulative Family Structure Experience**

A novel contribution of the current study was the examination of cumulative family structure influence on well-being indicators of emerging adults. The only significant between-group difference that was found was in current levels of depressive symptoms. On average, those in the highly stable nuclear/long duration family structure class indicated lower current levels of depressive symptoms than those in the highly unstable repartnered/short duration and later instability/short duration classes. A similar trend was seen for both those in the highly stable hybrid/long duration and those in the early instability/late stability/moderate-long duration classes compared to those in the highly unstable repartnered/short duration and later

instability/short duration classes. There were no differences between those in the highly stable nuclear/long duration class and those in the highly stable hybrid/long duration or early instability/late stability/moderate-long duration classes.

These findings are interesting for a number of reasons and provide insight into the influence of number, type, timing and duration of transitions as well. Overall, the highly stable nuclear/long duration and highly stable hybrid/long duration classes had the lowest number of transitions, longest duration in their current family structure, and reported the lowest levels of depressive symptoms. On the other hand, the two classes that were significantly different from the highly stable nuclear/long duration class (highly unstable repartnered/short duration and later instability/short duration) had, on average, the shortest duration in their current family structure and a higher number of transitions. Interestingly, the early instability/late stability/moderate-long duration class did not significantly differ from the stable classes even though members of this class experienced a higher number of relationship transitions than those in the later instability/short duration family trajectory class. The findings of the current study offer two possible reasons for this. First, although the number of relationship transitions for the early instability/late stability/moderate-long duration class was higher, this class reported the lowest number of sibling transitions. Therefore, it could be that sibling transitions may have a greater impact on the association between instability within a household and depressive symptoms than do relationship transitions. However, the highly stable hybrid/long duration class experienced the second highest number of sibling transitions, but overall experienced a stable trajectory and fewer depressive symptoms. This pattern suggests that sibling transitions alone are not what distinguish mean-level differences between groups.

Thus, our attention turns to a second factor – the combination of duration and timing. It appears that duration (i.e., a period of family structure stability) may be a more potent indicator of current depressive symptoms than the number or type of transitions alone. That is, instability alone was not enough to distinguish between-group differences; rather, it was the timing of the instability and the duration of time since the instability (i.e., instability occurred closer to or farther from the current time point) that was the superior indicator. Members of the two stable classes as well as those in the early instability class had been in their current family structure for at least 13.75 years and reported lower levels of depressive symptoms, compared to those in the highly unstable repartnered/short duration and later instability/short duration classes who had been in their current family structure for an average of 4.21 years or less. As life course theory suggests, duration is an important aspect to consider when examining family structure across the life course because increased duration in a particular role is associated with increased stability. From a developmental perspective, those in the highly unstable repartnered/short duration and later instability/short duration classes were likely to experience a transition during middle childhood. Disruption during this time may lead to more negative behavior as parents in unstable families may have more trouble maintaining supervision, discipline, or consistency in behavior (Hao & Xie, 2002). Additionally, family disruption is known to increase the risk of short-term psychiatric problems, such as depression (Hetherington & Stanley-Hagan, 1999). Thus, it may be that those with shorter durations in their current family structure are still experiencing short-term effects that are no longer present for those who experienced instability early on. This finding is consistent with those seen in Hao and Xie who found duration to be the superior measure of cumulative instability. The findings also support a growing body of research which suggests those growing up in a stable family type of any kind – particularly single parent families – have

better outcomes than those living in unstable two-parent households (Raley & Wildsmith, 2004; Waldfogel, Craigie, & Brooks-Gunn, 2010).

Even though significant between-groups differences were found on measures of depressive symptoms, it is important to note that overall, the mean scores are low given the range of possible scores. As a group, this sample was low on depressive symptoms and there was limited variability in the scores. As such, these may not be practical or meaningful differences, since this is overall, a higher functioning sample. Future work examining these nuanced classes or trajectories of family structure experience with larger, more diverse samples is needed to better understand the impact these experiences have on young adult outcomes such as depressive symptoms.

Differences on current levels of coping skills and conflict management skills were not significant. However, this is likely due to the very homogenous nature of the sample. There was little shift in and out of family structure between time points and thus, classes other than class one were relatively small. More than 2/3rds (69%) of the current sample reported remaining in a stable nuclear family from birth to current age in comparison to Mitchell's (2013) study using a nationally representative sample, in which about half remained in a stable nuclear family across time points. While some differences were seen on measures of depressive symptoms, they were not as pronounced as expected. Exploring the differences between groups with a larger, more diverse sample may likely produce results more consistent with our hypothesis. We expect more would be learned from future research that oversamples ethnic minorities and those who are lower-educated.

It is also possible that the characteristics of the current sample (e.g., all participants were currently enrolled in college) provide explanation for why differences between groups were not

seen on all measures. The current sample may be benefitting from positive factors (e.g., family resources) that reduce the risk associated with family instability. Fomby (2013) found that instability decreases the likelihood of attending or completing college. This link was partially explained by household resources during adolescence. Although we do not have the means to test for level of resources in adolescence with the current sample, all individuals in the sample were currently enrolled in college. Thus, even those who did experience high levels of instability were also able to experience resiliency. Additionally, it is likely that college itself is a protective factor as it provides a community of support and a variety of resources (e.g., work, study, mental health services, health care, strong peer networks) for the individual.

Although we acknowledge the limitation of our sample, it is also important to note an additional possible explanation that considers socio-historical context. While most research and publicity surrounding family structure and instability is focused on negative outcomes for children, life course theory offers reasons to expect that differences in well-being indicators might not be so pronounced. Given that recent demographic trends indicate that living in more complex family forms is becoming increasingly common (Cherlin, 2010), it might be that it is also being considered more normative. Parents and children in these more complex family structures may perceive transitions in these structures as more normal or predictable and therefore, less stressful and outcome differences between groups, while they may still exist, may not be as pronounced as in previous generations (Amato & Anthony, 2014; Elder & Shanahan, 2006; Ryan & Claessens, 2013). However, it is still unclear as to for whom and under what conditions these structures may be perceived as normal. It is likely that it may differ for those who are in married versus cohabiting families, or whether the experience occurs at younger ages or older ages (Ryan & Claessens). More pronounced differences may also be unveiled as classes

of experiences become even more nuanced as this literature continues to develop. Thus, it is still important to expect and to continue asking questions about variations in outcomes (Amato & Anthony).

Taken together, understanding the influence, or lack of influence, cumulative family structure experience has on indicators of well-being is important and warrants future research. The previous “truths” that people in non-nuclear families are at risk (e.g., Cherlin, 2008) may not be as simple as previously thought. Future work should focus on capturing the diversity within families based on a number of instability indicators rather than one at a single point in time. Depending on snap-shot measures of family structure is not enough to adequately capture differing cumulative experiences that exist within one current family structure group and relying on broad definitions of family structure or instability limits our understanding of the family’s contribution to development.

### **Limitations**

The current study offers some important insights into the cumulative family structure experiences of individuals living in various family structures and with varying biological relatedness to family members. Limitations of the study, however, are acknowledged and some cautions in the interpretations of the findings are suggested. The biggest limitation of the study is that the sample was primarily female, quite homogenous and not generalizable to the broader population. Furthermore, and likely due to the sample, although the overall sample size is substantial, the group sizes of several of the latent classes that emerged were relatively small, reducing the power available to detect significant differences on outcome measures. The study made use of a convenience sample because the methods used to collect family structure experience over the life course (i.e., family mapping) was novel and we felt it best to first gather

data from a large number of readily available young adults. The authors were personally able to guide each class through the procedures for completing the surveys and maps and address any questions directly that arose. They were also able to use respondent-checking (i.e., directly contacting the respondent) as a method for ensuring that the maps were coded correctly. A necessary next step is to employ the Family Mapping procedure in a more diverse, community sample in an effort to validate the measure and to replicate and further enhance current findings.

Another limitation of this study is the lack of demographic data collected on the parents of respondents. Only education level and ethnicity could be considered. Certainly other variables may explain class membership such as intergenerational family patterns (i.e., each parent's family structure experiences while growing up), more detailed information on economic well-being over the life course, current level of family economic support, and parent age at first birth. Future research will benefit from collecting data from the parents as well as the young adults. Although not a focus in the current study, future research could include variables related to non-resident households as well. It is likely that factors in both the residential and non-residential household are important to consider when examining experiences of instability. This would be especially salient for those who are splitting time between households. Additionally, time spent in the household with each sibling is likely important to consider. Recent research has indicated the need to assess aspects of sibling relationships (e.g., Deater-Deckard et al., 2002; Halpern-Meekin & Tach, 2008; Strow & Strow, 2008); however, as a field, we still know very little about what aspects of these relationships have the most meaningful impact.

Finally, while this study did include both cohabiting and married two-parent families, no distinction was made between the two in the coding at each time point due to the predominance of married couples in our sample. Cohabiting transitions were included in the total number of

relationship transitions, but were not coded separately from marital transitions. Research indicates that cohabiting unions are often more unstable and shorter in duration than marriages (e.g., Manning & Lamb, 2003) and it is likely that transition out of a marriage vs. out of a cohabiting union may have differential impacts on child outcomes (Wu et al., 2010). Therefore, it is recommended that future research further distinguish these differing contexts and examine any between-group differences that may exist.

### **Conclusions and Future Directions**

Currently, our knowledge of how family structure and instability influence individual well-being is limited to incomplete, mostly static “pictures,” and measures that consider only residential parent relationship transitions. Given that an increasing percentage of American children are growing up in non-nuclear and more complex family forms (Cherlin, 2010; Evenhouse & Reilly, 2004), further attention to and examination of the complexities of family structure and instability is warranted. While it may be that differences in outcomes based on parents’ relationship instability may not be as pronounced as in previous years (e.g., Amato & Anthony, 2014; Ryan & Claessens, 2013), identifying and studying diverse family structure trajectories that incorporate multiple dimensions of family structure enhances our knowledge base regarding the influence of family contexts on individual development. Rather than looking at aspects of family structure or instability independently, it is important to consider a variety of factors that provide a more detailed description of cumulative family structure experience (e.g., Cavanagh, 2008; Manning & Bulanda, 2007). This study took a step forward in such efforts to unveil, rather than subsume diversity.

While the current study did have limitations, several contributions can be noted. First, the current study provides support for use of a life course theoretical framework when examining

cumulative family structure experience. In addition to the articulated use of a theoretical perspective, we also evaluated explicit theory-based assumptions that allowed for a more clearly guided investigation of cumulative instability from birth to emerging adulthood. Additionally, this study demonstrates that LCA is a useful approach that can organize information about individual trajectories and create classes or profiles that are empirically practical. Guided by life course theory, this study found – even among a fairly homogeneous sample - five distinct classes of trajectories that reveal some distinctions not typically made, based on relationships with siblings as well as parents, on timing of parents’ partner transitions, and on duration of current family structure. To our knowledge, this is the first study to consider these variables together when examining cumulative family structure experience. Importantly, this study reveals some of the complexities in long-term experience that can be missed when static measures of family structure at a given time point are used. Future work will benefit from examining the comparative influence of the classes (i.e., combination of variables) and the influence of variables individually. In addition, some indication is provided that differences, as well as unexpected similarities, in current indicators of well-being may be determined based on differing cumulative experiences.

Our findings support previous research suggesting that race and parent education level are predictive of family structure pathways and extend the research by examining the influence of cumulative family structure trajectories on individual outcomes. While we offer an important first step in this direction, it is also likely that the variables examined (number, timing, type and duration) may have more or less of an impact on individual outcomes depending on additional factors. For example, while it was not a focus of the current study, Osborne and colleagues have suggested that transitions differ by the degree to which they are planned, the changes in

resources, and the level of interpersonal conflict that is created. Thus, it may be important for future research to examine these factors when considering the impact of transitions on cumulative instability. For example, it may be that the entrance of a step or half-sibling is more or less influential depending on how much time the respondent is spending with that sibling (i.e., residential versus non-residential). Along those lines, it is important for future research to consider the impact of role transitions over time. While we were unable to assess role transitions in the current study, a life course perspective suggests that this could be an important factor in determining the influence of transitions over time. For example, transitions will likely look different for those who become a stepchild versus those who do not or those who become a half-sibling compared to a step-sibling or biological sibling. The social role is likely to change with each transition (e.g., caretaker, shift in family birth order) and considering these changes will further our understanding of the relational dynamics associated with cumulative family structure transitions.

Findings of this study, as well as those from previous research, have important implications for researchers and practitioners alike. Rather than communicating a global view of how family structure at one time point, or individual aspects of family instability influence trajectories of experience and individual outcomes, it is important to continue to move the research toward embracing the myriad differences in individual experience. Examining cumulative family structure experience will continue to become increasingly complex as we see more and more children growing up in diverse family forms. As such, we endeavor, and encourage future studies, to involve more diverse samples, oversampling underrepresented groups, and examine more nuanced differences within racial and socio-economic groups. While more parsimonious categorizing of family types and transitions may be desirable for statistical

reasons, capturing the experiences of those who have previously been “unseen” will serve to better inform both research and practice.

Table 1.

*Descriptive Statistics and Correlations for All Outcomes*

Scale	Descriptive Statistics							Pearson Correlation, Sig. (1-tailed)					
	<i>N</i>	Min.	Max.	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	1	2	3	4	5	6
1. Depressive Symptoms (Transformed)	527	.00	3.00	.16	.14	.64	-.27	1.000	.238*** .000	-.061~ .080	-.075* .043	-.014 .371	-.043 .328
2. Reactive Coping	527	1.00	5.00	2.65	.91	.32	-.32	.238*** .000	1.000	-.029 .250	-.182*** .000	.055 .105	-.005 .908
3. Reflective Coping	527	1.25	5.00	3.56	.72	-.27	.06	-.061~ .080	-.029 .250	1.000	.236*** .000	-.086* .024	-.022 .608
4. Conflict Management Skills	527	1.00	5.00	3.37	.73	-.17	.07	-.075* .043	-.182*** .000	.236*** .000	1.000	-.123** .002	-.018 .683
5. Ethnicity	527	.00	1.00	.87	.33	-2.26	3.11	-.014 .371	.055 .105	-.086* .024	-.123** .002	1.000	.133** .001
6. Mother's Education Level	527	1.00	6.00	4.57	1.25	-.86	-.15	-.043 .328	-.005 .908	-.022 .608	-.018 .683	.133** .001	1.000

Note. ~  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 2.

*Model Fit Statistics for One through Six Class Models*

No. of Classes	Model Fit Statistics			
	<i>BIC</i>	<i>Entropy</i>	<i>L-M-R</i>	<i>B-L-R</i>
1	10790.602	na	na	na
2	8943.944	.995	.000	.000
3	8242.027	.995	.001	.000
4	7925.388	.996	.051	.000
5 (Selected Model)	7679.322	.997	.291	.000
6	7519.327	.999	.433	.145

Table 3.

