Family Transitions and Adolescents' Depression

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Chapter 1

INTRODUCTION

In most research on child development, the social organization of the family is widely recognized as the most single important contributor to child's well-being. Most empirical research on family background focuses on the structural characteristics of families, such as family structure, at a single point in time. Research has consistently found that family structure is a powerful predictor of child's well-being (Ginther and Pollak 2004; Houseknecht and Sastry 1996; Wu and Martinson 1993). In particular, family structure has been linked to a wide variety of both short-term and long-term child development, including educational performance (Ginther and Pollak 2004), economic success (Biblarz and Raftery 1999), psychological adjustment (Kurdek, Fine, and Sinclair 1994), premarital birth (Wu and Martinson 1993), and long-term health (Tucker et al. 1997).

This enduring interest in family structure and child development has been further stimulated by several important demographic shifts concerning the structure and stability of American children's home environments that have occurred over the last few decades (Hao and Xie 2002). From 1990 to 1997, the percentage of children born to unmarried mothers increased from 28% to 32% (Seltzer 2000). At the same time, the number of single-mother households modestly declined in the late 1990s, particularly among low-income families (Acs and Nelson 2001; Dupree and Primus 2001). These seemingly contradictory trends can be attributed primarily to the growing incidence of births and childrearing in cohabiting-couple families (Bumpass, Sweet, and Cherlin 1991; Cherlin 1992; Seltzer 2000). Marriage rates have declined while rates of cohabitation have

steadily increased, especially in disadvantaged populations (Bumpass and Lu 2000; Manning and Lichter 1996). Although the number of children living in cohabiting households during a given year is relatively low (under 4% in 1990; Manning and Lichter 1996), recent estimates project that 40% of children in the U.S. will reside in a cohabiting-couple household at some point during their childhood (Bumpass and Lu 2000). However, cohabitations tend to be short-lived, and the proportion of cohabiting couples who marry has also declined (Bumpass and Lu 2000). Consequently, more than one half of children will spend some time in a single-parent family (McLanahan and Sandefur 1994), and most children whose parents divorce will experience parental remarriage. More generally, children are spending fewer years in married families (Bumpass and Lu 2000). In fact, most children can expect to experience multiple living arrangement transitions during childhood, and these transitions can be detrimental to children's well-being (Wu 1996).

While there is a growing body of research documenting the increase in adults' experiences in union changes including cohabitation, however, fewer studies have investigated the implications of this increase for children's experiences while growing up. Empirical results suggest that changes in family structure, whether they result from family dissolution or family reconstitution, are detrimental to children's well-being (Amato 2000; Duncan and Brooks-Gunn 1997; Hetherington and Stanley-Hagan 1999; Pryor and Rodgers 2001). Given the increasing proportion of children exposed to family structural transition (Brown 2002; Graefe and Litchter 1999), there is considerably less

research examining the effect of family transition on child outcomes, in particular, adolescent's psychological well-being.

Using data from the first two waves of National Longitudinal Survey of Adolescent Health (Add Health), I examine the link between family transition and adolescent's psychological well-being with two objectives. The first objective is to address how existing theories explain the relationship between family transitions and adolescent's psychological well-being. The second objective is to explore the pathways linking family transitions to adolescent's psychological well-being.

Chapter 2

BACKGROUND AND HYPOTHESES

Family sociology posits a number of different theories relating family structure to children's outcomes. This study focuses on three major perspectives—socialization, social control and family instability theory—to explore the link between structural transition of the family and adolescent's psychological well-being. After a discussion of these perspectives, I review past literature on the relationship between diversity of family experiences and child outcomes, followed by a discussion of pathways linking family transition with child outcomes. Lastly, hypotheses of this study are presented.

Theoretical Consideration

The framework of this study uses the life course perspective to explore the relationship between family structure and child outcomes. The life course perspective views lives as interdependent and interrelated through time and focuses on the timing and sequencing of events, addressing the active roles of both children and parents in parent–child interactions (Hogan 1978; Elder 1985). The structural transition of the family is one of important event for child development. Recent research examining links between histories of family structure and child outcomes have provided evidence that family transitions place children at risk for adverse outcomes (Amato and Booth 1997; Hao and Xie 2001; McLanahan and Bumpass 1988; Wu and Martinson 1993; Menaghan, Kewaleski-Jones, and Mott 1997). These research link family structure with three sociological theories—socialization, social control and family instability theory—and predict that children from alternative families get fewer economic, social, and cultural resources, which impede healthy development. In specific, a socialization hypothesis

maintains that early socialization produces trajectories through childhood. A social control hypothesis suggests that close supervision dissuades children from deviance. A family instability hypothesis stresses that frequent changes in family structure, and the attendant stress produced, undermines child development (Hao and Xie 2001; Wu and Martinson 1993). In this study, I employ these perspectives with special attention to family instability hypothesis to explore the link between family transition and adolescent's psychological well-being. In the discussion of these perspectives, I focus on the parental effects instead of family size, the number of relatives residing in the same household or the number of siblings. The underlying assumption for this focus is that parents play very crucial roles in the socialization and social control of children during adolescence.

Socialization Theory

Socialization theory emphasizes the process by which children learn the ways of a given society or social group so that they can function within it (Elkin and Handel 1984). Socialization hypotheses also focus on the essential role of parenting in shaping children's lives (Parcel and Menaghan 1994). During the early socialization process, parents' values and principles of morality are transmitted to and internalized by their children through positive sanctioning and reinforcement. Parents and children also share similar attitudes towards life because of their shared social position, background, experiences and social forces (Bengtson 1975). Socialization theory not only points to parenting styles, which may differ systematically with family structure, but also maintains that interruptions in early socialization process because of transitions of family

structure will weaken the internalization of values and norms and may have consequences of lifelong depression. For instance, the single-mother family reduces the family's ability to provide optimal amounts of support and control to children (Astone and McLanahan 1991). Parental absence has an especially severe impact on very young children (McLanahan, 1985; McLanahan and Bumpass 1988). Severing parental attachments through divorce during the first few years of life is strongly associated with negative outcomes in later life (Rutter and Quinton 1984). Since step-families are "incomplete institution" and step-parents have unclear and inconsistent roles in childrearing (Cherlin 1978), step-families may weaken the early socialization process. Cohabitation without marital and biological bonds provides weaker early childhood socialization.

Thus, the general consensus is that very young children are particularly vulnerable to family disruption and that disruption during early childhood carries lasting effects that reach into adolescence.

Social Control Theory

Social control theory derives from the sociological literature on the social control of adolescents and emphasizes parents' control over children's inappropriate behavior. As children gain a sense of self and independence, parental supervision and control become increasingly important; hence parental control is particularly important during middle childhood and adolescence (Hao and Xie 2001). Parents practice behavioral control by placing constraints and directions on children's behavior, such as disciplinary rules and limitations on unsupervised behaviors. Parents also implement psychological control by encouraging autonomous thinking and self-discovery, which is suggested to

help develop children's psychological and social competence (Baumrind 1989; Maccoby and Martin 1983). Empirically, past research finds detrimental effects of single-mother families in middle childhood (Lindner, Hagan, and Brown 1992; Hanson, McLanahan, and Thompson 1997). Step-families, as incomplete institutions, and cohabiting couples without marital and biological bonds both lack clear rules on how the father figure should supervise children, thereby providing weak parental control over children (Cherlin 1978). Social learning theory complements social control theory by emphasizing role models. It views the family as the primary site where children learn how to get along in the society when they reach adulthood (Kohn 1983). Parents are role models within the family and in the broader society. One variant is the "pathology of matriarchy" that was proposed by Moynihan (1965); another variant argues that father absence leads to a lack of knowledge about how to operate in society (McLanahan and Sadefur 1994). In father-absent homes, where mother-child relations run the risk of becoming more peerlike, and stepfamilies, where stepparent-child relations may be defined more as friends than as parent-child, children will not learn how to successfully interact with authority figures (Nock 1988). Lack of these important skills may lead to unhealthy mental development of adolescents whose social activities also organize around non-family mode of social organization such as schools.

Thus, social control theory, combined with social learning theory, emphasizes the number and type of adults present during adolescence. It implies that adolescents' well-being is affected primarily by *current* situation rather than *past* experience. This perspective suggests that parents in unstable non-intact families will have difficulty in

maintaining stable supervision, granting constant encouragement of autonomy and providing consistent role models, which may result in psychological problems.