*Average Posterior Class Membership Probabilities for the Selected Five-Class Model*

	Two-Bio Parent	Bio Child in Step-Nuclear Hybrid	Step Child in Step-Nuclear Hybrid	Simple Stepfamily	Single Parent Family	Parental Relationship Transitions	Sibling Transitions	Duration in Current Family Structure
<b>Highly Stable Nuclear/Long Duration</b>								
Birth	1.00	.00	.00	.00	.00	.00	1.56	19.61
Age 5	1.00	.00	.00	.00	.00			
Age 10	1.00	.00	.00	.00	.00			
Age 15	1.00	.00	.00	.00	.00			
Current Age	1.00	.00	.00	.00	.00			
<b>Highly Stable Hybrid/Long Duration</b>								
Birth	.00	.96	.00	.00	.04	.04	1.86	19.43
Age 5	.00	1.00	.00	.00	.00			
Age 10	.00	1.00	.00	.00	.00			
Age 15	.00	1.00	.00	.00	.00			
Current Age	.00	1.00	.00	.00	.00			
<b>Highly Unstable Repartnered/Short Duration</b>								
Birth	.75	.20	.00	.00	.05	2.81	2.08	3.41
Age 5	.46	.15	.05	.06	.29			
Age 10	.25	.08	.11	.11	.46			
Age 15	.10	.05	.18	.31	.35			
Current Age	.00	.03	.19	.54	.25			
<b>Early Instability/Later Stability/Moderate-Long Duration</b>								
Birth	.71	.04	.00	.04	.21	1.20	1.34	13.75
Age 5	.19	.02	.06	.22	.51			
Age 10	.00	.00	.22	.21	.57			
Age 15	.00	.00	.28	.19	.53			
Current Age	.00	.00	.30	.15	.55			
<b>Later Instability/Short Duration</b>								
Birth	.83	.15	.00	.00	.02	.81	1.65	4.21
Age 5	.85	.15	.00	.00	.00			
Age 10	.83	.15	.00	.00	.02			
Age 15	.55	.04	.00	.00	.41			
Current Age	.09	.02	.00	.00	.89			

Table 4.

*Summary of Multinomial Logistic Regression Analysis for Demographic Predictors of Class Membership*

	Highly Stable Hybrid/Long Duration			Highly Unstable Repartnered/Short Duration			Early Instability/Later Stability/Moderate- Long Duration			Later Instability/Short Duration		
	<i>B</i>	<i>SE B</i>	<i>e<sup>B</sup></i>	<i>B</i>	<i>SE B</i>	<i>e<sup>B</sup></i>	<i>B</i>	<i>SE B</i>	<i>e<sup>B</sup></i>	<i>B</i>	<i>SE B</i>	<i>e<sup>B</sup></i>
Ethnicity (1=White, 0=Non- White)	1.76***	.48	5.80	1.47***	.43	4.33	2.00***	.36	3.65	.44	.52	.55
Mother's Education Level (1=College Degree, 0=No College Degree)	-.14	.45	.87	.73*	.36	2.07	.70*	.32	2.00	.52	.33	1.68

*Note.* Class 1, Highly Stable Nuclear/Long Duration is the reference class.

~  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 5.

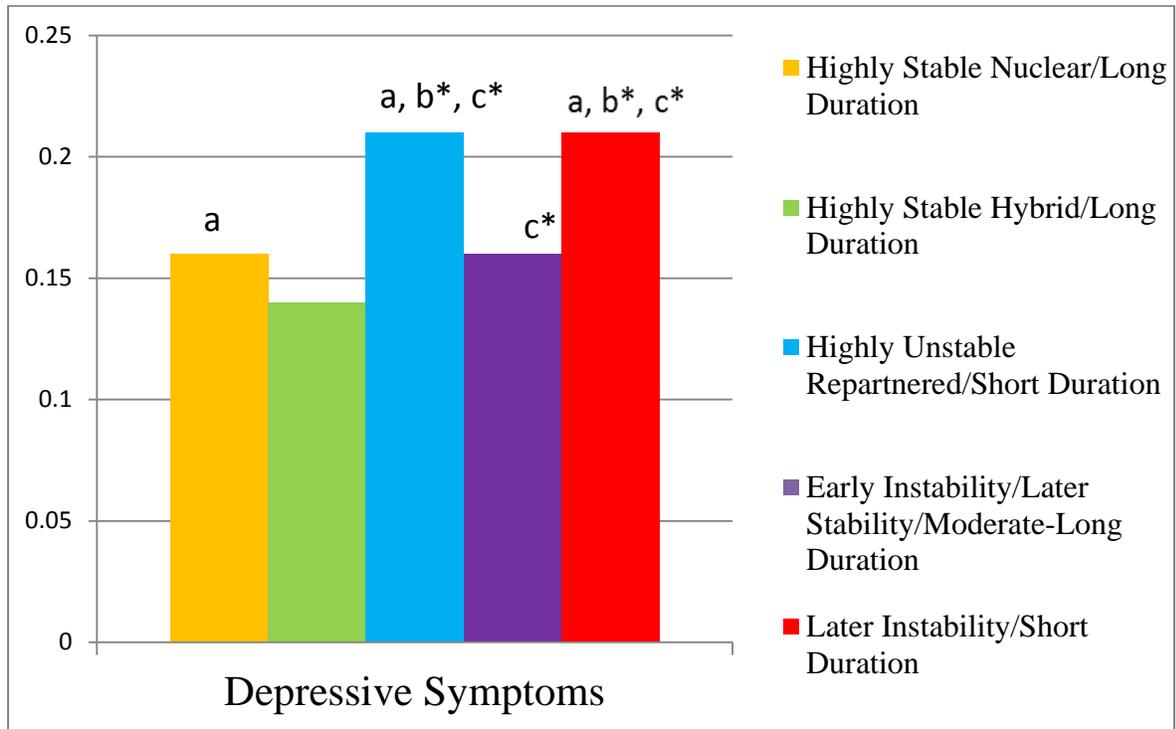
*Between-Groups Analysis of Covariance of Outcomes on Latent Classes*

	Highly Stable Nuclear/Long Duration		Highly Stable Hybrid/Long Duration		Highly Unstable Repartnered/Short Duration		Early Instability/Later Stability/Moderate- Long Duration		Later Instability/Short Duration		<i>F</i>	Sig
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Depressive Symptoms	.16	.01	.14	.03	.21	.02	.16	.02	.21	.02	2.62	.034
Reactive Coping	2.66	.89	2.25	.86	2.78	1.12	2.71	.89	2.69	.85	1.66	.157
Reflective Coping	3.54	.72	3.38	.74	3.79	.70	3.59	.80	3.66	.60	1.68	.154
Conflict Management Skills	3.30	.74	3.50	.71	3.45	.78	3.49	.84	3.49	.68	1.01	.399

*Note.* ~  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Figure 1.

*The Effect of Latent Class Membership on Current Levels of Depressive Symptoms*



*Note:* a, b, and c indicate those that are significantly different from each other

*Note:* \* indicates a trend approaching significant difference

### III. Paper 2 – Relationship education for incarcerated adults: Exploring program outcomes and moderators of change

The growing incarceration rate in the U.S. has spurred a large body of research on the impact of incarceration on individuals, families and children (e.g., Einhorn, Williams, Stanley, Wunderlin, Markman, & Eason, 2008; Johnson & Easterling, 2012; Shamblen, Arnold, McKiernan, Collins & Strader, 2012). The rapid increase seen since the 1970's has led the U.S. into a time that many are deeming as "an era of mass incarceration" (e.g., Clear, 2007; Garland, 2001; Gottschalk, 2006; Mears, Cochran, Siennick, & Bales, 2012). Recent estimates suggest that over 2.2 million adults are currently housed in U.S. federal and state prisons (Cloud, 2014). Of those incarcerated, over 50% of males and over 60% of females are parents, making the incarceration epidemic an important influence on family lives in the U.S. (Travis, McBride & Solomon, 2005).

As incarceration rates continue to rise, so does the number of prisoners being released each year. Unfortunately, it is estimated that within three years of release, two-thirds of these prisoners will be rearrested, with nearly 50% returning to prison with new sentences (Langan & Levin, 2002). Increased attention is being paid to prison programming implemented to enhance individual skills linked to successful re-entry (e.g., Einhorn et al., 2008; Gottschalk, 2006; Mears et al., 2012; West, 2010). Many programs focus on vocational training and educational attainment; however, a growing number emphasize family relationships and social supports. More specifically, recent programs target the adult relationships of inmates (i.e., couple and coparenting), given that recent research suggests that those who maintain strong, healthy family

relationships are more likely to successfully reintegrate into society after release (e.g., Berg & Huebner, 2011; Laub & Sampson, 1993; Visher & Travis, 2003). Research on family programs and their effects for prisoners, however, is limited due to several impediments – such as, restrictive prison policies, logistical challenges, and limited funding (Haney, 2001; Mulroy, 2012). Only a handful of studies of the effectiveness of family programs for prisoners have been published and only three published studies of relationship education (RE) exist (Accordino & Guerney, 1998; Einhorn et al.; Shamblen et al., 2013). These RE evaluation studies were limited to a sample of prisoners who were currently in a relationship and the majority attended with their partner. Findings indicated positive change on measures of relationship functioning after class participation. Despite an emphasis at the federal level on the importance of efforts to enhance the family relationships of prisoners (ASPE, 2010; White House Domestic Policy Council, 2014), this evaluation research is in its infancy. Prison program evaluation studies are largely atheoretical. In addition, the need for assessing the impact these programs have on interpersonal skills and relationship quality for a broader population of prisoners continues to gain attention (e.g., Einhorn et al.; Gottschalk; Mears et al.). The current study advances the literature on relationship education efficacy in general, and on family-focused prison programs specifically. We incorporated aspects of life course theory that consider timing of program implementation, external contexts, and duration of sentence, and examined the experiences of a diverse group of adult prisoners who participated in a relationship education program. The focus was on determining program effects in multiple domains - couple, individual and parental functioning - as well as on whether individual characteristics moderate these program outcomes.

## **Theoretical Framework**

Criminological research has emphasized the usefulness of considering crime and delinquency within a life course theoretical framework (Laub & Sampson, 1993; Matsueda & Heimer, 1997). Transitions and trajectories are central components of the life course theory (Elder, 1985). The theory posits that during any life transition, a substantial change in direction has the potential to be viewed as a crucial life event, which for some may be seen as a turning point (Elder & Johnson, 2002). Turning points, then, have the potential to alter an individual's trajectory (e.g., Elder & Johnson; Laub & Sampson, 1993; Maruna, 2001). Taking this perspective, a life course approach offers a theoretical framework for understanding the impact of incarceration on individual outcomes and for anticipating changes following an intervention that may serve to influence the trajectory of individual and relational functioning.

Derivatives of a life course theoretical perspective such as Laub and Sampson's (1993) age-graded theory of informal social control (also Sampson, Laub and Wimer, 2006) emphasize the importance of turning points and – important for the current study – the importance of social relationships in altering the trajectory of offenders (Lilly, Cullen and Ball, 2007). Laub and Sampson argue that transitions themselves do not necessarily affect criminality, but rather it is the extent to which these transitions are associated with informal social control. That is, transitions effect change in criminal trajectories (i.e., become turning points) by influencing the strength of social ties (Matsueda & Heimer, 1997). Incarceration is a critical event (Adams, 1992; Johnson and Tabriz, 2009), and for many prisoners it signifies a turning point in their lives (Maruna, 2001). Whether or not this turning point results in positive or negative change, however, may depend on several factors, including the extent to which social supports have been sustained and whether or not the prisoner has the knowledge and skills necessary to maintain these social supports and reintegrate into society (Bales & Mears, 2008; Laub & Sampson).

## **The Influence of Families on Prisoners**

Scholars have devoted considerable attention to identifying factors that affect prisoner reintegration (e.g., Mears et al., 2012) and to understanding persistence in and desistance from offending (Hochstetler, DeLisi & Pratt, 2010; Huebner, DeJong & Cobbina, 2010; Kubrin & Stewart, 2006; Maruna, 2001; Mears, Wang, Hay & Bales, 2008; Piquero, Farrington & Blumstein, 2003). While some researchers focus on how experiences in prison impact reintegration and recidivism (Berg & Huebner, 2011; Mears et al., 2012; Nagin, Cullen & Jonson, 2009; Visher & Travis, 2003), others have focused on examining ways to improve prison programs and policies for more successful reintegration outcomes (Cullen & Gendreau, 2000; Gideon & Sung, 2010). In spite of advances in research in this area, much still remains to be known about the mechanisms that promote successful reintegration (Lattimore, Steffey & Visher, 2010).

What we do know is that research consistently shows employment and social ties to family as particularly important aspects of successful reintegration (e.g., Berg & Huebner, 2011; Laub & Sampson, 1993; Visher & Travis, 2003). In addition to the post-release influence of family, there are a handful of early studies (Howser, Grossman, & Macdonald, 1983; Kemp, Glaser, Page, & Horne, 1992) that indicate prisoners who maintain healthy, close family relationships – particularly romantic relationships - are also better able to cope with the prison environment and exhibit less negative behaviors while incarcerated. Over the course of incarceration, family members often become the core of an offender's social network (Shapiro & Schwartz, 2001). Prisoners often experience a depletion of resources while incarcerated, furthering the gap between them and society and creating a sense of isolation (Mears et al., 2012).

There is a growing body of social science research indicating that family members often become critical sources of mental, physical, and financial support during personal crises (Cattell, 2001). It makes sense then, that during incarceration (a period of personal crises for offenders) prisoners commonly rely on family members and most continue to rely on them upon release from prison, particularly in the period immediately following release (Berg & Huebner, 2011). For example, Nelson, Dees, and Allen (1999) reported that nearly 80% of the released prisoners in their study relied on family members for a place of residence upon release from prison, and several other studies (eg., Berg & Huebner; Braman, 2004) have consistently found the family to serve as a source of financial and social support in the post-release environment. Those without these supports in place upon release are the most likely to re-offend and return to prison (e.g., Berg & Huebner; Visher & Courtney, 2006). In a study examining the impact of visitation on recidivism, Mears et al. (2012) found that visitation has a small to modest effect on reducing recidivism and that this effect may be most prominent for visitation time with spouse or significant other. While it is true that delinquency may contribute to the weakening of social bonds and relationships over time (e.g., Thornberry, 1987), there is some research to indicate that this relationship is reciprocal; thus suggesting that the strengthening of these relationships may contribute to decreases in delinquency over time (e.g., Bales & Mears, 2008; Laub & Sampson, 1993; Mears et al.). This is thought to be because family members are able to help prisoners overcome the social barriers associated with incarceration and help them rebuild their social connections after release (Matsueda & Heimer, 1997). These findings suggest the importance of strong family relationships to incarcerated individuals and have important implications for the internal environment of prisons, for the costs associated with incarceration and recidivism, as well as for individual, family, and community health and well-being.

## **Family Life Education for Prisoners**

In spite of the research suggesting the positive impact of maintaining healthy familial relationships on life inside and outside of prison (Berg & Huebner, 2011; Braman, 2004; Kemp, et al., 1992), programs focusing on strengthening and maintaining relationships are not widely implemented within this population (Mulroy, 2012). Most prison programs target educational or vocational skills (Haney, 2001). This is largely because research indicates that unemployment is highly correlated with recidivism and the means necessary to secure employment (i.e., educational attainment and job skills) are largely deficient among prisoners (Adams et al., 1994; Brewster & Sharp, 2002). While findings on these types of programs are mixed and often vary by individual factors (prior educational attainment, gender, and training needs) (Adams et al.; Brewster & Sharp), benefits such as an increased likelihood of finding a job after release (Brewster & Sharp) and avoidance of risky health behaviors (Ross, 2011) have been noted. While these programs, and the benefits associated with them, are certainly important, they do not address the other critical factor - healthy family relationships and strong social supports – which are typically the key antecedents post-release to securing a job (e.g., Berg & Huebner; Haney). They also do not address the interpersonal skills beneficial for maintaining jobs (e.g., Lin, 2001).

As such, both educational/job skills training and the administration of family life education (FLE) in prison facilities are likely both important interventions that may contribute to positive shifts in a prisoner's trajectory. FLE is designed to strengthen and enrich the quality of family life (Ballard & Taylor, 2012). Although there are several types of FLE programs offered, programs focusing on parenting are most commonly used in prisons (e.g., Bushfield, 2004; Luke, 2002; Mulroy, 2012; Travis, Waul, & Haney, 2003). Programs that are designed for families with an incarcerated parent typically fall into one of four categories, two of which target only the

children of prisoners (Mulroy): (1) parenting classes for incarcerated parents, (2) parent-child visitation programs, (3) mentoring for children of incarcerated parents, and (4) school and community-based counseling for children of incarcerated parents.