Family Instability Theory

A family instability or family stress/crisis/change hypothesis addresses the problem from a different angle. Family instability theory posits *change* in family life as the central cause of family structure effects on children; in other words, it maintains that change in family structure prompts reorganization of the roles of family members and adversely affects the nurturing and support provided by parents. Thus, the family instability theory emphasizes the responses of adolescents to the stresses from both the major family event and the tension accompanying the event (Cherlin et al. 1991; Martinson and Wu 1992; Wu and Martinson 1991).

Key aspects of family life for this theory are parental marital events. Divorce and remarriage are believed to constitute a major stressor in the lives of children and impact children's long-term life course trajectories (Amato 2000). Loss of a parent due to parental divorce or the presence of a new parental figure after remarriage may create uncertainty in children and adolescents about whether they can depend on a parent for constant and stable emotional support. In addition, changes in family structure may impose expectations and responsibilities on youth that they are not yet behaviorally, cognitively, or emotionally ready to manage (Sessa and Steinberg 1991). Moreover, major family structure change such as divorce and remarriage often time trigger other stressors like geographic mobility or change in economic well-being, often weaken

children's sense of emotional security and bonds which make adjustment even more difficult.

These ideas have generally received empirical support. Research regarding family instability theory show that, at least among adolescents, there are linkages between disruptive family events and children's impaired school performance, social behavior, self-esteem, early disengagement from the parental household and delinquency (Amato and Booth 1995; Biblarz and Raftery 1999; Conger et al. 1992, 1993; Hao and Xie 2001; McLanahan 1988; McLoyd et al. 1994; Wallerstein and Blakeslee 1989; Wu and Martison 1993). Furthermore, Wu and Martinson (1993) and Wu (1996) find that it is change in childhood family structure rather a prolonged period living in a mother-only family that is most strongly linked to young women's chances of having a premarital birth. Wojtkiewicz (1993) also finds that transition into a mother-only family is more important to chances of high school graduation than is duration of time spent in a mother-only family. Some of Wojtkiewicz's findings about other non-intact family structures, however, are not entirely consistent with the theory that changes are more important than the length of time spent in a non-intact family. Studies also suggest that children fare worse during a two to three years period before and after a marital disruption and the adverse effect become weaker in a long run (Hetherington 1987; Rutter 1971; Wallerstein and Blakeslee 1989).

There is a small but growing body of evidence showing that more and more children have been born into cohabiting families and that families begun by cohabitation have greater instability (Brown 2002; Bumpass and Lu 2000; Manning and Lamb 2003).

Cohabiting partnerships are more precarious and short-lived than marriages; more than half end within five years either from breakup (40%) or marriage (55%) (Bumpass and Lu 2000; Smock 2000). This dissolution rate means a significant proportion of children experiencing multiple family structure changes within a short period of time. Using data from National Survey of Family Growth, Raley and Wildsmith (2004) find that including transitions into and out of cohabitation to conventional family transition measurement with only marital disruption increase the measure of family instability by about 30% for Whites children and over 100% for Black children. I will discuss the significance and empirical research on cohabitation and child's outcomes in following section in depth.

In summary, the socialization, social control and family instability theory all propose resource-based mechanisms and predict that children from "nontraditional" two-biological-parent families get fewer economic, social and cultural resources, which impede healthy development of children. However, they stress different elements of a family experience during childhood and adolescence. The socialization theory addresses the effect of *prior* experience on current well-being, while social control theory stresses the effect of *current* family situation on current behavior (Hao and Xie 2001; Wu and Martinson 1993). In contrast with the focus on family *statuses*, the family instability theory emphasizes the effect of family *event* and the importance of stable family structure, assigning a special role to family transitions during childhood.

Diversity of Family Experiences and Child Outcomes

Empirical research suggests that growing up in alternative families and experiencing changes in family structure is associated with poor child outcomes. To

further understand the effect of family experiences on adolescent's psychological well-being with a special attention on the structural transition of the family, literature on the effect of different types and shifts of family structure on child outcomes will be reviewed.

Parent Loss and Child Outcomes

Parent loss may be caused by parental divorce or parental death, which are both associated with lower child outcomes (Amato 2000). Parental divorce and separation has been reported in the literature as being associated with a wide range of adverse effects on children's well-being, both as a short-term and long-term consequence of the transition. For example, there is an emerging consensus in the sociological literature regarding the impact of parental divorce/separation on depression in childhood and adolescence. Parental divorce/separation is associated with substantial short-term elevations in children's emotional distress, which tend to dissipate within 18 months to 2 years (Aseltine et al. 1994; Hetherington, Cox, and Cox 1982). There is a great deal of evidence that, for some youths, divorce remains problematic throughout adolescence. Small but stable differences in the psychological well-being of adolescents with ever-divorced parents have been repeatedly observed, indicating that this experience continues to be a source of stress among adolescents who are several years removed from the physical separation of parents (Allison and Furstenberg 1989; Amato and Keith 1991). Other effects reported include adverse impacts on schooling (Asone and McLanahan 1991; Evans et al. 2001), physical well-being (Dawson, 1991), social conduct (Morrison and Coiro 1999), peer relations (Demo and Acock 1988), substance use (Ermisch and Francesconi 2001), early departure from home (Mitchell et al., 1989) and sexual behavior

(Ellis et al. 2003; Woodward et al. 2001). A further range of impacts in early adulthood and beyond include higher rates of early childbearing (McLanahan and Bumpass 1994), early marriage (Keith and Finlay 1988), marital dissolution (Amato and DeBoer 2001), lone parenthood (McLanahan and Booth 1989), low occupational status (Biblarz and Gottainer 2000), economic hardship (McLanahan and Booth 1989), poor quality relationships with parents (Aquilino 1994), poor psychological well-being (Biblarz and Gottainer 2000), mistrust in others (Ross and Mirowsky 1999), and low longevity (Tucker et al. 1997).

The long listing suggests that parental divorce or separation impact children's lives across all domains of functioning. Yet many scholars who have identified associations between family structure and family change and child outcomes have drawn attention to the relatively small size of the effects. Joshi et al. (1999) describe the effect sizes they measured as "modest", while Allison and Furstenberg (1989) report that the proportion of variation in outcome measures that could be attributed to marital dissolution was generally small, never amounting to more than 3%. However, the gap in well-being between children with divorced and non-divorced parents remains small but consistent in earlier decades persisted into the 1990s over times (Amato 2000).

On the other hand, a few studies suggest that the majority of children whose parents have divorced function within normal or average limits in the years after divorce (Kelly 1993). Furthermore, there is a considerable range of functioning within both groups of children from divorced and intact families. In fact, not only do some children do well despite the divorce of their parents, but some children actually benefit from the

divorce. For instance, Demo and Acock (1988) note that adolescents living in single-parent families can gain certain ability such as sense of responsibility as a result of changes of family. However, changes that involve the emergence of more chaotic patterns of family life are unlikely to be beneficial for children, even if some strive to furnish a sense of order. Children also benefit where a parental separation provides release from an aversive family situation; for example, where the parental relationship is highly conflicted and the children are drawn into the conflict (Booth and Amato 2001), where the child's relationships with a parent figure is of poor quality (Videon 2002), or where fathers exhibit antisocial behavior (Jaffee et al. 2003). Thus, divorce probably helps fewer children than it harms, while it remains true that children whose parents separate do less well, on average, across a range of measures of well-being.

Amato's (1993) and Amato and Keith's (1991) quantitative meta-analysis of a large amount of studies reached the same conclusion that parent loss due to parent death also has negative association with child well-being. Most studies show that well-being is lowest in divorced families, intermediated in bereaved families, and highest in intact families. This suggests that although the loss of parent through death is problematic, additional factors are involved in divorce that further lowers the well-being of some children (Amato 1993).

Stepparent family/Remarriage and child outcomes

Importantly, there is evidence that the negative effects on children cumulate with each additional transition, both in and out of marriage (Wu 1996; Wu and Martinson 1992). Despite the potential gains from both improved economic circumstances and the

presence of an additional adult to help with parenting tasks, remarriage potentially introduces new stressors and does not generally improve outcomes for children. Indeed, some studies have shown children to be worse off after a parent's remarriage. (Hetherington, Bridges, and Insabella 1998; McLanahan and Sandefur 1994). Children from stepfamilies experience higher high school dropout rate, higher levels of problem behaviors, decreased emotional well-being, and greater delinquent peer group affiliation than those from intact two-parent families (Astone and McLanahan 1994; Hetherington et al. 1998). For example, among children who had experienced a parental separation, those whose parents reconciled or whose mother remarried exhibited more behavior difficulties than children who remained in a single-parent family (Fergusson et al. 1986). Baydar (1988) found that, although divorce was not negatively related to mothers' reports of children's emotional problems, remarriage was.