These types of FLE programs are important as parental incarceration is associated with many complexities and familial adjustments (e.g. Greenberg, 2006; Hairston, 2003; Mulroy, 2012) and risks to children's development (e.g., Aaron & Dallaire, 2010; Johnson & Easterling, 2012). Incarcerated parents and their families face unique challenges that are not usually addressed in the educational and vocational programs typically offered in prisons (e.g., Mulroy). Incarcerated mothers report that separation from their children during the length of their sentence is the hardest part of incarceration (Hairston, 1991). Incarcerated men report worrying about their relationships with their children during incarceration and whether or not they will be able to maintain any type of relationship while serving their time (Brenner, 1999; Hairston).

Although more parenting classes are being offered in prison, it seems that most are being offered in female facilities rather than male facilities. It is estimated that 90% of female facilities offer parenting programs, while only 41% of male facilities offer these programs (ASPE, 2010; Hughes & Harrison-Thompson, 2002). Even though we know that programs are being offered, few studies to date have evaluated the effectiveness of such programs. Most programs instead ask for participant feedback on the quality of the program at the end of the session (ASPE, 2010; Dunn & Arbuckle, 2002; Hairston & Lockett, 1987; LaRosa & Rank, 2001; Palm, 2001; Skarupski et al., 2003). A few studies employing pre- and post-test designs have suggested the potential effectiveness of these types of programs to improve parental knowledge, attitudes and behaviors (Cornille et al., 2005; Hairston & Lockett; LaRosa & Rank; Sandifer, 2008; Wilczak & Markstrom, 1999). Abbey and colleagues (2000) used a quasi-experimental design to examine

the impact of Active Parenting Now in New Jersey prisons. Participants in the program reported less family conflict, higher self-esteem, and higher family cohesion compared to a comparison group.

While we recognize that FLE programs focused on parenting are beneficial and important, additional skills that are important for successful reintegration (e.g., couple, co-parent, individual) may not be thoroughly addressed. Although the parent-child relationship is a very important relationship, the adult relationships will likely be most important for successful reintegration, given that adult relationships can provide practical supports (e.g., financial support, residence). In addition, adult relationships are shown to influence parenting practices and the parent-child relationships (e.g., Grych & Fincham, 2001; Kirkland et al., 2011; Zimet & Jacob, 2001). Of particular importance to successful reintegration is the spouse or partner. Laub and Sampson (1993) suggest that one of the reasons the spousal relationship is so unique and potentially beneficial with this population is because it is unencumbered by the stigma associated with incarceration. It is believed that family (e.g., Maruna, 2001), particularly romantic partners (Laub & Sampson), are better able to overlook the offenders' arrest record whereas others may construct an opinion of the offender based solely on their criminal record. As such, the stigma associated with incarceration has less of an impact on relationship ties with family members than it does with members of the community (e.g., Braithwaite, 1989; Maruna, 2001). Additionally, the relationship with the co-parent is important to address, regardless of whether or not co-parents are currently in a couple relationship. Research suggests that the quality of the co-parent relationship is indicative of the amount of contact the offender has with his or her children (Poehlmann, 2005). Research also indicates that co-parenting relationships marked by high cooperation and low conflict are associated with better child outcomes, as well as greater

relationship quality and stability between parents (Rosenberg & Wilcox, 2006). Thus, strengthening the adult or couple relationships is important as it will likely serve as the biggest source of support after the offender is released from prison and will also benefit the family as a whole.

### **Relationship Education for Prisoners**

One specific form of FLE, typically referred to as relationship education (RE), addresses couple and coparenting relationships and focuses on strengthening these relationships as well as improving individual skills important for maintaining healthy relationships and reintegrating into society (Accordino & Guerney, 1998; Einhorn et al., 2008; Shamblen et al., 2013). The education provided through the implementation of RE offers a potentially untapped resource for addressing the unique challenges faced by prisoners and their families, behaviors and adjustment inside of prison, and successful reentry into society after release (Accordino & Guerney; Einhorn et al.; Mulroy, 2012; Shamblen et al.). While technical and vocational programs promote the development of a specific trade or skill, and parent education promotes the improvement of parenting specific skills, RE offers skills for managing and promoting healthy adult relationships. These skills are transferable and may likely be helpful within other adult relationships (e.g., peers and work relationships) that are necessary for successful reintegration and finding employment (e.g., Berg & Huebner, 2011; Huffcutt, Conway, Roth & Stone, 2001).

Prisoners and their families face both common stressors and unique challenges to maintaining healthy, stable relationships while incarcerated and upon release. The knowledge and skills provided through RE are needed for staying connected to and for reconnecting with partners, children and family members after separation, as well as for finding jobs, and reintegrating into society (e.g., Einhorn et al., 2008; Mears et al., 2012). While there has been an

increase in research examining outcomes and impact of RE among more diverse and disadvantaged populations (Hawkins & Fackrell, 2010), there remains little empirical attention on these programs serving prisoners even though there have been increased efforts to provide RE to this population (see the Administration for Children and Families for re-entry programs offered under the Office of Family Assistance; [www.acf.hhs.gov/programs/ofa/programs/healthy-marriage/prisoner-reentry](http://www.acf.hhs.gov/programs/ofa/programs/healthy-marriage/prisoner-reentry)).

Although it appears that FLE for prisoners is becoming more widely available, only three published studies have examined the experiences of prisoners participating in RE (Accordino & Guerney, 1998; Einhorn et al., 2008; Shamblen et al., 2013). Accordino & Guerney implemented a 2-day marriage enrichment program (16 hours total) for 22 Jewish prisoners and their wives, and focused on empathic, expressive, and discussion/negotiation skills. Participants completed survey items addressing the general quality of the program and the leaders. Overall, participants found the program to be helpful and felt it was successful.

Einhorn et al. (2008) examined the impact of the Prevention and Relationship Enhancement Program (PREP) with a sample of 254 male and female prisoners who were currently in a relationship. No control group was utilized. The program was offered to prisoners and their partners; however, classes for groups of individuals were also offered for those attending without a partner. The study used a slightly modified version of PREP tailored to the prisoners' specific needs in prisons. The program took place over the course of six weeks. The modifications included additional communication skills, modeling how to complete assignments, and examples that were specific to the prisoners' current situations. Participants completed surveys before the education program and immediately following. The study examined a range of relational outcomes (e.g., relationship satisfaction, dedication to the relationship, confidence

in the relationship, and communication with partner). Using a series of time by gender analyses of variance (ANOVA), significant increases were found in all areas with no evidence of significant gender by time interactions. Additionally, they examined race as a moderator and found no significant interaction effects.

Shamblen and colleagues (2013) implemented an adapted version of the Creating Lasting Family Connections program with 115 married couples in which the husband had recently been released from prison. Additionally, a sample of 20 married men who were participating in other programs that are typically offered to prisoners upon release were included as a control group. Classes were offered in either a weekend retreat format (two eight-hour sessions) or a 10-session format (two hours per session). Participants completed surveys at pre-test, post-test and again after three months and examined a range of relationship skills (e.g., communication skills, conflict resolution skills, emotional expression, and relationship satisfaction). Using Hierarchical Linear Modeling (HLM), the study first examined change for husbands in the intervention group relative to husbands in the comparison group. Results indicated that changes in the intervention group were more positive than those in the comparison group on measures of communication skills, conflict resolution skills, emotional awareness and interpersonal skills. The study next used HLM to examine relationship skill change for husbands and wives attending the program together. Results indicated that both husbands and wives improved similarly over time.

### **Current Study**

While the three previous studies offer a much needed first step in investigating the impact of RE on prison populations, much has yet to be learned about the value of these programs. The studies limited their samples to include only those currently in couple relationships and only two of the three studies were implemented during incarceration. The

studies focused primarily on outcomes measuring couple relationship skills; only one (Shamblen et al., 2013) included examinations of individual skills which are necessary for maintaining healthy relationships with others. To our knowledge, no evaluation of RE has included measures assessing parental functioning. There is a body of research suggesting that couple functioning and parenting are linked (e.g., Cummings & Davies, 2002; Grych & Fincham, 2001; Zimet & Jacob, 2001) and that enhancements related to RE participation in the couple domain are associated with more positive parenting practices (Adler-Baeder, Calligas, et al., 2013).

The current study offers an important advancement in the study of RE programs for prisoners by examining the impact of RE on a sample of incarcerated adults, regardless of relationship status. The current study adds to the literature by examining changes not only in couple functioning, but in individual and parental functioning as well. Additionally, this study utilized theoretical assumptions explicitly and examined the influence of several moderators on change from pre- to post-test.

While research indicates that stable, healthy relationships (e.g., Berg & Huebner, 2011) are important for successful reintegration into society, very few studies have examined the impact of RE on incarcerated individuals. As such, the first aim of the current study was to add to this body of evaluation research and assess the impact of RE on individual level outcomes related to positive relational health. Based on assumptions from life course theory as well as previous research examining outcomes of RE in couple (Accordino & Guerney, 1998; Einhorn et al., 2008; Shamblen et al., 2013) and individual functioning (Shamblen et al.) with incarcerated individuals, the current study expected that RE would result in positive change from pre to post test on all measures (H1). Measures represent functioning in three distinct domains: couple, parenting, and individual well-being. In the couple domain, we examined both a behavioral

measure – use of negative interactions in a couple relationship - and a cognitive/attitudinal measure – divorce/separation proneness. In the parental functioning domain, we examined parenting efficacy, prison-specific parenting stress associated with visitation, and prison-specific parent-child contact. In the individual functioning domain, we examined levels of depressive symptoms, sense of efficacy through a measure of individual empowerment, and an indicator of interpersonal competence - conflict management skills.

In broader studies of RE with non-incarcerated populations, only minimal attention has been given to whether change seen from pre to post RE class is moderated by individual characteristics (e.g., Adler-Baeder et al., 2010; Rauer et al., 2014); however, many scholars note the value of determining conditions or characteristics that influence the efficacy of RE programs (Rauer, et al.; Wadsworth & Markman, 2012). As such, another goal of the current study was to examine the influence of both demographic and contextual variables on change from pre- to post-test after RE. Studies examining demographic moderators of RE have typically examined gender, ethnicity or education level. Hawkins et al. (2008) found that in RE research, gender interaction effects are not substantial overall. The findings on ethnicity have been mixed. While some studies have found no moderating effects for ethnicity (Adler-Baeder et al.), a few studies have found evidence in support of ethnicity as a significant moderating effect (Devaney & Dion, 2010; Rauer et al.; Wood et al., 2010). Rauer and colleagues found that change in commitment was more strongly associated with change in relationship quality for European Americans than for African Americans. On the other hand, studies examining the Building Strong Families (BSF) program have found that African Americans are more likely to benefit from RE than other groups (Devaney & Dion; Wood et al.). Einhorn and colleagues examined ethnicity as a moderator with an incarcerated sample and found no significant differences. Thus, the

examination of ethnicity as a moderator is exploratory in nature as we do not have enough consistent evidence to hypothesize on a direction.

Additionally, findings from the BSF studies indicated that participants who did not have a high school degree were more likely to see a positive, significant impact of RE than those who had higher levels of education. Thus, we expect that those with less education will report more change in the desired direction than those with higher levels of education. Relationship status is also important to consider in this study. Typically, studies of RE examine samples with people who are currently in a relationship (both married and unmarried) and less is known about those who attend RE and are not currently in a relationship. Specifically for an incarcerated population, relationship status has important implications as those who are in committed relationships are likely to have stronger social supports outside of prison (e.g., Laub & Sampson, 1993). As such, those in relationships may be more likely to show change on measures of individual and parental functioning. Since those reporting on couple functioning are currently in relationships, it is also important to consider marital status. Adler-Baeder and colleagues found that marital status influenced base-line levels of functioning and that married men showed more positive change in measures of relationship confidence than nonmarried men. It may be that those who are married are more committed to their relationships (Stanley, Markman, & Whitton, 2002) or more likely to use RE programs for enhancing the quality of the current relationship (Adler-Baeder, et al.).

To our knowledge, age has not typically been addressed as a moderator. Overall, we expected that demographic variables would influence change from pre- to post-test on outcomes in all three domains of functioning (H2). Specifically, we expected those currently in relationships to show more positive change on measures of individual and parental functioning than those who are not currently in a relationship; those who are married to show more positive

change on measures of couple functioning than those who are not married; and those with less education to show more positive change than those with higher levels of education. The effects of gender, ethnicity and age were more exploratory in nature, as we did not have enough empirical evidence to hypothesize the direction of effects.

We also considered that certain individual characteristics are believed to be important in determining whether incarceration is viewed as a turning point and in determining the impact programs have on individuals. A life course approach includes the concept of duration, which in turn prescribes the consideration of the timing of intervention. As duration in a role increases, individuals become more and more committed to the social role and others in that role (Becker, 1961). Thus, the longer that people remain in a role, the more likely these roles are to stay in place (Elder & Johnson, 2002). This has potential implications for the examination of prison programming because it calls into question whether or not programming is more or less effective at different time points.

Implementing programs closer to the beginning of the sentence (i.e., when most incarcerated individuals have not yet become committed to the social roles within the prison) may be more beneficial compared to mid- or late-sentence when incarcerated individuals may have embedded themselves within social roles in the prison. Alternately, at the end of the sentence it may be that this time prior to release represents a new transition towards the anticipated social role outside the prison and may be an opportune time for program implementation. Jackson and Innes (2000) examined if certain characteristics influenced whether a sample of incarcerated males was likely to self-select into educational prison programs. They found that those who had more time served and less time left were more likely to participate, which lends credibility to the assumption that anticipated roles may influence current behavior.

Thus, it is likely that both self-selection into an RE program and time point in sentence (i.e., those who have served more time and have less time left) are associated with increased change from pre to post test. However, since all participants in the current study selected to attend the RE class, we tested only the time point in sentence influence on program outcomes.

Jackson and Innes (2000) also found that those who had committed serious offenses while incarcerated (i.e., homicide or assault with a weapon) were less likely to participate (i.e., less motivated) than those who had not. Although this was an examination of misconduct during incarceration rather than the arresting offense, it is likely an indicator of the severity of the arresting offense. Giordano and colleagues (2002) argue that individual motivation is required for successful, long-term change. As such, it may be that those with more serious offenses (i.e., longer sentences) may be less motivated and less likely to show change than those with less serious offenses. Additionally, whether or not the participant is a first time prisoner or has a prior history of incarceration may influence how they view their social role within the prison and influence their attitude toward the programming. First time prisoners may be comparatively less connected to the social role of prisoner and be more open to influence and change. In sum, the current study expected that time served, time left, total length of sentence (used as a proxy for severity of sentence), and number of times incarcerated would influence and potentially moderate the effects of relationship education on couple, individual and parental functioning outcomes (H3). We expected that those with longer sentences and those who have been incarcerated multiple times would show less change than those who have shorter sentences and have been incarcerated fewer times. The effects of time left and time served were more exploratory in nature, as theory guides the expectation that both less time served and less time

left may be associated with greater change. We did not have enough empirical evidence to hypothesize one as more influential than the other.

Thus, the current study addressed the following hypotheses:

H1: RE will result in positive change on measures of couple, individual and parental functioning for a sample of incarcerated adults controlling for age, gender, ethnicity, and education level.

H2: Change after RE on measures of couple, individual and parental functioning will be moderated by differing demographic characteristics (relationship status, ethnicity, education level, age, and gender) for a sample of incarcerated adults, such that those currently in relationships will show more positive change on measures of individual and parental functioning, those who are married will show more positive change on measures of couple functioning, and those with lower levels of education will show more positive change.

H3: Change after RE on measures of couple, individual and parental functioning will be moderated by differing contextual variables (time served, time left, total length of sentence, and number of times incarcerated) for a sample of incarcerated adults, controlling for relationship status, ethnicity, education level, age, and gender, such that those with longer sentences and those who have been incarcerated multiple times will be less likely to show positive change.

Rationale for the current study is based on the need to examine what role relationship education plays in promoting positive change that may lead to successful reintegration into society and reduced recidivism rates. While the current study did not attempt to address recidivism rates at this time, we offer an initial step in growing the evidence that RE can have

positive effects for prisoners in areas that research indicates are associated with reduced recidivism (Berg & Huebner, 2011; Laub & Sampson, 1993) and in understanding the patterns of individual characteristics that may moderate program effects. By disentangling characteristics that may impact the success of such intervention programming with this population, we can begin to understand more about models of best practices. Results may inform policy in this area as prison programming and recidivism are important topics in this time of mass incarceration.

## **Method**

### **Sample and Procedure**

This research was approved by the Institutional Review Board and was conducted in accordance with ethical standards for voluntary participation, informed consent, and confidentiality. Participants in this study were recruited as part of a federally-funded healthy marriage and relationship education initiative. Individuals voluntarily signed up for the RE classes and did not receive incentives from the Department of Corrections or the research study. Individuals who participated in the RE programs attended classes using the Together We Can (TWC) curriculum (Shirer, et al., 2009) which consists of a minimum of 6 group education sessions which focus on building knowledge and skills associated with healthy couple and coparenting relationships. TWC is a research-based educational program designed for lower literacy populations and addresses core relationship skills for adults and can be used with both married and nonmarried individuals and couples. Lessons in the curriculum address positive coparenting relationships, stress and conflict management strategies, ongoing involvement of both parents, and healthy decisions about romantic and couple relationships. Prior to taking classes, participants completed a pre-program questionnaire. Post-program questionnaires were completed at the end of the six- to eight-week classes. Questionnaires consisted of approximately

160 items assessing their behaviors, experiences, beliefs, and attitudes regarding their individual functioning, relationships and family in addition to socio-demographic information. They took approximately 50 minutes for participants to complete and were read aloud to assist with any literacy issues. Respondents did not complete items that did not pertain to them (i.e., parenting items if they were not a parent; couple items if they were not in a couple relationship).

The sample for the current study is drawn from 187 incarcerated adults from five prison facilities across the state. The analytic sample was restricted to the adult participants who completed both a pre- and post-test (N=122). T-test analyses for all outcomes and continuous variables, and chi-square analyses for gender, ethnicity, and education level were utilized to determine whether significant differences existed between participants who completed only a pre-test and those who completed a pre- and post-test. A significant difference was found on pre-test reports of *prison-specific parent-child contact*, such that those who completed a pre-test only reported less contact with their children than those who completed a pre- and post-test. Additionally, a significant difference was found for number of times incarcerated, such that those who completed a pre-test only had been incarcerated fewer times than those who completed a pre- and post-test. Thus, the analytic group was distinct from the original group on only those two measures. While the attrition rate was relatively high (34%), it is to be expected when working with an incarcerated sample as there are many complexities (e.g., release, facility transfers, court dates) within the prison system that may interfere with program completion.

Because race was examined as a moderator and due to small numbers, ethnicities other than European American and African American were not used, resulting in a final analytic sample size of 111. Fifty-eight percent of the current sample identified as African American, and 42% as European American. The average age of participants was 37.04 (Median=37; Range 20

to 62). Gender composition was 67% male and 33% female. Participants were asked about their education. For the current sample, 15% did not complete high school, 38% completed high school/GED only, 20% completed some college, 25% completed a Technical or Associate's Degree, 2% completed four years of college and 0% had post college education. Although this is a relatively large proportion that have a high school degree or higher for a prison sample, research shows that those with higher education levels are more likely to select to participate in educational classes (Jackson & Innes, 2000). Eighty-four percent of participants reported being a parent and 48% reported currently being in a couple relationship. Of those in a couple relationship, 46% reported being married and 54% reported being in a nonmarried committed relationship. Average length of time served was 5.67 years (Median=3; Range 0 to 30) and the average length of time left was 11.05 years (Median=3; Range 0 to 117). Average length of total sentence was 16.12 years (Median=8; Range 0 to 120). Average number of times incarcerated was 2.48 (Median=2; Range 1 to 6).

## **Measures**

**Demographic variables.** Participants completed items on the survey indicating their age, gender and ethnic background. Age was coded as a continuous variable and represents the actual age in years reported. Because age was included as a moderating variable, age was recoded to reflect a median split where 1 indicated 38 or older and 0 indicated 37 or younger. Gender was dummy coded with 1 indicating females and 0 indicating males. Ethnic background was also dummy coded, with 1 indicating African American and 0 indicating European American. Educational level of the participant was obtained as a proxy for socio-economic status. Participants were asked to circle one of the following in regards to their education level: less than high school, completed high school, some college, 2 year college/Technical school degree, 4

year college degree, or post college degree (e.g., Master's, Ph.D., M.D., Ed.D.). Responses were coded as a continuous variable from 1 to 7; higher values indicate a higher level of education. Given the small number of participants in some categories, education level was recoded where 1 indicated less than high school, 2 indicated high school or GED, 3 indicated some college, and 4 indicated a two or four year degree. Relationship status was determined using one item (i.e., "Are you currently in a couple/romantic relationship status?") and responses were dummy coded, with 1 indicating yes and 0 indicating no. Participants were also asked to indicate their marital status by circling one of the following: single, committed relationship (not married), married, separated, divorced, or widowed. From that item, marital status for those who were currently in a relationship was created, with 1 indicating married and 0 indicating nomarried relationship. Parent status was determined using one item (i.e., "Are you a parent, foster parent, or stepparent?") and responses were dummy coded, with 1 indicating yes and 0 indicating no. Time served was determined using one item (i.e., "How long have you currently been incarcerated?"), as was time left (i.e., "How long do you have left on your current sentence?"), and number of times incarcerated ("How many times, including your current sentence, have you been incarcerated?") Total sentence length was created by combining time served and time left and was used as a proxy for severity of sentence. Because they were used as moderators, time served, time left, total sentence length and number of times incarcerated were categorized. For time served, 1 indicated on year or less, 2 indicated two to six year, and 3 indicated seven or more years. For time left, 1 indicated on year or less, 2 indicated two to 11 years, and 3 indicated 12 or more years. For total length of sentence, 1 indicated one to two years, 2 indicated three to seven years, 3 indicated eight to 19 years, and 4 indicated 20 or more years. For number of times

incarcerated, 1 indicated first time incarcerated, 2 indicated second time incarcerated, and 3 indicated that the participant had been incarcerated three or more times.

**Couple functioning domain.** *Negative interaction* was assessed using five items (adapted from Stanley, Markman, & Whitton, 2002). Questions included such items as “I shout/yell at my partner” and “When we have problems, it is like we are on opposite teams.” Participants responded using a five-point Likert scale, from 1 (*never*) to 5 (*all of the time*). The Cronbach’s alpha reliability for the current study was  $\alpha = .80$ . *Divorce/separation proneness* was measured using three items (Amato & DeBoer, 2001; from Booth, Johnson, & Edwards, 1983). Questions included “Has the thought of divorce or separation ever crossed your mind” and “Have you/your partner ever seriously suggested the idea of divorce or separation?” Participants responded using a three-point Likert scale, 1 (*never*) to 3 (*yes, recently*). The Cronbach’s alpha reliability for the current study was  $\alpha = .75$ .

**Individual functioning domain.** *Individual empowerment* was measured using six items (Shirer & Adler-Baeder, 2005). Questions included such items as “I express myself clearly and without fear” and “I have the power to manage challenges in my life.” Participants responded using a five-point Likert scale, from 1 (*I have not thought about this*) to 5 (*I do this on a regular basis*). The Cronbach’s alpha reliability for the current study was  $\alpha = .68$ . *Conflict management* was measured using three items (from Buhrmester, Furman, Wittenberg, & Reis, 1988). Questions included items such as, “I am able to put bitter feelings aside when having a fight” and “In a fight, I am able to see the other person’s point of view and really understand his/her point.” Participants responded using a five-point Likert scale, from 1 (*not at all like me*) to 5 (*very much like me*). The Cronbach’s alpha reliability for the current study was  $\alpha = .74$ . *Depressive symptoms* were measured using five items (taken from the Center for Epidemiological Studies –

Depression Scale; Radloff, 1977). Questions included such items as “I felt depressed” and “I felt sad.” Participants responded using a four-point Likert scale, from 0 (*none*) to 3 (*3+ times*). The Cronbach’s alpha reliability for the current study was  $\alpha = .81$ .

**Parental functioning domain.** *Parenting efficacy* was measured using three items (Dumka et al., 1996). Questions included such items as “I feel sure of myself as a parent” and “I know things about being a parent that would be helpful to other parents.” Participants responded using a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach’s alpha reliability for the current study was  $\alpha = .68$ . *Prison-specific parenting stress: visitation* was measured using six items (from Houck & Loper, 2002). Questions included such items as “I am unable to have any effect on my child’s life from prison” and “It is upsetting for me to see my child during visitation.” Participants responded using a five-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach’s alpha reliability for the current study was  $\alpha = .81$ . *Prison-specific parent-child contact* was measured using four items (from Houck & Loper, 2002). Questions included such items as “During the last month, I have written to my child and/or sent messages to my child through relatives or caretakers” and “During the last month, I have talked with my child on the telephone.” Participants responded using a five-point Likert scale, from 1 (*every day*) to 5 (*no such contact*). The Cronbach’s alpha reliability for the current study was  $\alpha = .72$ .

### **Analytic Strategy**

In order to examine whether RE results in positive change on measures of couple, individual and parental functioning, controlling for age, ethnicity and SES (H1), the current study examined differences in changes from pre-test to post-test using repeated measures analysis of covariance (RMANCOVA) using SPSS. RMANCOVA was also employed to

examine the interaction effects of Time X demographic variables (relationship status, ethnicity, education level, age, and gender) (H2) and Time X contextual variables (time served, time left, total length of sentence, and number of times incarcerated) (H3). Because we were interested in the unique effect of each potential interaction, the demographic and contextual variables were entered separately for each outcome, controlling for relationship status, ethnicity, education level, age, and gender, except when testing for one of these as a moderator. All possible interaction effects were conducted; however, due to space limitations only the significant interaction effects are emphasized and presented in the summary tables (Tables 4-5).

## **Results**

### **Preliminary Analyses**

Prior to testing specific hypothesis, initial descriptive statistics for the outcomes were computed and assessed and are presented in Table 1. Preliminary assumption testing was also conducted to check for normal distribution, skewness, kurtosis, independence, normality, and sphericity/equality in variance, reliability and homogeneity. Assumptions were supported for all analyses. For each hypothesis or research question, the inclusion of covariates (relationship status, ethnicity, education level, age, and gender) was guided by the relationship between covariates and the outcomes, which was determined using the Pearson Correlation procedure (Table 2).

### **Hypothesis 1: Changes from Pre-Program to Post-Program**

It was expected that RE would result in positive change on measures of couple, individual and parental functioning for a sample of incarcerated adults controlling for relationship status, age, gender, ethnicity, and education level. Repeated measures analysis of covariance (RMANCOVA) was used to examine change from pre- to post-test on all measures. Results are presented in Table 3 for all outcomes. Overall our hypothesis was supported; the results indicated significant change in all three domains (couple, individual, and parenting

functioning), on six of the eight outcomes. Change approached significance on measures of *prison-specific parent-child contact*, and no change was seen on measures of *divorce/separation proneness*. The effect sizes in the current sample ranged from .16 to .49, with an average effect size of .33.

## **Hypothesis 2: Demographic Characteristics as Moderators**

It was expected that change after RE on measures of couple, individual and parental functioning would be moderated by differing demographic characteristics (relationship status, age, gender, ethnicity, and education level) for a sample of incarcerated adults, such that those in relationships would show more change than those not in relationships on measures of individual and parental functioning, those married compared to those in a nonmarried couple relationship would show more change on measures of couple functioning, and those with lower levels of education will show more positive change on all outcomes. . RMANCOVAs were conducted to test for interaction effects of the demographic variables by time with each of the eight outcomes. Significant interactions effects were found between only some of the moderators and outcomes; thus, our hypothesis was only partially supported.

**Relationship status.** As expected, analyses revealed a significant time X relationship status interaction effect on *parenting efficacy*,  $F(1, 74) = 5.80, p < .05$ , partial eta squared = .07. Univariate models and independent t-tests revealed that those who were currently in a relationship showed significant change in the desired direction from pre- to post-test, but those who were not currently in a relationship did not show change. Pre-test scores were similar for both groups, but those in a relationship reported significantly higher parenting efficacy at post-test than those who were not current in a relationship (Figure 1). Contrary to expectation, analyses revealed no time X marital status interaction effects for the couple functioning

outcomes (negative interactions and divorce/separation proneness), but significant differences were found in the between-subjects analysis for *divorce/separation proneness*,  $F(2, 102) = 5.01$ ,  $p < .01$ . Univariate tests revealed that those who were married reported higher levels of proneness to divorce or separation than those who were in a nonmarried relationship at pre-test, and this difference was marginally significant at post-test.

**Ethnicity.** Contrary to our hypothesis, analyses revealed no significant time X ethnicity interaction effects on any of the outcome measures, however, significant differences were found in the between-subjects analysis on measures of *conflict management skills*,  $F(1, 104) = 10.11$ ,  $p < .01$ , *parenting efficacy*,  $F(1, 80) = 9.16$ ,  $p < .01$ , and *prison-specific parent-child contact*,  $F(1, 76) = 5.67$ ,  $p < .05$ . Specifically, univariate models revealed that African Americans reported significantly higher levels of functioning on all three outcomes than European Americans at both time points.

**Education level.** As expected, analyses revealed a significant time X education level interaction effect on *prison-specific parenting stress: visitation*,  $F(3, 68) = 4.13$ ,  $p < .01$ , partial eta squared = .15. Univariate models and individual t-tests revealed that those without a high school degree showed significant change in the desired direction in stress related to visitation from pre- to post-test, while those in all other education levels did not report change from pre- to post-test. Post hoc analyses determined that at pre-test, those without a high school degree showed marginally higher levels of stress, but there were no differences between groups seen at post-test (Figure 2).

**Age.** Analyses revealed significant time X age interaction effects on measures of *conflict management skills*,  $F(1, 102) = 4.12$ ,  $p < .05$ , partial eta squared = .04 and *depressive symptoms*,  $F(1, 108) = 4.10$ ,  $p < .05$ , partial eta squared = .04. Univariate models indicated that although

the two age groups reported similar levels of conflict management skills at pre-test, younger participants (age 37 and younger) reported significantly higher levels of conflict management skills at post-test than did older participants (age 38 and older) (Figure 3). Additionally, younger participants showed significant decreases in levels of depressive symptoms over time, while older participants reported lower levels of depressive symptoms at pre-test and showed no significant change (Figure 4).

**Gender.** Analyses also revealed significant time X gender interaction effects on measures of *individual empowerment*,  $F(1, 98) = 6.51, p < .01$ , partial eta squared = .06 and *depressive symptoms*,  $F(1, 101) = 4.33, p < .05$ , partial eta squared = .04. Univariate models and individual t-tests indicated that males reported a significant increase in individual empowerment (Figure 5) and a significant decrease in depressive symptoms (Figure 6) over time, while females did not report change from pre- to post-test. Additionally, for *prison-specific parenting stress: visitation*,  $F(1, 74) = 6.65, p < .01$ , significant differences were found in the between-subjects analysis. Specifically, univariate tests revealed that females reported significantly less parenting stress than males. This finding held true for both the pre- and the post-test scores.