It appears that the complexity of family life in stepfamilies hinders them from benefiting from the additional resources that are available when a lone mother remarries. Cherlin (1978) conceptualizes stepfamilies as "incomplete institution." Relationships within stepfamilies are complex and need time and goodwill on all sides to work well. Children are often suspicious of their mothers' new partners and slow to open up to the benefits the new relationship might confer on them, while stepfathers are often unclear about how to respond to the children of their new partner (Amato 1987; Cherlin 1978). Typically, this uncertainty results in lower levels of involvement. As Fine et al. (1993) note, stepfathers appear to actively refrain from becoming involved with their stepchildren. Perhaps as a result, cohesion remains lower among stepfamilies than among

intact families (Pryor and Rodgers 2001). Even so, improvements in stepfamily functioning are evident over time (Amato 2000), which suggests that many families manage to master the challenges they face.

Single-parenthood and child outcomes

The sociological research on the effect of single-parenthood on child outcomes underwent several changes since the 1960s (McLanahan 1997). From the prevailing claims that parent absence has large negative consequences for children prior to 1970s to an overly positive argument during 1970s, new consensus emerged that children raised by never-married parents do nearly as well as children raised by divorced and separated parents (once parents' education and race are taken into account), and both do worse than children raised by both biological parents (McLanahan 1997).

Compared to two-biological-parent families, an expansive body of research has delineated youth from single-parent families display greater disengagement from school and higher drop-out rates (Astone and McLanahan 1991). Adolescent girls from single-parent households are at higher risk of becoming single mothers themselves (McLanahan and Booth 1989; Wu and Martinson 1993), and residing in a single-parent family predicts leaving home at younger ages for both male and female adolescents (Cooney and Mortimer 1999; Kiernan 1992).

Traditionally, it has been assumed that a family with both parents living in the same household as the child is a better environment for children's development than a single-parent family. According to this view, mothers and fathers are important resources for children; each is a source of emotional support, practical assistance, information,

guidance, and supervision. In addition, the presence of two adults in the household allows parents to serve as role models from whom children learn social skills such as cooperation, negotiation, and compromise. Thus, the absence of one parent from the household is problematic for children's socialization (Amato 1987, 1993). The limited time and energy devoted by working custodial parent decreases the parental support given to children, which in turn increases the likelihood of problems such as poor academic achievement, depression, and misbehavior (Belsky 1990). In addition, the parental authority structure may be weaker in single-parent than in two-parent families (Nock 1988; Steinberg 1987). This combined with a lack of parental supervision, may increase the chances of children's delinquency and premarital pregnancy (Dornbusch et al. 1985; Wu and Martinson 1993).

Compared to other families than two-biological-parent families, family stability and history within the single-parent family are key dimensions. Never-married single-parent households are among the poorest families compared to other family structures (Demo and Acock 1996), and never-married mothers report lower levels of education and lower employment rates than previously married single mothers (Thomson, Hanson, and McLanahan 1994). However, once the effects of family income are controlled, children from never-married households tend to show more positive developmental outcomes than children from divorced single-parent families (Najman, et al. 1997), possibly due to the interparental conflict before and after the marital disruption (Biblarz and Raftery 1999; Wu and Martinson 1993). Indeed, transitions *per se* may be the riskiest factor for child development. For example, studies show that multiple transitions into and out of single-

parent status is the most deleterious consequences for children (Capaldi and Patterson 1991; Martinez and Forgatch 2002; Wolfinger 2000). Thus, while growing up in a single-parent household is associated with a variety of negative outcomes for children and adolescents, these effects are alleviated by the stability of family structure and magnified by the cumulative effects of maternal/paternal partnering instability.

Cohabitation and child outcomes

Children in the United States are increasingly likely to spend some of their lives residing in a cohabiting parent family. In fact, half of cohabiting couples live with children (Seltzer 2000). Bumpass and Lu (2000) estimate that two fifths of children in the United States are expected to experience a cohabiting parent family at some point during their childhood, and children born during the early 1990s will spend 9% of their lives living with parents who are in cohabiting unions. Adolescents in cohabiting parent families typically are living with their mother and her cohabiting partner (Fields 2001). Brown (2002) reports that almost all children over the age of 12 in cohabiting parent families are living with only one biological parent. Thus, cohabitation for adolescents (unlike for young children) represents a family that is structurally similar to a stepfamily. However, cohabiting partnerships are more precarious and short-lived than marriages. Cohabitation occurs more frequently among economically disadvantaged families and adults with lower education (Bumpass, et al. 1991; Bumpass and Lu 2000; Cherlin 1992; Manning and Lichter 1996), which may profoundly influence the family environments experienced by low-income children (Jayakody and Cabrera 2002).

Although cohabitations appear less stable than marriages, potential benefits of cohabitations for low-income children and families could reasonably be expected, because the family's economic, psychological, and parenting resources are enhanced by the addition of another adult, especially if the adult male is the child's biological father. However, cohabiting couples face a number of challenges that may undermine any positive gains for adolescent well-being. For example, male cohabiting partners tend to contribute less financially to the household than do married men (Graefe and Lichter 1999, Manning and Lichter 1996), and cohabiting partners pool less of their income than married spouses (Bauman 1999). Despite many cohabitors' expectations to marry at some point (Bumpass et al. 1991), cohabiting relationships are characterized by poorer relationship quality than marriages, even after controlling for the economic discrepancies between these family structures (Nock 1995). Recent evidence has also documented higher rates of domestic violence between cohabiting partners in low-income adolescents' households (Lohman, Votruba-Drzal, and Chase-Lansdale 2002).

There are a limited but growing number of studies examine the social well-being of children living in cohabiting parent families (Brown 2001; DeLeire and Kalil 2002; Hao and Xie 2001; Manning and Lamb 2003; Nelson, Clark, and Acs 2001), but results are mixed. Some studies suggest that compared to married families, school-aged children from cohabiting families score lower on psychological well-being (Dunifon and Kowaleski-Jones 2002) and academic achievement, and have more behavior problems (Brown 2002; Morrison 2000; Thomson, et al. 1994). Other research suggests that adolescents and children in cohabiting families share similar levels of behavior problems

and academic achievement as children in married stepfamilies (Morrison 2000). The findings seem to depend on the gender and age of the child as well as the specific dependent or outcome variable (e.g., math scores vs. verbal scores or internalizing vs. externalizing behavior). Only a few studies contrast the well-being of children in cohabiting family with those in single-parent family. Work using longitudinal data and multivariate, fixed effects models find that teenagers living with cohabiting parents and single parents share similar levels of behavior problems (Acs and Nelson 2002; Morrison 1998).

Given the increasing number of children experiencing family transitions, it is necessary to accurately capture the complexity of family structure of adolescents. Although useful, summary measures such as family composition at certain age or interview, or the cumulative number of transitions children experience provide little insight into the diversity of family experiences. One way to provide a rich description of family experience in early years is by identifying all unique trajectories through childhood (Martinson and Wu 1992; Wojtkiewicz 1992). However, a large number of categories would be unmanageable in analyses, especially if they were adapted to include cohabitation as a family union. Based on the approach from research examining the first few family transitions (Graefe and Lichter 1999; Raley and Wildsmith 2004), I identify several recent family sequences to examine their short-term effect on adolescent's psychological well-being. Detailed discussion on the measures will be presented in the Data and Method section.

Short-term and Long-term Impacts of Family Transitions

Recently family researchers have increasingly approached a marital transition, especially divorce, as a multi-stage process rather than a singular disruptive event. This continuous and multistage process may begin long before families dissolve and extend many years after divorce or separation (Demo and Acock 1988; Morrison and Cherlin 1995). In particular, the entire process is hypothesized to begin with a predisruption stage, followed by crisis stage and eventually postdisruption stage. Predisrupted families are characterized by interpersonal conflicts among family members, physical and emotional abuse of spouse, children, and a decline in parental commitment (White 1990). When parental divorce finally occurs, the process transfers into a crisis stage (Chase-Lansdale and Hetherington 1990). During this crisis stage, children experience a series of additional transitions in family life, including a decline in living standard and a decrease in personal contact with the noncustodial parent (Amato 1987). Conceivably, the well-being of children may be further damaged as they are forced to adjust to these stressful transitions.