### **Hypothesis 3: Contextual Characteristics as Moderators**

It was expected that change after RE on measures of couple, individual and parental functioning would be moderated by differing contextual variables (time served, time left, total length of sentence, and number of times incarcerated) for a sample of incarcerated adults, controlling for relationship status, age, gender, ethnicity, and education level, such that those with longer sentences and those who have been incarcerated multiple times will be less likely to show positive change. RMANCOVAs were conducted to test for interaction effects of the contextual variables by time with each of the eight outcomes. Significant interactions effects

were found between only a few of the moderators and outcomes; thus, our hypothesis was only partially supported.

**Time served.** Analyses revealed no significant time X time served interaction effects on any of the outcomes examined, but significant differences were found in the between-subjects analysis for *depressive symptoms*,  $F(2, 102) = 5.01, p < .01$ . Post hoc analyses revealed that those who had served in between two to six years reported significantly higher depressive symptoms than those who had served a year or less and those who had served seven or more years at pre-test. At post-test, those who had served two to six years reported significantly higher depressive symptoms than those who had served seven or more years, but no significant differences were found between those who served two to six years and those who had served a year or less.

**Time left.** Analyses revealed a significant time X time left interaction effect on *conflict management skills*,  $F(2, 84) = 3.09, p = .08$ , partial eta squared = .07. Univariate models and independent t-tests revealed those who had between two and 11 years left reported an increase in conflict management skills from pre- to post-test, while those who had one year or less left and those who had 12 or more years left did not show change from pre- to post-test (Figure 7). Additionally, significant differences were found in the between-subjects analysis on measures of *negative interactions*,  $F(2, 49) = 4.80, p < .01$ , partial eta squared = .18, and *divorce/separation proneness*,  $F(2, 49) = 3.18, p < .05$ , partial eta squared = .12. Post hoc analyses revealed that on pre-test reports of negative interactions, those with 12 or more years left reported significantly lower levels of negative interactions than those who had one year or less left; the same trend was seen at post-test. On indicators of divorce/separation proneness, post hoc analyses revealed no between-group differences at pre-test. However, at post-test those with 12 or more years left

reported marginally lower levels of divorce/separation proneness than those who had one year or less left, and those who had two to 11 years left.

**Total length of sentence.** Analyses revealed a significant time X total length of sentence interaction effect on *parenting efficacy*,  $F(3, 63) = 2.79, p < .05$ , partial eta squared = .12.

Contrary to our hypothesis, univariate and individual t-tests revealed that those with longer total sentence lengths (both eight to 19 years and 20+ years) reported a significant increase in parenting efficacy from pre- to post-test, while those who had shorter total sentence lengths (both one to two years and three to seven) did not show change from pre- to post-test (Figure 8). Post hoc analyses indicated that at pre-test, all groups indicated similar levels of parenting efficacy. At post-test, those with eight to 19 years reported significantly higher levels of parenting efficacy than those with three to seven years.

**Number of times incarcerated.** Contrary to expectations, analyses revealed no significant time X number of times incarcerated interaction effects on any of the outcomes examined, but significant differences were found in the between-subjects analysis for *depressive symptoms*,  $F(2, 103) = 3.16, p < .05$ , partial eta squared = .06, and approached significance for *negative interactions*,  $F(2, 56) = 2.72, p < .10$ , partial eta squared = .09. Post hoc analyses revealed that individuals reported similar pre-test levels of depressive symptoms regardless of number of times incarcerated, but at post-test, those who were incarcerated for the first time reported significantly lower levels of depressive symptoms than those who had been incarcerated three or more times. On measures of negative interactions, those who were incarcerated for the first time reported significantly lower levels of negative interactions at pre-test than those who had been incarcerated three or more times. At post-test, those who were incarcerated for the first

time and those who were incarcerated for the second time reported significantly lower levels of negative interactions than those who had been incarcerated three or more times.

### **Discussion**

As relationship education (RE) programs become more widely implemented, it is important to measure and document the influence of RE on diverse audiences. Researchers have been challenged to examine the impact of RE with more disadvantaged groups, and while we are seeing an increase in this area (Hawkins & Fackrell, 2010), only three studies have examined the influence of RE with an incarcerated sample, yet there are indications that the offering of these programs in prisons has grown significantly. These previous studies were limited to individuals who were currently in couple relationships and did not examine the influence of contextual factors on pre- to post-test change. As such, the aim of the current study was to expand the existing literature by examining the impact of RE on a broader sample of incarcerated adults, regardless of whether or not they were currently in a relationship, and to expand our understanding of its influence on outcomes beyond the couple domain by also including measures of individual and parental functioning, based on theory and research linking these domains. Additionally, the current study utilized a life course perspective and examined whether demographic and contextual variables influenced baseline and post-program levels of functioning and change patterns in each domain.

As hypothesized, the current study found improvement in all three domains of functioning. Specifically, results indicated change on six of the eight outcome variables examined. Although change only approached significance on measures of prison-specific parent-child contact, and there was not significant change on measures of divorce/separation proneness, the sub-samples of individuals who were parents ( $n=82$ ), and of individuals currently in a

relationship was small ( $n=61$ ). We observed a trend of average change in the desired direction for parent-child contact and divorce/separation proneness scores that may emerge as significant, given a larger sample size.

Due to complicated policies regarding collection of these data within prisons, the current study could not randomly assign prisoners to the RE program and test for treatment effect. As such, we cannot say definitively that these patterns of change were solely due to program participation. We can, however, note the calculated effect sizes (appropriate formulas for paired comparisons were used). The effect sizes in the current sample ranged from .16 to .49, and most effect sizes were in the small-to-moderate range (Cohen, 1977). The largest effect sizes were seen on measures of individual functioning (i.e., individual empowerment, .49; depressive symptoms, .46); average effect size across all domains was .33. For educational programs with a nonclinical sample, an effect size greater than or equal to .25 is considered a “practical” difference indicating a level of meaningful change for program effect (Wolf, 1986). These are consistent with those reported in a recent meta-analysis which examined the impact of marriage education programs (Hawkins et al., 2008) and consistent with those found in the Einhorn et al. (2008) prison study’s report of effect sizes ranging from .19 to .81. Additionally, recent evidence suggests that the patterns of outcomes are relatively similar for RE studies with and without a control group (Blanchard et al., 2009). Thus, we can have some confidence that these documented changes over a short period of time are due to program participation. Plans are currently being made to explore methods for collecting data from a comparison sample for future RE evaluation work with incarcerated populations.

As previously noted, the primary focus of the three previous studies focusing on RE with an incarcerated population was to examine changes from pre-program to post-program solely in

couple functioning or to assess the general quality of the program and the leaders. The findings of the current study extend these efforts and suggest that the impact of RE may not be limited to the couple domain, but may extend beyond the couple relationship to contribute to better individual and parental functioning as well, particularly for some sub populations of RE participants. Because of the current context of the participants, enhancements to feelings of individual empowerment and efficacy and reductions in levels of depressive symptoms are especially meaningful. Prisoners often relate negative feelings associated with disempowerment and lack of control over many dimensions of their daily life (de Viggiani, 2007) and these feelings, along with depressive symptoms may contribute to involvement in problematic behaviors and situations in the prison either directly or through their connection to reduced quality of family relationships and social supports. Enhancements in the individual domain, thus, may be linked not only to enhanced positive connections outside the prison, but within the prison as well

Our findings also validate the assumption that although the program content was primarily focused on adult relationships (i.e., couple or co-parent), the potential impact of RE is not limited to these relationships. The Together We Can (TWC) curriculum (Shirer, et al., 2009) focuses on building knowledge and skills associated with healthy relationships, but these skills are transferrable. These skills may likely be helpful within other adult relationships (e.g., peers and work relationships) that are necessary for creating and maintaining social ties, finding employment, and successful reintegration into society (e.g., Berg & Huebner, 2011; Huffcutt et al., 2001). Furthermore, evidence from basic research suggests that marital or couple relationships affect parenting behaviors, which then influences child outcomes (e.g., Grych & Fincham, 2001; Zimet & Jacob, 2001). There is also evidence from applied research to suggest

that including couple skills training with parenting skills training may result in more positive parenting practices (e.g., Cowan et al., 2009). Recently, a few RE evaluations have also modeled this spillover effect and found that changes in the couple domain are associated with change in the parenting domain (Adler-Baeder et al., 2013), and that enhancing the couple or coparenting relationship is beneficial to child outcomes (Kirkland et al., 2012). The current study adds to this evidence with a different population. Since it is estimated that more than 50% of incarcerated adults are parents of minor children (Travis, McBride, & Solomon, 2005), it is important to assess the impact of RE on parental functioning within an incarcerated population as well. Specifically related to parenting, the findings of this study indicate that RE may be a useful program for building skills that will improve parenting efficacy, reduce some parental stress and encourage increased parent-child contact during incarceration.

From a theoretical perspective, we know that learning new skills may serve as a catalyst for positive change (Elder, 1985). For those who are incarcerated, this may depend on the ability of those incarcerated to use these skills to build and maintain social supports (Bales & Mears, 2008; Laub & Sampson, 1993). Since it is believed that family members are best able to help prisoners build social ties after release (Matsueda & Heimer, 1997), it may be that learning to use these skills in multiple domains of functioning will not only improve the quality of relationships within the family, but also help overcome some of the barriers to successful reintegration into society.

### **Examining Moderators of Change**

A strong recommendation coming out of the RE literature is that research must move beyond the initial “does it work?” evaluation question and begin assessing diversity and identifying moderators of program effectiveness based on individual characteristics as well as

external contexts (Wadsworth & Markman, 2012). This is particularly important for disadvantaged samples, as concerns have been raised about using RE programs that were initially examined with samples that were primarily white and middle- to upper-class with more diverse and disadvantaged groups (Markman, Stanley, & Kline, 2003). As such, we examined whether change was influenced by a variety of variables. As there have been several RE studies to examine the influence of demographic variables (e.g., Hawkins et al., 2008; Rauer, et al., 2014), we first examined the influence of relationship status, age, gender, ethnicity, and education level.

It was expected that those currently in relationships would show more positive change on measures of individual and parental functioning than those who are not currently in a relationship, and those who are married would show more positive change on measures of couple functioning than those not married. In support of our hypothesis, analyses revealed that those currently in a relationship reported significant gains in parenting efficacy from pre- to post-test and those who were not currently in a relationship did not show change. This may mean that participants not currently in a couple relationship may benefit from additional emphasis and support on methods for engaging with their children in an effort to enhance their feelings of parental efficacy. Overall, however, relationship status and marital status did not influence the amount of change in the majority of outcome areas assessed. Although contrary to our expectations, this finding suggests that RE can be offered to a broader population of incarcerated men and women and will likely result in multiple benefits, regardless of participants' relationship status.

It was also expected based on previous work documenting enhanced relationship benefits following RE participation for those with lower socio-economic status (Adler-Baeder, et al., 2010; Devaney & Dion, 2010; Wood et al., 2010) that those with less education would show

greater change on outcomes than those with more education. This notion was supported only in regards to prison-specific parenting stress associated with visitation. On all other measures, similar benefits were seen regardless of education level. Thus, it could be that for an incarcerated sample, education level may not be as influential as it is in community samples.

Contrary to our hypothesis (and consistent with Adler-Bader et al., 2010; Einhorn et al., 2008), no group differences were seen based on ethnicity. As previous research indicates that African Americans are more likely to benefit from RE than European Americans (e.g., Devaney & Dion, 2010; Wood et al., 2010), and the current sample was predominantly African American, it may be that the European American subsample was too small to pick up a moderation effect. As such, future work should continue to examine the moderation effect of ethnicity in larger, diverse samples and importantly, to explore what may explain any differences found.

In regards to age, it appeared that those 37 and younger showed significant change compared to those 38 and older on measures of conflict management skills and depressive symptoms. As there has not been much research examining age as a potential moderator of RE, it is unclear as to why this might be. Perhaps, from a developmental perspective, those who are younger may not be as committed to the social role of a prisoner, and are more malleable/receptive to the information provided through RE. Another possibility is that younger participants may feel more socially connected to those outside the prison. Wolff and colleagues (2012) found that younger inmate populations reported feeling that they had higher levels of resources available than older inmate populations. Thus, for younger participants, it may be that social supports are stronger, which may further enhance their motivation for gaining new information and skills. Future work investigating age differences and perceived levels of support may be warranted.

For gender, males reported change on measures of individual empowerment and depressive symptoms while females did not. The significant gender interactions are also inconsistent with Einhorn et al. (2008) and others who found no significant interaction effects for gender; however, other studies examining gender tend to focus on couple functioning rather than other domains of functioning. One possible explanation for this finding is the differences seen in male and female facilities. For example, research indicates that females are provided fewer educational opportunities than males while incarcerated (Rose, 2004). Research also indicates that education is associated with empowerment (Wilson & Anderson, 1997). It could be that females are less likely to show change on measures of empowerment because they are less likely to believe they will have additional options outside of the RE class. Additionally, research notes that depressive symptoms are far more common among incarcerated females than males (James & Glaze, 2006). Thus, it may be that programs targeting female prisoners should more specifically emphasize skills associated with building empowerment and overcoming depression. Additional support services, including mental health services, are also recommended.

While the demographic variables are one aspect of individual characteristics that may influence participants' experiences in RE, our study also considered the unique contextual variables experienced by an incarcerated population. A life course approach includes the consideration of duration; as duration increases, individuals are likely to become more committed to the social role (Becker, 1961). Thus, whether the intervention was completed at the beginning or end of the sentence was important to consider. Additionally, empirical and theoretical evidence also suggest that total length of time (as a proxy for severity of sentence) and the number of times incarcerated may impact an individual's motivation (Jackson & Innes, 2000) and how one perceives his or her social role and the number of social supports available to

the prisoner (e.g., Laub & Sampson, 1993). It was expected that those with longer sentences and those who had been incarcerated more times would show less change than those with shorter sentences and those who had been incarcerated fewer times. These types of questions also can inform policy regarding the timing for offering RE programs in prisons.

While group differences were found on measures of parenting efficacy for total length of sentence, the changes were not in the expected direction. Instead of those with shorter sentences showing more change, it was those with the longest total sentence lengths (i.e., likely to indicate a more severe criminal offense) who showed greater change in parenting efficacy than those with shorter sentences. One possible explanation of this is that those with longer sentences may have more difficulty finding ways to stay connected with their children and have an active parenting role, given that they will be incarcerated for longer portions of the child's life. Thus, even though those with longer sentences may be less motivated to begin with, they may have more to gain from and be more encouraged by the knowledge provided through RE.

In addition, although we expected that those who had been incarcerated more times would show less change, no group differences were found based on the number of times incarcerated, thus benefits were seen for both first time incarcerated and repeat incarcerated populations. Additionally, no group differences were found by time served. Group differences were found based on time left for only one outcome; those who had between two and 11 years left indicated the lowest pre-test scores but the highest post-test scores on measures of conflict management skills. Although these findings do not offer much support for the expectation that duration in role matters in predicting the level of improvement following RE participation, perhaps they offer insight into the role of significant experiences as turning points. That is, consistent with a life course approach, education itself can provide an opportunity for a turning

point in trajectories including incarceration, regardless of duration in the role. Perhaps those who choose to engage in the education program are benefitting similarly – for the most part – regardless of these contextual variables because they see this as an opportunity to learn new skills and strengthen their social ties outside of prison. Future work focusing on the impact of RE over longer periods of time that include post-release, and on processes of change (see Rauer, et al., 2014) will shed light on the impact of RE as a turning point for offenders.