In the short-term adolescents display a variety of negative adjustment patterns. For instance, during the two years following a parental divorce, adolescents tend to have lower academic achievement and escalated depression, delinquency, and disruptive behaviors (Chase-Lansdale and Hetherington 1990; Hetherington 1993). Because mothers typically retain child custody after a divorce (Seltzer 1994), adolescents must cope with their father's absence (Hetherington et al. 1998), as well as the increased economic hardship associated with this transition, such as lower household income

(Smock, Manning and Gupta 1999) and residential moves to poorer neighborhoods (South, Crowder and Trent 1998). During the crisis stage, both mothers and adolescents report more strained and conflictual interactions with each other, and maternal parenting quality often declines, including greater coercion and irritability, less vigilant monitoring and supervision, weakened control, and diminished communication and affection (Demo and Acock 1996; Hetherington et al. 1998).

In the long-term, although the majority of adolescents recover from the stressful family event (Hetherington and Kelly 2002), empirical research finds that the effects of divorce and its aftermath persist through young adulthood, especially if maternal partnering transitions continued after the first divorce. Adults who were exposed to familial disruptions in childhood or adolescence show modestly higher rates of mental health problems, use of psychological services, premarital births and dissolution of their own first partnerships (Chase-Lansdale, Cherlin and Kiernan 1995; Wu 1996).

My current study focuses on the short-term impacts of family transition on children during adolescence. This study examines the family experiences of adolescents over a time span of one year and perceives the structural transitions in family as family crisis. Drawn from sociological and developmental literature on family transition, the family crisis model can be applied to many aspects of family change, not only martial dissolution but also martial formation, both of which entail difficult adjustment for children. For example, Cherlin (1978) and Hetherington (1993) have noted that problems in remarried families centered around establishing new family roles and relationships, especially those relating to parent-child relationships and to issues of financial support.

The family crisis argument also can be applied to other non-traditional forms of family transitions with negative consequences for both adults and children. These ideas have received empirical support. Findings suggest a 2-year period following a family disruption during which children and parents adjust slowly to new circumstances (Chase-Lansdale and Hetherington 1990). In either case, the events leading up to and following a change in a respondent's parental situation can be emotionally charged and highly stressful for both parents and children.

Linking Family Transitions with Adolescent's Depression

Mental health is one of the most serious concerns for today's adolescents. Between 1979 and 1997, the suicide rate for American youth increased considerably, doubling among children 10 to 14 years of age and increasing by 13 percent among adolescents 15 to 19 years old (Guyer et al. 1998). During the same time period, the age-adjusted death rate for suicide fell by 12 percent. Since the primary antecedents of suicide include depression (Zhang and Jin 1996), the exploration of the influence of family during adolescence would be wise to focus on this important mental health outcomes.

Similar to the studies of depressed adults, several cross-sectional studies using both clinical and community samples of depressed children and adolescents have found a modest but significant relationship between stressful life events in the year prior to the onset of depression and depression (Garber and Hilsman 1992). Specific stressful life events may include parental loss, divorce and so on. For example, women who lost a parent before the age of 17 and had poor parental care were found to be at risk for having poor self-esteem, getting married early, and having children at an earlier age. These

women were found to be at increased risk of developing depression when exposed to stressful life events (Brown and Harris 1993). In the present study, the practical task is approached with a special attention to the mechanisms linking family transitions and adolescent's higher degree of depression.

Resources provided by parents have a more direct influence on children than those provided by the community or government (Haveman and Wolfe 1994). Family resources during childhood are particularly important for children's development because children's social and intellectual development is more malleable than it is in later life stages. Much empirical research demonstrates that childhood family circumstances affect children's level of achievement and psychological well-being (Duncan et al. 1998; Haveman and Wolfe 1994). Most of these studies, however, do not address the intervening mechanisms through which how family characteristics affect children's depression. Several potential pathways linking family transition with child depression will be identified and discussed in the following section.

Family Processes

Family processes are closely linked to the psychological well-being of adolescents (Acock and Demo 1994). Family processes are traditionally measured by parent-child closure and parental control. While a strong parent-child bond has been found to be positively related to various desirable outcomes for children and adolescents (Baumrind 1991), a large body of literature suggests that children whose parents encourage autonomous thinking and self-discovery are more likely to develop psychological and social competence (Barber 1992; Baumrind 1989; Rodgers 1999). In other words,

children who are overcontrolled psychologically may lack the confidence and the very impulse to deal with the external world and may withdraw to fend for themselves psychologically. Such children appear to be at greater risk for internalized problems such as depression (Barber 1992). Empirical research also suggests that there are differences in levels of parental warmth and parental control among various family structures.

In single-parent families, single parents have to fulfill two parental roles which contributes to the poor parent-child relationships that compromise children's healthy development (McLanahan and Sandefur 1994). Children's attachment to non-resident parents is considerably weaker, further undermining the amount of support and closeness children experience in their parental relationships. Evidence suggests that closeness to nonresident fathers is positively associated with child well-being (Amato and Gilbreth 1999; White and Gilbreth 2001). Although remarriage introduces an additional adult to the household, children seem to have difficulty adapting to their mothers' remarriage, even more so when they reach adolescence. As children get older, they are less likely to form strong attachments to stepfathers or consider them "family" (Cherlin et al. 1995). If mothers remarried when children were in early adolescence, Hetherington (1993) found that stress and conflict in parent-child relations escalated, and maternal control and monitoring weakened to lower levels than exhibited by divorced mothers. Among older adolescents, mother-child relations in stepfamilies were marked by increased negativity and decreased communication (Hetherington 1993). Thus presence of a legally and socially recognized stepparent does not seem to raise the levels of warmth and support. In addition, stepparents report higher levels of inconsistent and/or negative parenting and

lower levels of parental monitoring (Kim, Hetherington, and Reiss 1999). Compared to stepparent in terms of obligations and rights of cohabiting partners to their partner's children, a cohabiting partner often occupies even more ambiguous family roles featured by little trust and authority from child's perspective. Research that distinguishes parenting behaviors of cohabitors from married couples or single parents supports the notion that slightly more negative parenting practices occur among cohabiting parents (Brown 2002; Dunifon and Kowaleski-Jones 2000). Yet parenting indicators do not explain the effect of parental cohabitation on child well-being (Dunifon and Kowaleski-Jones 2000; Thomson, Hanson, and McLanahan 1994; White and Gilbreth 2001). Moveover, cohabiting partners may indirectly affect child well-being by renegotiating their family roles and competing with the child for the biological parent's attention and affection (McLanahan and Booth 1989).

Economic Hardship

Economic situation is likely to vary with family structure (single-parent families tend to have lower income than two-parent families) and tends to vary with changes in family structure (children's economic status tends to drop substantially after parental marital disruption and rise with parental (re)marriage) (Hill, Yeung, and Duncan 1996). Economic hardship is closely linked to child well-being and often is a mechanism through which family transition influences child well-being (McLanahan and Sandefur 1994). Carlson and Corcoran (2001) maintain that economic status is an important mediator of the family structure and child outcomes relationship because family structure and economic status are correlated, and poverty is negatively associated with child well-

being. Generally, children raised in families with higher socioeconomic status experience more positive cognitive and social developmental indicators of well-being (Carlson and Corcoran 2001; Duncan and Brooks-Gunn 1997; McLanahan and Sandefur 1994). Indicators of both family income and parent's education have positive effects on child development, with income having a stronger influence (Duncan and Brooks-Gunn 1997).

Income reduces the effect of family transition on child depression (Carlson and Corcoran 2001; Duncan and Brooks-Gunn 1997; Hill, Yeung, and Duncan 2001; McLanahan and Sandefur 1994). Economic hardship is thought to play a prominent role in explaining children's distress following divorce (Aseltine et al. 1994; Furstenberg and Cherlin 1991). Disrupted families generally experience dramatic declines in standard of living, with many female-headed families falling into poverty following divorce (Eggebeen and Lichter 1991). Although financial distress is typically seen as one of the clearest and most problematic consequences of divorce, there are far few empirical studies linking children's psychological well-being after divorce with changes in the family's economic situation (Amato and Keith 1991). As one of the exceptions, Aseltine's (1996) study of high school students in the Boston metropolitan area demonstrates the central role of economic hardship in linking family status with depression, with the strength of this indirect pathway partly attributable to the greater vulnerability of youths in single-parent families after divorce to financial stresses. Studies also indicate that economic differences account for a sizable portion, but not all, of the adverse effects of being raised in a single-parent household. For example, Hill and Duncan (1987, 2001) and McLanahan and Sandefur (1994) find that parental income

differences account for between one-third and two-thirds of the estimated impact on completed schooling of living in a single-parent family. Other studies find that income differences play a less important role (Sandefur et al. 1992) or a complex role that varies by type of non-intact family, accounting for single-parent influences but not influences of mother-of-stepfather (Boggess 1998).