The examination of these individual contextual variables have potential implications for policy as they speak to the timing of intervention. While most funding and program opportunities tend to focus on the time just prior to release, our findings offer support for considering that education at any point during incarceration may positively influence functioning. Shamblen and colleagues (2013) argue that classes taught just after release have the benefit of skills being taught more proximally to when learned skills can be enacted. However, findings from this study would suggest that there is the potential for skills based training to be meaningful even while individuals are serving their time. It may be that providing individuals with skills and knowledge from the start of their incarceration might help individuals maintain social supports even while incarcerated, and thus maintain identification with social roles outside of prison, regardless of duration of sentence. Further research that considers timing and context is warranted.

### **Between-Subjects Effects**

Although not a primary focus of the study, it should be noted that several between-subject differences were evident. This has potential implications for delivery of RE programs as the between-subject findings indicate potential patterns of higher or lower levels of functioning for subgroups at baseline - and perhaps overtime, even when the amount of change may be similar. Because this is a novel study, we emphasize that specific differences were found

on a few measures rather than what these differences are. More studies are needed that examine levels of functioning based on both demographic and contextual variables within incarcerated populations before specific meaning and practical application for the between-subject differences can be derived. Currently, we have no way of knowing whether these baseline differences or differences over time are particular to the sample studied or whether they exist more broadly. It may be that information on baseline differences can serve to sensitize educators working with incarcerated samples with diverse demographic and contextual experiences by informing class logistics or curriculum taught. As Adler-Baeder and colleagues (2010) suggested following their examination of baseline differences based on demographic characteristics in a large, diverse sample of RE participants, increased evidence of heterogeneity may suggest the need to “group” participants based on demographic or contextual factors that are likely to influence both participant experience and outcomes. To our knowledge, ours is the first study to examine between-subject differences with an incarcerated population. Thus, future research should focus on the implications of these differences and what, if any, modifications may be needed in regards to RE programs for prison populations.

### **Limitations**

While this study contributes to the literature in many ways, there are also a number of limitations to be considered. One of the biggest limitations is the lack of a comparison group. As previously noted, however, the calculated effect sizes were well above the level of meaningful/practical differences for an educational program (i.e.,  $> .25$ ; Wolf, 1986). Because of their magnitude, we can have some confidence that the changes seen on measures of couple, individual and parental functioning are due to program participation. Furthermore, the current sample consisted of willing participants, and it should be noted that volunteer participants may

be biased to report enhanced functioning in the targeted areas (Festinger, 1957). Future plans are being made to include a comparison group in future studies. The comparison group will likely be a group taking a different type of education program rather than random assignment of willing participants due to the regulations and difficulties of obtaining and randomly assigned to control group in prison. In addition to a comparison group, future work will benefit from examining the impact of varying levels of programming (e.g., receiving materials rather than attending the class).

The overall sample size for the current study is relatively small, particularly when considering the measures of couple or parental functioning and examining the influence of categorical variables. Although the overall sample size was 169, the number of those who completed both a pre- and post-test was smaller ( $n=111$ ). Attrition is likely due to transfers to different facilities, release, court dates, or any number of other factors associated with the complex nature of the prison system. It is likely that with a larger sample and increased power we would see more pronounced effects. Still, our results are comparable to previous RE evaluation studies and participants are clearly receptive to the program, providing encouragement for continued work in this area.

Additionally, we provide only an initial assessment of change. Using only a pre/post survey design does not allow for the assessment of long-term benefits of the program. Since the post test was given only at the time of class completion (six to eight weeks after the start of class), we were not able to examine whether positive program effects remained, are enhanced, or decline over time. As the participants are still incarcerated at the time of the post-test, we were also unable to examine the impact of RE after release. Gathering this type of follow-up data in future research will be beneficial for informing policies regarding the offering of RE in prisons.

Furthermore, including additional contextual variables is important to consider. Rather than using length of sentence as a proxy for severity of sentence, future work examining severity of the crime as a moderator will provide a better understanding of the impact of sentence severity. Security level of the prison should also be considered. A minimum-security level prison may be more likely to offer education classes than a maximum-security prison, and individuals in lower security prisons may have more contact with social supports outside of prison as well. Uncovering these potential differentiating factors is important in developing our understanding of factors that promote positive change after RE participation.

A final limitation is the analytic plan used in the current study. Given the small sample overall and the small subsample of those in a couple relationship, we used a series of repeated measures ANOVAs to maximize the sample for each outcome. As such, the continuous variables used were categorized based on characteristics of the current sample. Future analyses with a larger sample can make use of concurrent tests of change in outcomes and moderation through the use of SEM. These procedures will provide a more robust assessment of comparative benefit and comparative influence of moderators.

### **Conclusions and Future Directions**

A life course perspective suggests that there is the potential for any specific experience or event – here, participation in a relationship education class - to result in a turning point by offering new information or skills that have the potential to alter an individual’s trajectory (e.g., Elder & Johnson, 2002). Offering RE in prisons has the long-term goal of providing incarcerated individuals the knowledge and skills to successfully reintegrate back into their families and society after release. Given the theoretical and empirical evidence that links strong relationships and social support to better adjustment outside of prison (e.g., Laub & Sampson, 1993; Mears et

al., 2012), and the evidence of change following participation in RE on couple, individual, and parental functioning seen in this study, it is important to continue to offer and examine the impact of RE with this population during and after incarceration.

Overall, this study adds to the literature in several ways. First, it contributes to the overall research on RE and provides an examination of RE with a predominantly minority and disadvantaged sample. Further, the current study expanded on the limited existing research on RE for prisoners by examining individual and parental functioning in addition to couple functioning, and by not limiting our sample to those who were currently in a relationship and attending with a partner. Additionally, and novel to the current study, we examined the influence of multiple demographic and contextual variables on changes seen from pre- to post-test.

Overall, we find both similarities and differences among program participants at start and on changes from pre- to post-test. For the majority of outcomes, the positive impact of the program emerged regardless of the demographic and contextual variables. This is important because it highlights the potential value of RE for incarcerated individuals regardless of individual differences, and provides evidence of positive changes for many key outcome areas for a broader population of male and female prisoners (i.e., single, as well as those in married and nonmarried couple relationships). Still, we encourage the continued use of a contextual lens when exploring the impact of RE to uncover possible distinct experiences within samples. For example, our findings that women did not benefit on two key outcomes in the individual functioning domain, while men did, the evidence that parents not in a couple relationship did not demonstrate enhanced parental efficacy, and that older participants did not improve their conflict management skills may be used to inform future research and practice. With larger, more diverse samples, we are likely to pick up larger and more meaningful distinctions in change patterns that

have clearer implications for program design and “best” practices. Efforts in future research to uncover processes of change (Rauer, et al., 2014); that is, the relationships between outcome variables over time, will also serve to better inform our theoretical and practice models for working with incarcerated populations.

The findings also have some practical and policy implications given that the majority of empirical research and funding sources tend to focus on re-entry programs (i.e., programs just prior to release) rather than educational programs over the course of incarceration (e.g., Berg & Huebner, 2011). If there is truly interest in using incarceration as a rehabilitation measure (Haney, 2001), then perhaps a focus on building knowledge and skills from the start of incarceration rather than at the end when prisoners are more likely to have become embedded in the social roles of the prison and social and familial ties may have been weakened. As noted on some of the outcomes, mid-sentence participants had more pronounced changes. Thus, mid-sentence may be a critical low point for incarcerated individuals and therefore a time when program implementation may be especially beneficial.

In addition to assessing the impact of RE on individuals who are incarcerated, it is important for future work also to examine the impact of RE on other family members as well and to assess their views of the influence of RE on the incarcerated family member. In our study the program was available only to the incarcerated family member and we are unable to access and collect data from partners or children outside of the facility. While it is valuable to assess the participants’ perceived impact of RE, multi-informant data gathering and dyadic data analysis is an important next step in this research to further validate the report of benefits. This, however, is likely to pose additional challenges (e.g., long distances, transportation, and cooperation of the correctional facility). In addition to accessing family members for data collection, it also would

be valuable to compare the impact of classes offered to individuals versus couples, and to assess the impact of these classes multiple members of the family – as well as on workplace relationships. And finally, because we assert that enhanced relational skills and knowledge may positively influence behaviors and relationships within the prison, it would be a valuable effort to document such outcome measures as well. This study represents our initial step and these follow-up design elements are planned for future research.

Evaluating RE with an incarcerated sample is beneficial to researchers, policy-makers and government agencies alike as it offers a potential avenue for improving the well-being of incarcerated adults and their relationships. While delinquency is thought to weaken social bonds and relationships over the life course (e.g., Thornberry, 1987), there is some evidence to suggest that the opposite is true as well. Thus, strengthening relationships and social bonds may contribute to a decrease in delinquency over the life course (e.g., Bales & Mears, 2008; Laub & Sampson, 1993; Mears et al., 2012). We know from previous research that strengthening relationships is a crucial component of successful reintegration and reduced recidivism, and as such, an important factor in whether or not a potential turning point leads to a positive or negative trajectory (e.g., Mears et al.). While most prison programs tend to focus on vocational skills, including relationship education (focusing on interpersonal skill building and enhanced individual and family life skills) may provide additional skills necessary for successful re-entry into families, as well as the workplace, and the community.

As a final point we note that from the qualitative comments we collected, we see that, most importantly, the participants have a strong desire to strengthen these family relationships and overall have responded very positively to the RE program. A 51-year old African American woman wrote: “Continue to bring this relationship program to prisoners because no other

program offers such insight as does this one.” And a 33-year old European American man wrote: “I have never been more excited about something besides going home and it has been better for me since I’ve been in this class. I have learned so much about myself as a person that even I was surprised, and for that I am thankful. I do hope and pray that the healthy relationship class will continue.” These responses combined with continued efforts to document positive program effects can serve to support policies that expand the offerings of these types of programs in prison facilities in an effort to provide a positive turning point that improves current and future quality of life at the individual and community levels.

Table 1.

*Descriptive Statistics for All Outcomes*

Scale	Descriptive Statistics						
	N	Min.	Max.	M	SD	Skewness	Kurtosis
<b>Couple Functioning</b>							
Neg. Interactions	66	1.00	3.60	2.01	.73	.44	-.59
Divorce/Separation Proneness	65	1.00	3.00	2.10	.74	-.16	-1.36
<b>Individual Functioning</b>							
Ind. Empower	109	1.00	5.00	3.84	.76	-.93	2.11
Conflict Management Skills	106	1.00	5.00	3.34	.94	.11	-.62
Depressive Symptoms	111	0.00	3.00	1.15	.76	.36	-.48
<b>Parental Functioning</b>							
Parenting Efficacy	89	1.33	5.00	4.00	.86	-.72	.05
Parenting Stress: Visitation	85	1.00	5.00	2.96	.98	.09	-.28
Parent-Child Contact	85	1.00	4.80	3.13	.92	-.22	-.59

Table 2.  
*Pearson Correlations for Covariates and Outcomes Sig. (2-tailed)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Neg. Interact	1.000	.586***	-.255*	-.331**	.222~	-.060	-.110	.116	na	.175	-.127	.016	-.101	.147
		.000	.039	.008	.073	.663	.438	.418		.251	.308	.900	.424	.268
2. Divorce/Sep. Proneness	.586***	1.000	-.260*	-.346**	.108	-.311*	.019	.267~	na	.286~	-.181	.024	-.025	-.047
	.000		.036	.006	.392	.021	.892	.058		.060	.150	.851	.845	.726
3. Ind Empower	-.255*	-.260*	1.000	.380***	-.151	.421***	-.174	-.229*	.176	na	.290**	-.074	-.180	-.086
	.039	.036		.000	.116	.000	.111	.036	.070		.002	.446	.061~	.388
4. Conflict Mgmt	-.331**	-.346**	.380***	1.000	-.189*	.262*	.023	-.275*	.181~	na	.199*	-.003	-.162*	-.121
	.008	.006	.000		.050	.016	.840	.014	.065		.041	.972	.050	.234
5. Depress	.222~	.108	-.151	-.189*	1.000	-.194~	.256*	.070	-.085	na	-.151	-.153	.062	.067
	.073	.392	.116	.050		.069	.018	.529	.382		.114	.110	.523	.503
6. Parenting Efficacy	-.060	-.311*	.421***	.262*	-.194~	1.000	-.321**	-.397***	.214*	na	.303**	-.129	.014	-.075
	.663	.021	.000	.016	.069		.003	.000	.048		.004	.232	.894	.504
7. Visitation Stress	-.110	.019	-.174	.023	.256*	-.321**	1.000	.263*	-.038	na	-.079	-.074	-.150	-.246*
	.438	.892	.111	.840	.018	.003		.016	.733		.473	.501	.173	.029
8. P-C Contact	.116	.267~	-.229*	-.275*	.070	-.397***	.263*	1.000	-.128	na	-.239*	.155	.181	-.100
	.418	.058	.036	.014	.529	.000	.016		.254		.029	.163	.102	.383
9. Relationship Status	na	na	.176	.181~	-.085	.214*	-.038	-.128	1.000	-.169	.065	.003	.015	-.013
			.070	.065	.382	.048	.733	.254		.256	.507	.977	.877	.900
10. Marital Status	.175	.286~	na	na	na	na	na	na	-.169	1.000	-.190	.218	.306*	.031
	.251	.060							.256		.186	.132	.033	.841
11. Ethnicity	-.127	-.181	.290**	.199*	-.151	.303**	-.079	-.239*	.065	-.190	1.000	-.103	-.145	-.089
	.308	.150	.002	.041	.114	.004	.473	.029	.507	.186		.286	.132	.370
12. Education Level	.016	.024	-.074	-.003	-.153	-.129	-.074	.155	.003	.218	-.103	1.000	.270**	-.161
	.900	.851	.446	.972	.110	.232	.501	.163	.977	.132	.286		.005	.106
13. Age	-.101	-.025	-.180	-.162*	.062	.014	-.150	.181	.015	.306*	-.145	.270**	1.000	-.042
	.424	.845	.061~	.050	.523	.894	.173	.102	.877	.033	.132	.005		.676
14. Gender	.147	-.047	-.086	-.121	.067	-.075	-.246*	-.100	-.013	.031	-.089	-.161	-.042	1.000
	.268	.726	.388	.234	.503	.504	.029	.383	.900	.841	.370	.106	.676	

Note. ~  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 3.

*Repeated Measures Analysis of Covariance Examining Changes from Pre- to Post-Assessment*

	Pre		Post		df	F	Cohen's d (Absolute Value)
	M	SD	M	SD			
<b>Couple Functioning</b>							
Negative Interactions <sup>α</sup>	2.16	0.80	2.03	0.73	61	4.32*	0.37
Divorce/Separation Proneness <sup>α</sup>	2.21	0.68	2.10	0.73	60	2.24	0.27
<b>Individual Functioning</b>							
Individual Empowerment	3.61	0.77	3.90	0.67	108	6.53**	0.49
Conflict Management Skills	3.31	1.05	3.42	0.98	105	6.67**	0.16
Depressive Symptoms <sup>α</sup>	1.14	0.76	0.91	0.67	110	11.37***	0.46
<b>Parental Functioning</b>							
Parenting Efficacy	3.81	0.82	3.97	0.90	81	3.91*	0.34
Parenting Stress: Visitation <sup>α</sup>	3.09	1.00	2.91	0.95	81	4.65*	0.33
Parent-Child Contact <sup>α</sup>	2.93	1.00	2.83	1.01	77	3.00~	0.26

α. Mean level scores decreased, indicating change in the desired direction.

~ $p \leq .10$  \* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$

Table 4.