Cohabiting parents report relatively low levels of education, so economic status of children with cohabiting parents may be better than those of children in single-parent families (e.g., greater parental education and family earnings), but, on average, they are in more stressful economic situations than children in married couple families (e.g., greater poverty and food insecurity; Acs and Nelson 2002; Manning and Lichter 1996). Thus, it is more difficult for cohabiting parents to adequately provide the material goods and services that facilitate child development (McLanahan 1997). Moreover, economic hardship also contributes to poor parental psychological well-being (which might deteriorate parent-child bond and effective parenting) and residing in a poor neighborhood, which undermine child psychological well-being.

Residential Mobility

Change in family structure impacts the resources available to children. Family transition is often not only accompanied by a reduction in the time parents spend with children and their ability to monitor children's behavior (Seltzer, Schaeffer and Charng, 1989), dramatic drops in living standards (Duncan and Hoffman 1985; Duncan, Yeung, and Rodgers 1994), but also movement to different residences (Hill, Yeung, and Duncan 2001; McLanahan and Sandefur 1994).

Empirical findings suggest that some of the psychological distress is a direct outgrowth of the family experience, such as relocation, litigation, and changes in custody arrangement. For example, Astone and McLanahan (1994) find that roughly a third of the higher high school dropout rate among children in stepfamilies compared to those in intact families is due to residential mobility. Furthermore, the influence of residential mobility on children appears to be sensitive to children's age at the time of the move (Hill, Yeung, and Duncan, 2001). Hill and his colleagues (2001) find that residential relocation occurred in middle or late childhood exhibits as the strongest mechanisms in which childhood family structure influence educational attainment and nonmarital birth.

Presence of relatives

As discussed above, social control theory addresses the important role of adult's supervision in children's healthy development. Key aspects, according to this theory, are number and type of adults present in the child's home. Thus, presence of other relatives influences the effect of family transition on child psychological well-being indirectly through family process. Strong feelings of obligation to extended family members and high levels of reliance on kin for material and emotional support are survival strategies formed by single parent (single mother in particular) (Rossi and Rossi 1990). Thus, social control is thought to increase with numbers of adults in child's home. The more distant the relationship of adult to the child, though, the weaker the social control. Substitute parents such as grandparents are likely to exert less authority and social control than biological parents because of their more tenuous relationship to the child and because the parenting roles of such relatives are ill-defined (Cherlin 1978).

Empirical findings are mixed. Some research indicates that one of the greatest strengths of African American single-parent families is the existence of strong kinship ties (Hill 1972; Roschell 1997). This suggests that single parent have access to relatives as a set of parenting resources outside the context of a traditional marriage; thus, compared to those in mother-only families, children who live with single mother and grandparents tend to have less detrimental outcomes (Dunifon and Kowaleski-Jones 2002). However, in child's home residing both biological parents and grandparents, disagreements between the two regarding parenting style may undermine the social control exerted by both (Chase-Lansdale et al. 1994). For example, study of Hill, Yeung and Duncan (2001) suggest that mother-with-grandparent family structure experienced late in childhood is strongly tied to reduce educational attainment and enhanced risks of a nonmarital birth.

Other Factors

Other factors may also contribute to children's psychological well-being, including children's age, gender, race, prior psychological well-being as well as parental mental health.

Research suggests that age is related to various instruments used to measure mental health (Gaitz and Scott 1972). Epidemiological research on both lifetime and recent prevalence rates of mental problems consistently indicates that women tend to have higher rates of affective, anxiety disorders and depression than men (Robins and Regier 1994). Race and mental health is a central issue in epidemiological research, but the findings concerning the relationship between race and psychological functioning have

been inconsistent. Some studies found no racial difference in depression (Aneshensel, Clark, and Frerichs 1983).

Selection perspective holds that differences in child outcomes between children from different types of family union are due to factors such as children's psychological well-being prior to the family transition, parent's personalities, or genetic influence. Studies supporting this perspective found that negative outcomes observed among children with marital disruption are present years before the family event (Amato and Booth, 1996; Cherlin et al. 1991). Other found that parental depression account for the association between parents' marital transitions and children's emotional adjustment problem (Capaldi and Patterson 1991). In contrast, many empirical studies, some of which use random-effects models, provide strong evidence for family transition rather than selection as the cause of the gap in children's well-being from intact and alternative families (Cherlin et al. 1998; Hanson 1999; Morrison and Coiro 1999).

Central Hypotheses

Given the theoretical background and past empirical research of the relationships between family structure/transition and children's psychological well-being, I hypothesize that:

1. Recent family structure is associated with adolescent's psychological well-being. Two-biological-parent families provide the optimal family environment for children's psychological development, while other family structures are detrimental to adolescent's psychological well-being.

2. Adolescent's psychological well-being suffers from transitions in family structure. All types of family transition have adverse effects on child's psychological well-being, but to different extent.
3. Family experiences other than structural transitions are the potential intervening mechanisms through which family transitions influence adolescent's psychological well-being. Controlling for effects of these family factors such as family processes, economic hardship, residential mobility and presence of relatives in the households will reduce the effects of family transition.

Chapter 3

METHODS

Data

Data for these analyses came from the National Longitudinal Study of Adolescent Health (Add Health). Add Health is a school-based study designed to assess the health of adolescents and to explore the causes of their health-related behavior (Bearman, Jones, & Udry, 1997). The sampling frame included all high schools in the United States. Schools were stratified by region, urbanicity, school type, ethnic mix, and size and selected with probability proportional to size. School rosters were obtained and a systematic sample was drawn after students were stratified by grade and sex. The core sample is nationally representative of adolescents in grades 7 through12 in the United States. In addition, Black adolescents from well-educated families, Chinese adolescents, Cuban adolescents, and Puerto Rican adolescents were oversampled. Wave 1 (W1) of interviews was conducted from September 1994 through December 1995 and consisted of 20,745 respondents (total response rate was 78.9%). Wave 2 (W2) was conducted between April and August 1996 and consisted of 14,738 respondents (total response rate was 88.2%). A parent or parent-figure (usually the resident mother) of each adolescent also was asked to complete a questionnaire during the first wave. The parent survey contains 17670 respondents (Bearman, Jones, and Udry 1997).

The Add Health is appropriate because it contains a large number of adolescents living in various types of family union, especially cohabiting parent families and key measures of consequential adolescent outcomes, and has rich measures of family processes that may explain some of the observed differences in family structure. Most of

the research on social outcomes relies heavily on the National Survey of Families and Households (NSFH) because of the complete cohabitation and the child well-being measures included in their project. Yet those analyses are somewhat limited by the number of cases (Thomson et al. 1994; Hanson et al. 1997; Hao and Xie 2002) and now reflect the experiences of children over a decade ago. In addition, the Add Health also includes questions about the parents' union history, parenting characteristics, couple relationship and duration of current relationship. Some data sources (The National Survey of American Families, Current Population Survey, and Census) provide information only about the current family situation and no details about duration of relationship. But the Add Health data do not include details about family structure histories (Manning and Lamb 2003). In general, the Add Health provides one of the richest data sources on family dynamics, and couple relationships, as well as a variety of consequential adolescent outcomes.

The present analysis uses data adolescent survey and parent survey collected during first wave, and adolescent survey during the second waves to measure the variables. I restricted the study to adolescents with valid sample weights and a parent or parent-figure answering question on parental relationship history during the first wave (n=11,466). Cases with missing information on the central model variables leave a sample of 11,026 adolescents.

Measures

Dependent variable

Depression is one of the most frequently explored outcomes in studies examining the effects of family environment on children's well-being. 11 out of 19 questions correspond to the items from the Center for Epidemiological Studies Depression Scale (CES-D), a commonly used measure of depressed mood that has high construct validity and internal consistency (Randloff 1977). Respondents answered these 11 questions measuring how frequently they experienced various depressive symptoms such as feeling tired, lonely, sad, and depressed over the past week. See Appendix A for the exact question text. Response categories were rated on a scale ranging from 0 (rarely or never) to 3 (most of the time). The 11 items were averaged to create a scale with an observed range from 0 to 3, with higher scores indicating more depressive symptoms. The Cronbach alpha for this measure ranged from .87. Depression measured at W2 is employed as dependent variable, while depression at W1 is included as one of the control variables.

Independent variables

Family Structure and Transition.—The key independent variable is family structural transition. Family structure is established by the adolescent response in the household roster questions in both waves.