*Summary of Significant Demographic Interaction Effects for Repeated Measures*

	Neg Interact (n=62) M(SE)	Divorce/Sep. Prone. (n=61) M(SE)	Ind Empow. (n=109) M(SE)	Con Mgmt (n=106) M(SE)	Depress (n=111) M (SE)	Parent Eff. (n=82) M(SE)	Visitation Stress (n=82) M(SE)	P-C Contact (n=78) M(SE)
<b>T X Rel. Status</b>								
Yes T1						3.81(.77)*		
Yes T2						4.14(.79)*		
No T1						3.77(.86)		
No T2						3.73(.97)		
Married T1								
Married T2								
Not Married T1								
Not Married T2								
<b>T X Eth</b>								
AA T1								
AA T2								
EA T1								
EA T2								
<b>T X Edu</b>								
< HS T1							3.71(.79)**	
< HS T2							2.82(.99)**	
HS T1							3.17(1.12)	
HS T2							3.04(1.07)	
Some College T1							2.66(.81)	
Some College T2							2.67(.98)	
College T1							2.91(.91)	
College T2							2.91(.74)	
<b>T X Age</b>								
Younger T1				3.31(1.03)*	1.25(.74)*			
Younger T2				3.59(1.04)*	.88(.58)*			
Older T1				3.32(1.10)	1.06(.77)			
Older T2				3.26(.91)	.96(.74)			
<b>T X Gender</b>								
Female T1			3.80(.76)		1.00(.78)			
Female T2			3.80(.79)		.99(.74)			
Male T1			3.51(.68)**		1.21(.75)*			
Male T2			3.92(.61)**		.89(.66)*			

$\sim p \leq .10$  \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 5.  
*Summary of Significant Contextual Interaction Effects for Repeated Measures*

	Neg Interact (n=62)	Divorce/Sep. Prone. (n=61)	Ind Emp (n=109)	Con. Mgmt (n=106)	Depress (n=111)	Parent Eff. (n=82)	Visitation Stress (n=82)	P-C Contact (n=78)
	M(SE)	M(SE)	M(SE)	M(SE)	M (SE)	M(SE)	M(SE)	M(SE)
<b>T X Time Served</b>								
≤1 T1								
≤1T2								
2 to 6 T1								
2 to 6 T2								
7+ T1								
7+ T2								
<b>T X Time Left</b>								
≤1 T1				3.40(1.07)				
≤1 T2				3.30(1.02)				
2 to 11 T1				3.16(1.04)*				
2 to 11 T2				3.55(1.00)*				
12+ T1				3.44(.90)				
12+ T2				3.44(.98)				
<b>T X Total Sent.</b>								
1 to 2 T1						4.18(.68)		
1 to 2 T2						4.13(.91)		
3 to 7 T1						3.68(.79)		
3 to 7 T2						3.68(1.08)		
8 to 19 T1						3.90(.81)*		
8 to 19 T2						4.33(.60)*		
20+ T1						3.40(.98)*		
20+ T2						3.82(.89)*		
<b>T X Number Inc.</b>								
1 T1								
1 T2								
2 T1								
2 T2								
3+ T1								
3+ T2								

$\sim p \leq .10$  \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Figure 1.

*Time X Relationship Status Interaction Effect on Parenting Efficacy, Controlling for Ethnicity*

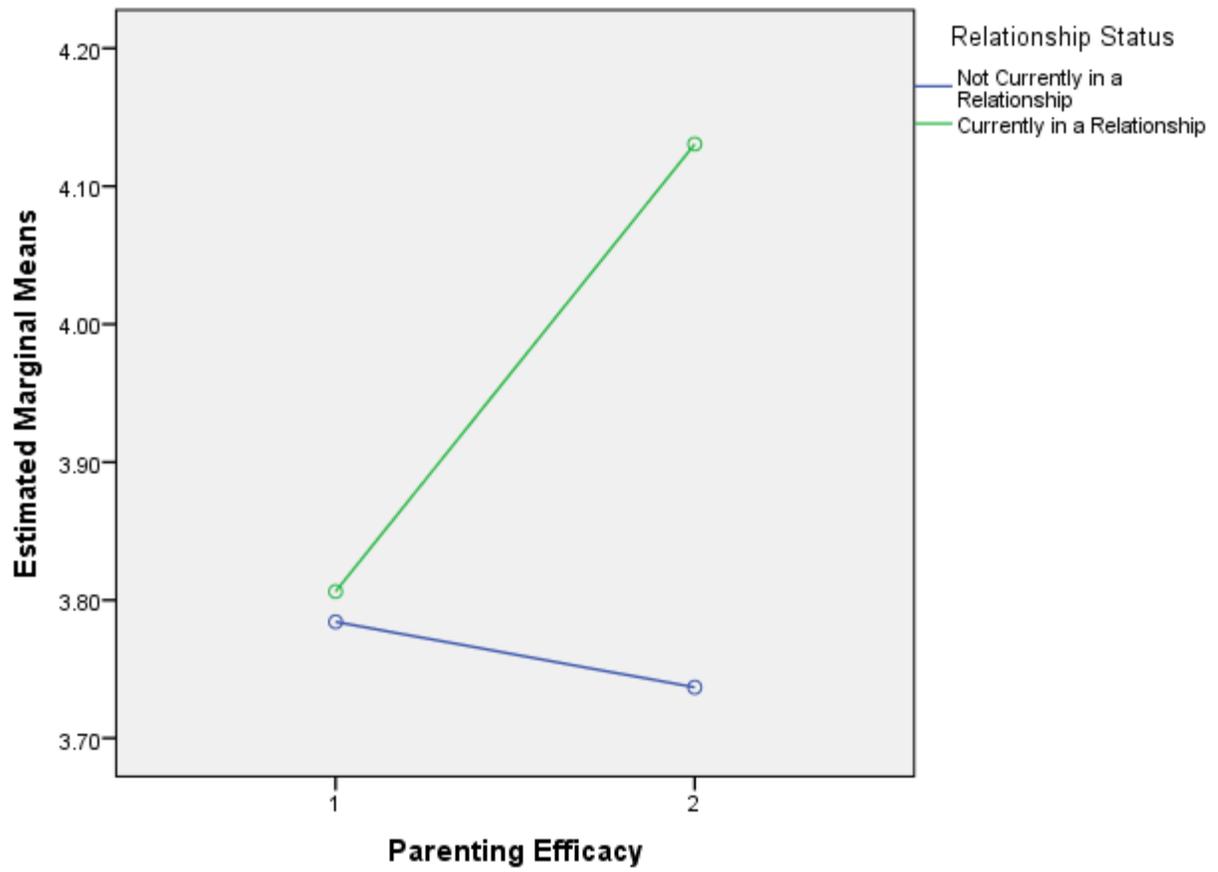


Figure 2.

*Time X Education Level Interaction Effect on Prison-Specific Parenting Stress: Visitation, Controlling for Gender*

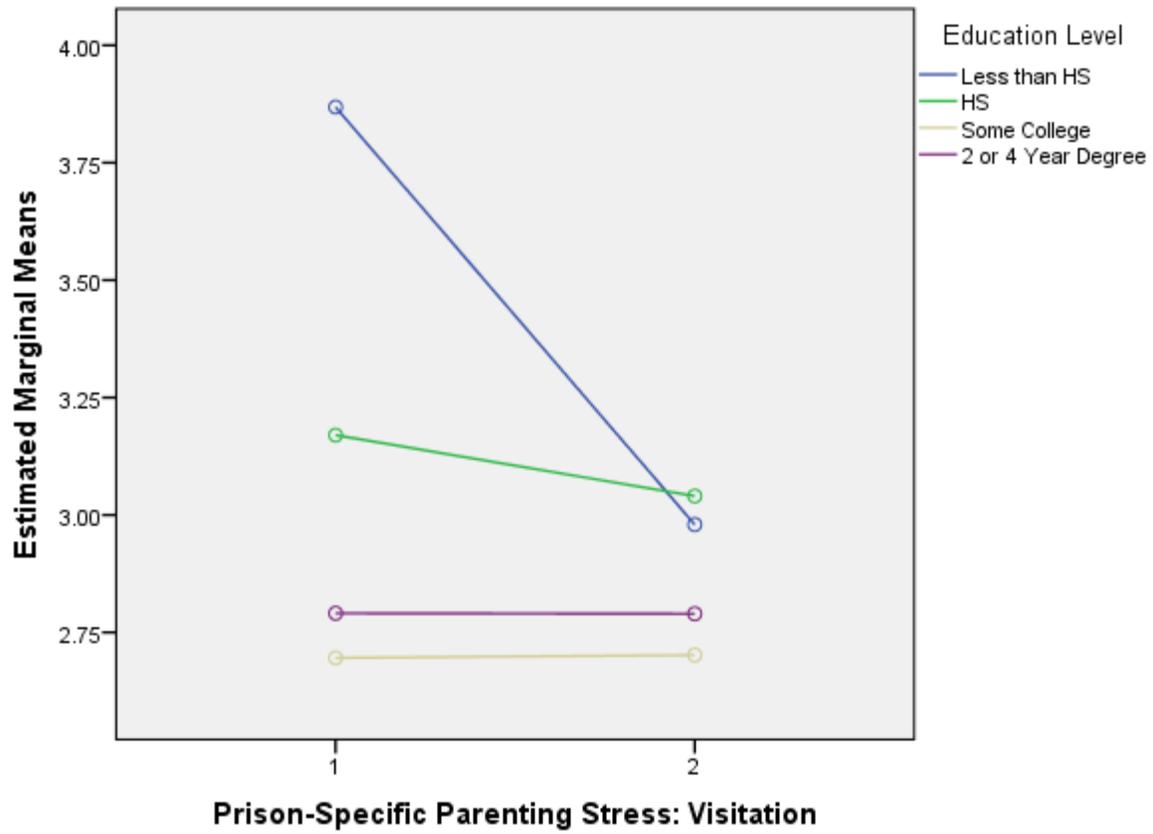


Figure 3.

*Time X Age Interaction Effect on Conflict Management Skills, Controlling for Ethnicity and Age*

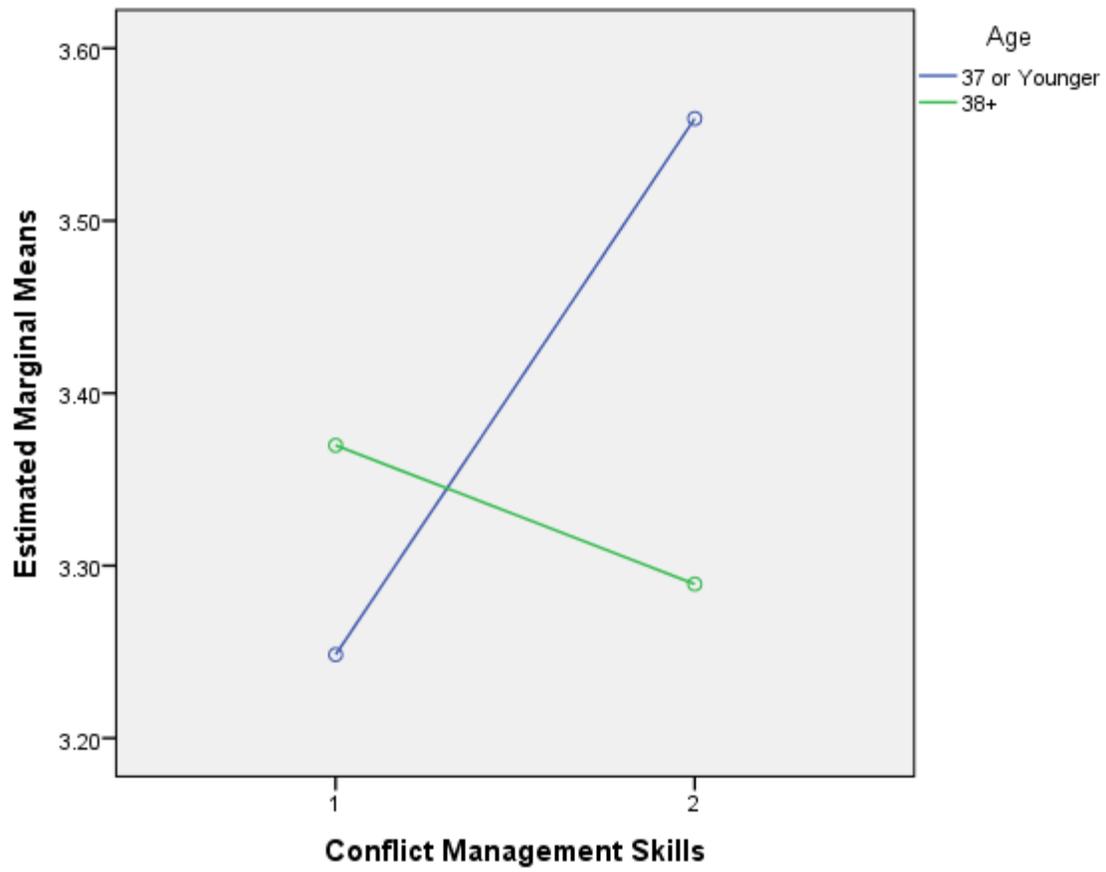


Figure 4.

*Time X Age Interaction Effect on Depressive Symptoms*

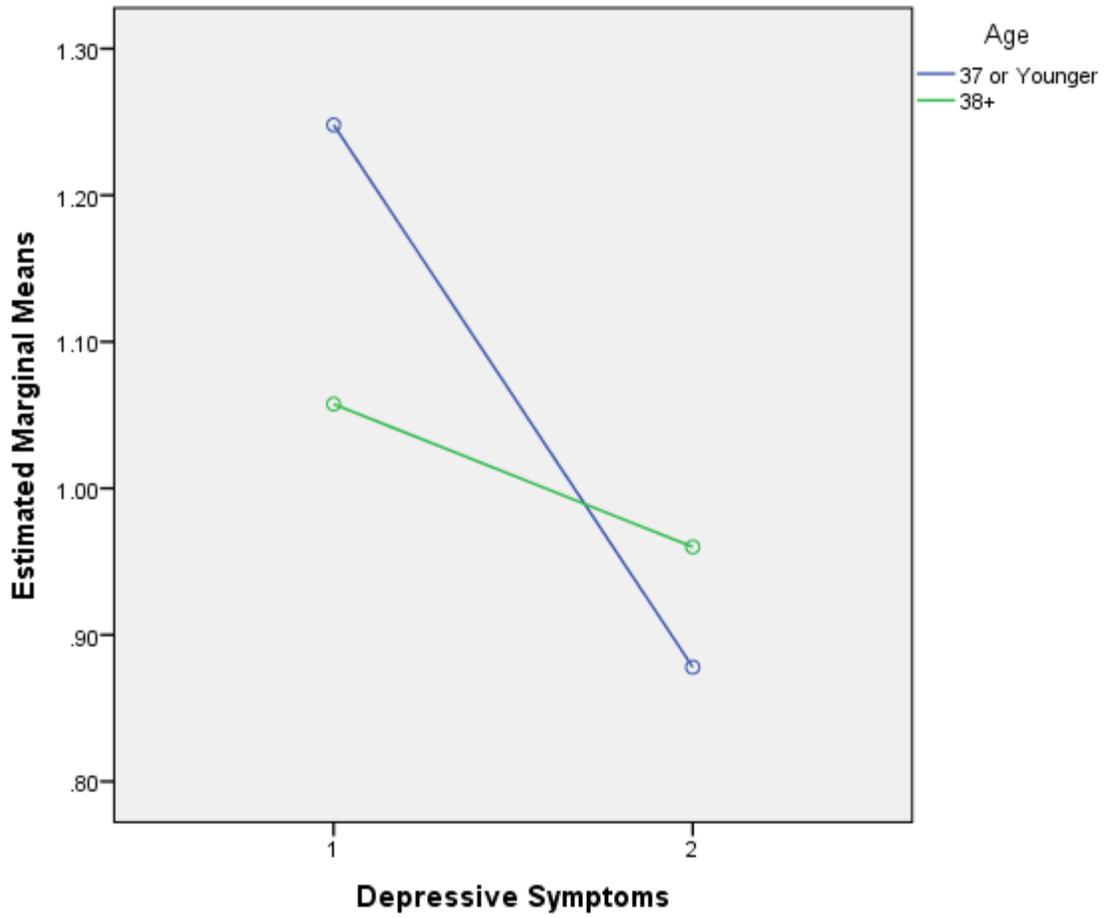


Figure 5.