The basic types of family structure are categorized into five family types: two-biological-parent family, step-family, single-parent family, cohabiting family and others. These frequently used snapshot measures of family types at W1 are employed to

operationalize the social control theory. If respondents report residing with both biological/adoptive mothers and biological/adoptive father, then family structure is coded as two-biological-parent family. Step-families are those where there is a biological/adoptive parent and a stepparent. Single parenthood indicates that the biological/adoptive parent is not living with any opposite-sex partner but may be living with relatives including grandparents. If the adolescent reports that the parent has a cohabiting partner, then the family is coded as a cohabiting parent family. Adolescents tend to under-report the status of cohabiting family. This is consistent with findings from other data (Brown 2002). Families without a parental figure or with only grandparents or foster parents are categorized as "other" type.

Measures of family transitions operationalize the family instability theory. The short-term effect of family transition is tested by the structural transition of family between W1 and W2. Transition is a dichotomous variable, coded as 1 if the family structure at W1 differs from that at W2.

Because different types of family transition may vary in their influence on children, I divide family transitions into three general categories: losing parents, gaining parents and change in type of parents. On a spectrum of family structures, starting from left to right, there are four basic family status including the married family (2-biological-parents and step-parents family), cohabiting family, single family, "other" type of family. Assuming cohabiting partners in the children's home will exert certain parenting practices as parents, I conceptualize that any shift from left to right along the continuum would be losing parent, and any shift from right to left would be gaining parent. The

changes within each of these four basic kinds of family structure are changes in types of parents with number of parents unchanged. Table 1 presents the categorization of family transition.

To provide a finer breakdown by general type of family transitions, more detailed set of family transitions measures makes distinctions among the three general types of family transitions. Based on past research (Martinson and Wu 1992; Raley and Wildsmith 2004), I create nine categories of family transitions between waves. Table 1 shows how nine possible types of family transitions between W1 and W2 are constructed. The examination of detailed and specific types of family transitions enables us to gain a clearer and more accurate understanding of the effect structural transition in family on adolescents.

Mediators

Mediators function as intervening mechanisms through which family transitions influence adolescent's depression. Ideally, measures of mediators should be created using data collected before the survey where dependent variables are from to avoid cross-sectional problems, such as the inability to know which measures are causally prior. But due to the limitations of Add Health, all mediators in this analysis are measured at W2, the same wave from which the dependent variable are constructed. Thus, it should be noted that these mediators, including parent-child closure, parental control and so on, could be the reaction of adolescent's depression as well.

Family Process.—Family process includes closeness to parent and parental control. In the W2, parent-child closeness is based on questions asking adolescents how

close they feel to their resident mothers and resident fathers respectively. If resident mothers and/or fathers were missing, closeness to nonresident biological mothers and/or fathers were used in this measure. The questions are averaged to measure parent-child bond on a 5-point scale, with 5 being the highest level of closeness to parent.

Parental control is based on a seven-item scale with high values indicating high control. The questions are coded dichotomously (0 = yes and 1 = no) and then averaged (Cronbach's alpha = .74). In W2, adolescent respondents are asked whether parents let them make their own decisions about the time they must be home on weekend nights, the people they hang around with, what they wear, how much TV they watch, which TV programs they watch, what time they go to bed on week nights, and what they eat.

Economic Hardship.—Economic hardship is measured by parental receipt of any type of public assistant at W2. Receipt of public assistant is a dichotomous variable, coded 1 if at least one parent received public assistant at W2. Parental income is not considered due to large number of missing cases at Wave 1 and unavailability of this measure at W2.

Presence of relatives.—Presence of relatives is a coded dichotomously (1=yes, 0=no).

Residential mobility.—Residential mobility is coded 1 if respondents had moved since the last interview and 0 otherwise.

Controls

I include several sets of controls in the analyses, including child characteristics (age, gender, race/ethnicity, prior depression, martial birth, and cumulative years in each

family status during the first six year of life), parental characteristics (parental marital history and parental depression), and socioeconomic status (family income and parental education). All controls are measured at W1.

Child characteristics include adolescent's age as a continuous variable from 12 to 21, gender as a dichotomous variable (1 = female), and race/ethnicity which is obtained from student's self-reported race/ethnicity. Hispanics of any race are coded as Hispanic. When respondents select multiple racial categories, I use the self-reported best single race. If a respondent does not select a best single race, the race is coded as other. Four dummy variables are codes as Black, Hispanic, Asian and Other, with White as reference group. Adolescent's depression at W1 is included as control variable using the same measure as that at W2.

Using the parent marriage and cohabitation history, I construct two measures operationalizing the early socialization perspective. Marital birth is a dummy variable. If children were born within marriage, then marital birth is coded as 1, otherwise 0. The cumulative time in each family status during the first 6 years in childhood is a set of continuous variables. Family statuses used in this measure include married family, cohabiting family, and single-parent family. The purpose of including the early childhood experience is to capture the long-term effect of early socialization (Hao and Xie 2002; Wu and Martinson 1993). In creating this measure, however, two-biological-parent family and stepfamily are both considered as a married family, because the parent survey from where this measure is constructed does not differentiate these two different kinds of families.

Two indicators of parental characteristics are included as controls. Parental depression is coded as 1 if the parent answered "no" to the question "In general, are you happy?". Number of the parent's prior marriage or marriage-like relationships is measured in parental relationship history survey. These relationships are asked about in reference to the 18-year period prior to Wave I, or from 1977 to 1995, so these refer to changes in parent's relationships during the course of the child's lifetime. For children who were 18 years old in 1995, such a measure captures the cumulative stress caused by family transitions throughout childhood; for those who were younger at the time, this variable is just a crude measure of a history of family changes. Because changes might possibly happen before the child was born, the interpretation of this variable requires cautions.

Socioeconomic status includes family income at W1 and parental education background. Family income was coded as categories with a category for missing to prevent loss of cases due to missing data. Parental education is measured for resident parents or nonresident biological parent by a five category scale from less than high school or unknown to post graduate degree. To avoid large number of missing data due to non-intact families, higher parental education is selected for the analysis.

Analysis Strategy

In this study, the dependent variables are measured on ordinary scales with several levels. Strictly speaking I cannot use linear regression, because I do not know the magnitude of differences between categories. In other words, even though integer scoring is easy to interpret, the restrictive assumption underlying linear regression may simply

not be met. In addition to the problem of nonlinear model fit, assuming interval scales also forces us to make strong assumption of the error distribution. If these assumptions are violated, the rate of making Type I error (mistakenly thinking there is a relationship) will be too high. Alternatively, ordered logit approach is best for this study to examine the ordinal dependent variables. The ordered logit effectively averages the coefficients for the explanatory variables across all the possible cumulative logits. As a result, all of the information in the ordered data gets used. Therefore, ordered logit model will be most appropriate for this study. Ordered logit model has one strong assumption: the effects of the predictors on the dependent variable are the same or proportional for all category differences.

Because Add Health's multistage sample design, sampled adolescents are not selected independently. Thus, my analyses use the Surveylogistic procedure in SAS to obtain standard errors corrected for the clustered design. I first estimate models that include only control variables. Then family structures at W1 are added to constitute the base model for the following models. Measures of family transitions are then introduced into the base model. Because I hypothesize that the effects of family transitions on adolescent's depression will change once mediators are included, I then introduce these variables in subsequent models.

Chapter 4

RESULTS

Before examining ordered logit models, I briefly discuss some descriptive statistics. Table 2 represents descriptive statistics (means or percentages, as appropriate) for the total sample as well as by family structure measured at Wave 1. About 56% (6,247/11,026 = .57) of children were living with both biological parents at Wave 1. Single-parent families are the second largest group in the sample, taking 20% (2,938/11,026 = .26) of the total, followed by 11% (1,165/11,026 = .11) cohabiting families. Most adolescents, regardless of family type, rate their depression level low at only between 0.4 and 0.5 out of a maximum of 3 at Wave 1 and Wave 2. Depression levels are lowest among adolescents residing with two biological parents and highest in "other" types of families (living with only grandparent, foster parent, or no parental figure), followed by cohabiting families. Table 2 indicates that 17% respondents reported having a family transition, about 5% lost parent(s) and over 10% gained parent(s). To be more specific, while 63% were in a stably married family and 16.73% were still in single-parent families between the two waves, about 11% of the respondents experienced transition in or out of cohabitation (.91 + .87 + 5.62 + 3.55 = 10.95). Among the five categories of family structure, cohabiting families tend to be least stable. Compared to other types of families that stay unchanged, only 1% of cohabiting families did not have a transition.

[TABLE 2 ABOUT HERE]

The closeness to parent scores averaged near the high end, at about 4 out of a maximum of 5. Respondents rated their parental control fairly low, at about 1.7 out of a

maximum of 7. Two-biological-parent families were in best socioeconomic situation. Nearly 18% cohabiting families were receiving public assistance at Wave 2, followed by "other" type of families and single-parent families. As expected, majority of children living in "other" type of families were living with relatives, while moderate amount of single parents, no matter they had cohabiting partners or not, were also residing with relatives at Wave 2. More of the residential move occurred in single-parent and "other" type of families since Wave 1. For children's demographic characteristics, respondents are 16 years old on the average and approximately equally split between males and females. 14% of the sample is black, 11% is Hispanic, 3% is Asian and other races are about 1%. Since "others" is a combination of groups and has a small number of cases, interpretations will not be given for the "other" racial category. 73% respondents were born within marriage. As expected, 85% respondents who were living with two biological parents at Wave 2 were born within the marriage. In general, respondents seem to spend most of the first 6 years of their life in a married family, although children currently in cohabiting family spent least time with married parents during early childhood (only 3 years out 6 were in married-families). On average, single parents have been in only one marriage-like relationship, and parents from cohabiting and step families in this sample have been in, on average, two relationships. Fairly few parents indicate having depression, with more single and/or cohabiting parents reporting depression. Parents in these families also tend to have lower income and lower education than their married counterparts in the sample.

[TABLE 3 ABOUT HERE]

Table 3 shows the family structure distribution at both Wave 1 and Wave 2 in the sample and indicates the changes in family structure from Wave 1 to Wave 2. The results are presented as frequencies, with row percentage in parentheses. Numbers on the diagonal of the matrix represent families that did not experience family structure changes between the two waves. This group of families occupies the major proportion of the matrix by 84% ((5,964 + 757 + 167 + 1,949 + 6 + 91 + 12 +271) / 11,026 = .84). Row percentage reflects the change of family structure from Wave 1 to Wave 2. For example, first line of the matrix shows that 95.47% of families with two biological parents stayed intact from Wave 1 to Wave 2, while 2.31% became single-mother families. Along the diagonal, families with two biological parents tend to be most stable than other kinds of families (over 95.47% remained unchanged), followed by stepfamilies, while higher percentage of families with single fathers experienced family structure transition during the time period and only 1.81% remained changed. It needs to be noted, however, that 332 families were categorized as single-father families at Wave 1 but only 12 single-father families at Wave 2.

[TABLE 4 ABOUT HERE]

Next the effects of predictors on the odds of depression are examined. Table 4 through Table 7 show the categorical analysis of adolescent's depression with four sets of family indicators and mediating factors. Each contains two to seven ordered logit models. The results are presented as odd ratios, which are the exponentiated logistic regression of coefficients. These odds ratios represent the effect of an independent variable on the odds of being higher category of depression. An odd ratio greater than one is a positive effect

on odds, or in other words, an effect that increases the level of depression. An odds ratio less than one is a negative effect that alleviates depression. An odds ratio equal to one is a null effect that does not influence the odds.

Analyses with unweighted sample (analyses not shown in tables) indicate that none of the models violates the proportional assumption test. However, proportional assumption test for analysis with weighted sample suggest that the assumption were violated. Multiple statistical research suggest that the proportional odds assumption tests provided in some statistics software packages including SAS is not very informative for large sample study and researchers should not solely depend on the significant test since a statistical significance does not necessarily mean a practical significance (Kim, 2000). Thus, I will continue the discussion with the findings from analysis with weighted sample.

Model 1 and Model 2 of Table 4 test the social control theory by presenting effects of family structure at Wave 1 on the odds of adolescent being very depressed. Model 1 tests the effect of controls and Model 2 introduces conventional snapshot measures of family structure at Wave 1. It provides the base model for the following analysis of effect of family transitions. Table 4 shows that, when holding control variables constant, the effects of family structure at Wave 1 are not significant.

While I do not want to devote too much attention to the control variables, their effects are largely consistent with previous research. For example, older female minority children are more likely to have higher level of depression than younger male Caucasian children. Children who previously had depression are more over 380% (4.857 – 1 = 385.7) more likely to be in higher level of depression in the future. In general, better-off families

in terms of socioeconomic status are associated with adolescents' lower levels of depression. Note that adolescents do not differ by either their own past family experience which is indicated through marital birth and family status during early childhood, or by parental characteristics such as martial stability history and parental depression.

[TABLE 5 ABOUT HERE]

Introducing family transition to the base model (model 2 in Table 4), models of Table 5 examines the family instability hypothesis that family transitions raise adolescent's depression level. Results of model 1 in Table 5 do not seem to support the family instability perspective: adolescents who experienced a family transition between the two waves are more likely to have higher level of depression, but the effect of family transition is not significant. Similar to previous models, effects of early childhood experiences and parental marital history are not significant. According to past empirical research, family events have substantial short-term elevations in children's depression, and in a long run, the effects tend to fritter away. However, my findings in Table 5 appear to be inconsistent with the notion of detrimental short-term effect of family crisis. Thus, I decide to explore if the kind of family transition will matter. Models in Table 5 merely examine the situations in which adolescent experiences a family transition or not. We know little about what kind of family transition matters. Are different kinds of family transition influence adolescent's mental health in different ways? Is gaining a parent the same as losing a parent in terms of influence adolescent's depression? If so, do they functions in the similar magnitude? What explain(s) the effect of different kinds of family transition? I investigate these questions in models of Table 6.

[TABLE 6 ABOUT HERE]

Table 6 presents models of the short-term effects of general types of family transitions on adolescent's depression and the intervening mechanism linking the types of family transitions and adolescent's depression. Results in model 1 of Table 6 indicate that different types of transition raise depression in various extents, although not all effect are significant. Losing parent has the strongest significant effect. Compared to those who did not experience any family transition, adolescents who lost a parent(s) are 40% (1.4 – 1 = .40) more likely to be in a higher level of depression. Other kinds of family transition, though detrimental, do not have significant effect on adolescent's depression. Because the effects of gaining parent or change in type of parent are not significant, the discussion will be focused on that of losing parent.

As discussed above, several family factors can be the potential mechanisms through which family transitions influence adolescent's depression. Thus, it is possible that the observed associations between family transitions, losing parent in particular, and adolescent's depression shown in model 1 are actually due to family factors or events triggered by the family transition which occurred. These factors include family processes (measured by closeness to parents and parental control), economic hardship, residential mobility and presence of relatives (hypothesis 3). Model 2 to 6 investigate this hypothesis by adding measures of family factors to model 1 one by one, and model 7 tests the intervening role of these factors as a whole. Comparing the estimated influence of family transition with and without other family factors provides an indication of the extent to which the effect of family transitions influence adolescent's depression indirectly via the

intervening mechanism of other family factors. If family transition influence adolescent's depression mainly because of the differences in other family factors or family events caused by family transition, then the estimated effect of family transition will decline when other family factors are included in the same model.

As expected, model 2 to 7 shows that other family factors, especially family process and economic situation, have strong effect on adolescent's depression. Adolescents who are closer to their parents have lower depression level, while those whose parents practice strict supervision and have financial problem have higher depression level. Residential mobility, while positive (meaning it raises children's depression), does not have significant effect. Similarly, effect of presence of relatives is not significant.

Model 2 to 7 support hypothesis 3. The effect of losing parent is not only reduced but also becomes statistically insignificant once all family factors are controlled. When intervening family factors are introduced respectively in model 2 to 6, the decrease in the magnitude of effect of losing parent indicates that a portion of the influence of losing parent is indirect via other family factors such as family process and economic situation. For example, about 10% of its impact is explained by closure between parents and children. Yet parental control has slight suppressor effect on the link between losing parents and depression. In other words, it slightly increases the effect of losing parents. In the aggregate, combined effect of other family experiences explains away the impact of losing parent on adolescent's depression (model 7). Thus, the results are consistent with

the notion that family environment and context in which children are raised are important for understanding differences in the effect of family transition.

[TABLE 7 ABOUT HERE]

To better understand the link between different sorts of family transitions and adolescent's depression, Table 7 explores the effects of more specific kinds of family transitions on depression in details. Moving beyond simple categories like losing and gaining parents, family transitions are broken down into nine exclusive types. Table 7 extends to more detailed questions, such as whether there is a difference in losing parent via transiting from married family to divorced and then cohabitation or via married family to single-parent family. In other words, it investigates the differences within each simple type of family transition. Moreover, families which did not experience structural transition are also divided into types including staying as married families, single-parent families, staying as cohabiting families and staying as other types of families. The purpose is to contrast and examine the differential effect of instable families, stable but non-intact families, and stably married families. Examining the effects of stability of family status also test the social control hypothesis, which suggests that the essential role of stability in single-parent families, cohabiting families and "other" type of families in reducing adolescent's depression.