*Time X Gender Interaction Effect on Individual Empowerment, Controlling for Ethnicity*

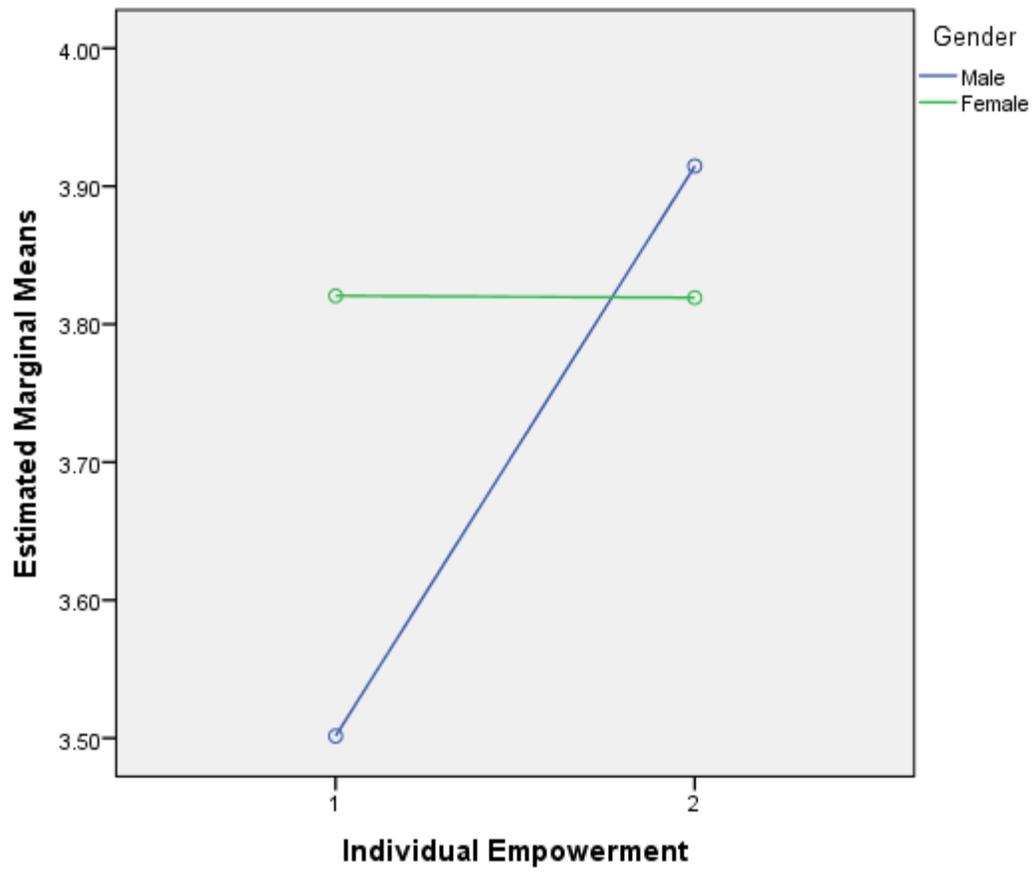


Figure 6.

*Time X Gender Interaction Effect on Depressive Symptoms*

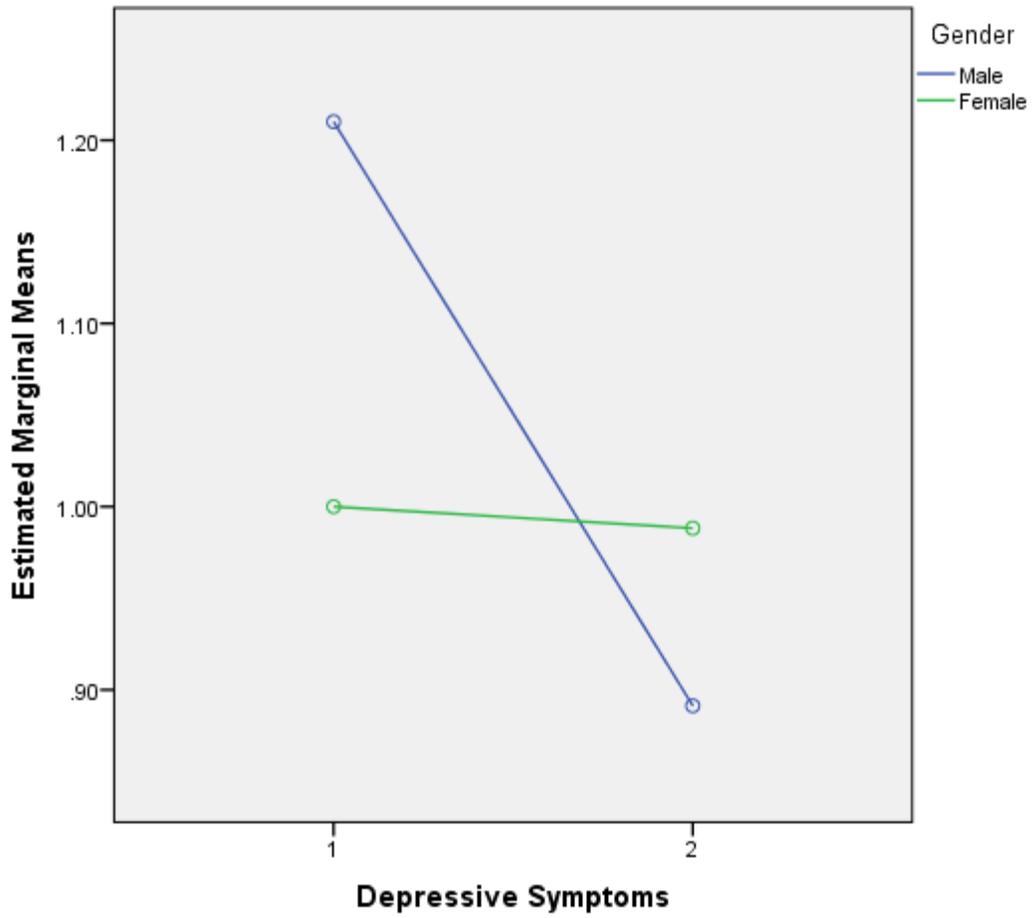


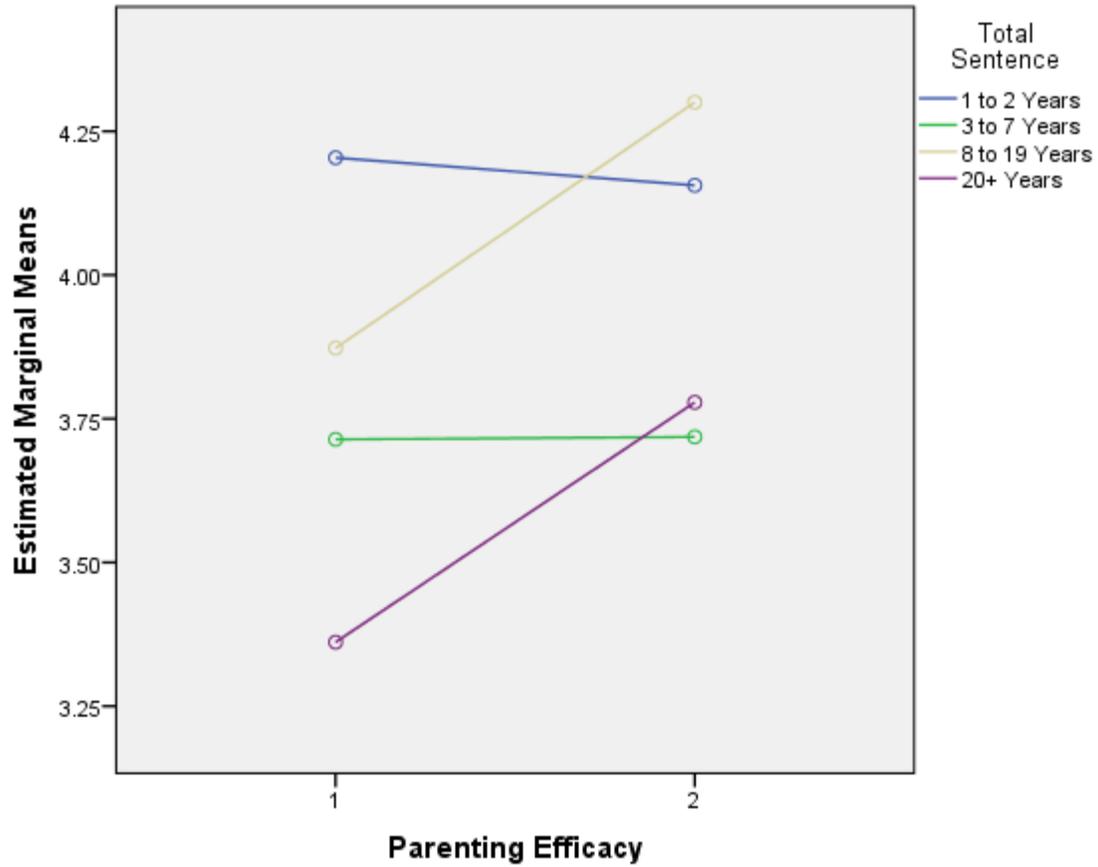
Figure 7.

*Time X Time Left Interaction Effect on Conflict Management Skills, Controlling for Ethnicity and Age*



Figure 8.

*Time X Total Length of Sentence Interaction Effect on Parenting Efficacy, Controlling for Ethnicity*



#### IV. General Discussion

More than 25 years ago, Rindfuss and colleagues (1987) encouraged researchers to take a closer look “at the life course as it is actually lived, not as we wish it to be for the sake of order in research” (p. 799). That is, researchers are encouraged to embrace the diversity and complexities of individuals and families rather than expect that everyone experiences the life course in the same way. All individuals undergo a variety of transitions that shape and influence life course trajectories that are conditioned by their context and do not emerge the same way for everyone (Elder; Rindfuss et al.).

Early models of development across the life course generally focused on single role sequences (Elder, 1978; Hareven, 1978). For example, when considering a family life cycle one might expect that children grow up, marry, and then have children who grow up and continue the life cycle (Elder & Johnson, 2002). However, research tells us that these changes do not occur in one sequence; people have multiple roles and multiple pathways to each role (Elder, Johnson & Crosnoe, 2003). The life course perspective provides a framework to examine these trajectories and their interactions over time rather than as static occurrences (Elder & Johnson).

Guided by a life course theoretical framework, the two studies sought to examine concepts of this theory in the context of diverse life experiences focused on two types of potentially risky transitions – experiencing family instability and incarceration. Over the last few decades, we have experienced significant demographic shifts in family living arrangements. This can be attributed to both demographic changes in family structure associated with increased cohabitation and repartnering, but also with a massive increase in incarceration rates seen in the

U.S. over the last 30 years (e.g., Cherlin, 2010). As a result, family contexts are becoming increasingly complex and children are more likely to experience living arrangements that do not include both biological parents (Brown, 2010). Given the growing complexities of family life, researchers must move beyond the traditional classifications of “family” and begin to embrace the complexities to reveal important subgroups of family experience. Thus, the two studies presented here focused on two subgroups that are often “missed” in research – those whose trajectories include instability over the life course via family structure changes, and those whose trajectories include incarceration - using explicit theoretical and more rigorous methodological approaches.

The first study sought to contribute to the recent empirical efforts to explore different family structure experiences by uncovering and labeling even more nuanced trajectories of family experience than have previously been identified. Additionally, the study employed latent class analysis (LCA) and offers additional support for LCA as a useful methodological approach to examining the complexities of families over time. Five distinct classes or trajectories emerged that include both stable and unstable pathways. The results of the study help move the literature on family structure and individual well-being forward by determining profiles of family structure experiences, exploring the demographic factors associated with these more complex types of experiences, and examining the influences on several indicators of current well-being (i.e., depressive symptoms, coping style and conflict management skills) among a sample of emerging adults. We offer further evidence for studying instability over time rather than at one time point. In fact, the current study suggests that the cumulative indicators of family structure (duration of current family structure and number of transitions) are crucial to understanding the nuances of diverse family experiences. Thus, we recommend the consideration of family instability as a

changing context over time, as our data suggests that the combination of varying factors within this context may have more meaningful implications than examining the effects of family structure alone.

A separate, but equally important, phenomenon adding to the increasing complexities of the experiences of American families is mass incarceration. While the first study considered the impact of transitions and duration on cumulative trajectories or experiences of family structure and instability, the second study considers the potential of turning points and their influence on trajectories that include incarceration. Life course theory posits that any life transition offers the opportunity for a turning point (Elder & Johnson, 2002). Turning points, then, have the potential to alter an individual's trajectory (e.g., Elder & Johnson; Laub & Sampson, 1993; Maruna, 2001). Providing incarcerated individuals new knowledge and skills for building and maintaining relationships may serve as a potential turning point as it is likely to enhance their sense of agency and help them maintain the necessary social supports associated with successful reintegration into society (e.g., Berg & Huebner, 2011). Data from a diverse sample of incarcerated adults who engaged in relationship education (RE) provided a context to evaluate the potential impact of RE and potential moderators of RE on couple, individual and parental functioning. For the majority of outcomes, the positive impact of the program emerged regardless of the demographic and contextual variables. This is important because it highlights the potential effectiveness of RE for incarcerated individuals regardless of individual differences. While we did not attempt to address recidivism rates in the current study, we offer an initial step in growing the evidence that RE can have positive effects for prisoners and in understanding the patterns of individual characteristics that may moderate program effects. Results may inform policy in this area as prison programming and recidivism are important topics in this time of mass incarceration. Results also

support the need for future work to examine the impact of RE on all members of the family, as it is expected that romantic partners and children are also likely to benefit.

### **Overall Conclusions**

Findings from this dissertation, in conjunction with other studies that have examined these populations, serve to encourage researchers to embrace the diversity within life course experiences and more purposefully examine diverse populations – especially those who are considered at risk. Both studies revealed groups that, although considered to be at high risk, demonstrated resiliency. For the first study, we found that instability alone did not result in between-group differences. Those in the stable hybrid class had parents who were repartnered and at least one half-sibling, putting those individuals at risk for a number of negative outcomes (e.g., Harcourt et al., 2013; Sweeney, 2010). Similarly, those in the early instability class were likely to experience the separation of their biological parents and spend time in either a stepfamily or single parent family, again putting them at risk for negative outcomes (e.g., Amato, 2010). Individuals in both classes, however, demonstrated resiliency and were no different than those in the stable nuclear class on measures of depressive symptoms. Similarly, the second study provided evidence that incarcerated individuals, thought to be at high risk for a continued trajectory of crime (e.g., Laub & Sampson, 1993), showed a positive shift on several indicators of well-being. Findings from both studies support the need to examine subgroup experiences that demonstrate resiliency to try and identify factors that help explain the conditions that promote resiliency (e.g., early vs. later instability, intervention programs).

The results here open the door and provide rationale for future efforts to continue to use advanced theoretical and methodological approaches to examine subgroups of populations across the life span and efforts to understand what explains varying trajectories following shared

transitions. It is critical that we continue to grow our theoretical and empirical models by introducing expecting and exploring complexity. Findings of these studies have important implications for researchers and practitioners alike. Rather than relying on a global view of life experiences over the life course, it is important to examine the mechanisms and circumstances that result in changes to trajectories for specific populations (Rutter, 1996). Understanding the diverse experiences of individuals and families is central to the development of policies and interventions that have the potential to promote resiliency for a greater number of individuals.

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