Model 1 of Table 7 documents the effect of 12 possible kinds of family transitions and status on adolescent's depression with staying in married family as reference. According to model 1, four detailed kinds of family transition have significant effect on adolescent's depression, each of which represents a simple category of family transition

tested in Table 6. These kinds of family transition include transitions from married families to divorced and then cohabiting families, from married families to single-parent families (two kinds of "losing parent" in Table 6), transitions from unmarried families to married families (one kind of "gaining parent" in Table 6), and transitions from married to divorced and then remarried families (one kind of "change of type of parent" in Table 6). All these kinds of transitions will increase the odds of adolescents having a higher score of depression. For example, compared to those who are in stably married families, adolescents, who used to live with married parent but later in a year lived in divorced and then cohabiting families, are 86% (1.86 – 1 = .86) more likely to have higher degree of depression. While in Table 6 gaining parent or changes in type of parents do not appear to have significant association with adolescent's depression, one specific kind of each of these two categories examined in Table 7 does show significant effect. This suggests that it is necessary to break family transitions into more specific categories so as to have better and more accurate understanding of the effect of family transitions.

Holding other factors constant, multiple family transitions seem to have the most detrimental influence on adolescent's mental health. Children, whose married parents got divorced and then either got into cohabitation or remarriage, have much more likelihood of having higher degree of depression. This finding is consistent with the family instability perspective that addresses the number of family transition. For example, Adolescents who experienced parental divorce and remarriage over a year are 106% (2.06 -1 = 1.06) more likely to have higher degree of depression. An analysis not shown indicates that four respondents out of these 72 cases that experienced this kind of family

transition scored their level of depression as 2 and above, 3 being the highest score. Thus it does not appear likely that this effect is driven by enough influential cases that could influence the results.

Model 2 to 6 explores the intervening role of each related family experiences as an explanation of the impact of family transition. Similar to the previous analysis, closeness to parents has the strongest mediating effect, followed by financial problem. These two explain part or all of the effect of different types of family transition that used to have significant impact on adolescent's depression. Again, parental control has slight suppressor effect on the link between types of family transition and depression. Finally, model 7 examines the aggregate intervening effect of all family experiences. Effects of single family transition are no longer significant, but effects multiple transitions still exist. Approximately 10% of the effect of transition from married families to divorced and cohabiting families is explained away. However, the effect of transition from married to divorced and remarried families stay strong and significant. It indicate that some other factors not included in this analysis are functioning as mediators between family transition and adolescent's depression.

Overall, the findings suggest that family transitions have strong and significant influence on adolescent's depression, but in various magnitudes depending on what kinds of family transitions occurred. In addition, effect of family transitions on adolescent's depression, despite of the kind of transition, can be explained by other family experiences children have.

Chapter 5

DISCUSSION

Population studies of adolescents have reported that the lifetime prevalence rate of major depressive disorder in adolescents has been estimated to range from 15% to 20%, which is comparable with that found in adult populations, suggesting that depression in adults often begins in adolescence (Kessler et al. 1994). Past research also suggests that depression increases the risk for substance abuse, suicidal behavior, and poor psychosocial and functional outcome (Birmaher et al. 1996). Given the importance of studies of adolescent's depression, the current analysis is another effort made toward identifying correlates of course of depression in children and adolescents in the familial context.

Family structure is a key concept in sociological research on family and child outcomes. This study of the effects of shift in family as family crsis on child outcomes provides new insights into the complexity of family experiences in childhood. To this end, I use adolescent's psychological well-being as a child outcome in a comprehensive examination of the role of family transition, addressing both the complexity of family transitions and the mechanisms linking family transitions with child outcomes.

To address the complexity of family transitions, I develop both general and specific categories of family transitions, including the simple dichotomous assessment of family transition, generalization of loss or gain of parents, and more detailed and specific family sequences. In this way, I examine more valid and precise measures of childhood experience in recent family environment.

To explore the pathways linking family transition with child outcomes, the analysis introduces five related familial resources as mediating factors. Examining the change of effects of family transitions after adding these mediators gives us a clearer picture of the association between family transitions and child outcomes.

I organize the substantive findings according to the central hypotheses. Results do not support Hypothesis 1 that adolescent's psychological well-being is associated with the family status at W1. Adolescent's depression do not appear to differ by different family structures, holding other factors constant.

Findings show that family transitions exacerbate adolescent's psychological well-being, supporting Hypothesis 2. This is consistent with research which emphasizes the importance of family stability rather than family structure for predicting child well-being (Hao & Xie, 2001; Hill et al, 2001; Wu & Martinson, 1993). A simple dichotomous measurement of family transition cannot give us an accurate picture of the negative effect of family transitions on adolescent's depression. Different types of family transitions between waves deteriorate adolescents' psychological well-being by different magnitudes. In general, adolescents who lost parents are highly likely to have higher score of depression. Multiple family transitions involving divorce followed by new family union are especially detrimental to adolescent's psychological well-being.

In partial support of Hypothesis 3, I find that some family experiences explain the influence of family transitions on adolescent's depression. My findings speak to how family processes and the complexity of family influence children's lives. Closeness to parent significantly reduces adolescent's depression and explains part of the effects of

family transitions on children's depression. With regard to parental control, I find that it generally raises adolescent's depression and has slight suppressor effect on the influence of family transition. I also try to account for economic hardship (receipt of public assistance). Similar to prior studies, my findings suggest that economic circumstances are associated with adolescent well-being (Duncan & Brooks-Gunn 1997) and it partially explain the effect of family transitions. However, my results of residential mobility and presence of relatives is inconsistent with past research. These potential mediators do not have significant effect on adolescent's depression; nor do they change the influence of family transitions significantly. It may be due to the fact of parent-child closure, like adolescent's depression, is a psychological measure, while other factors examined are not. It needs attention that effects of multiple family transitions are still significant, even after introducing mediators. This reminds us that there are other factors that may lead to adolescent's depression, such as parental conflict. Because parental relationship only applies to two-parent families and it is not available in the cases of cohabiting families in Add Health, I did not include this measure in the analysis. Future study should address this limitation.

The findings provide little support for social control theory. Effects of recent family structures (at W1) and stability of family through W1 to W2 were small and not significant. Contrary to study by Hao and Xie (2001), this study does not support for a hypothesis that stable families, albeit the kind of family structure, can reduce children psychological well-being, because of their continuation in consistent role modeling and stable and enforceable supervision and discipline.

The findings also provide little support for socialization theory. I test two variants of this hypothesis by examining the consequences of being born into marriage and extended years in each family structure during early childhood. Contrary to expectations, the effects of martial birth on adolescent's depression were not significant and in the opposite direction expected. Analyses also revealed adverse but insignificant effects of prolonged exposure to each family structure during first six years in childhood. These results, however, are consistent with past research (Hao and Xie 2001; Wu and Martinson 1993).

In general, my findings are more consistent with family instability theory and family crisis argument. Change rather than type of structure predominates in the strength of association with adolescent's psychological well-being. I also find that family transitions have a more pronounced association with adolescent's depression if the events occurred recently. Changes in parent's relationships during the course of the child's lifetime are not significantly associated with children's depression during adolescence. This is consistent with family instability theory also, which posits that change in family structure will have its greatest effects close to the time of the change. In addition, the number of transition matters. The more transitions the family goes through, the worse it will affect the children's mental health.

Several limitations should be noted when reviewing these findings. First, structural transition in family between waves transpired over a relatively short period of time. Although this study was able to cover a rich array of family transition indicators, adolescents' adjustment over the long-term to these familial transitions is not yet known.

In addition, the Add Health does not provide full marital or partnership histories from parents. A longitudinal measure of the social control theory and socialization need to be developed to capture the stability and fluidity of family status. Still, cross-sectional problems could occur when mediators and dependent variable in this analysis are measured at the same wave, which means that depression could be the cause the difference in closeness to parent, for instance. Thus, caution need to be brought to the interpretations of the results of this analysis. Last, the statistical models do not fully control for past family histories or unmeasured characteristics of parents that might be correlated with both family structure transitions and adolescent psychological well-being.

In summary, this study is a further step in understanding the complexity of family transitions and its link with adolescents' well-being. Future work on other samples should examine whether these patterns are replicated. Moreover, further research will be necessary to examine a wide array of child outcomes at various developmental stages to obtain a comprehensive understanding of the role of family structure in various dimensions of child outcomes. Early childhood experience may be more enduring for attitudinal development while adulthood may be more important for family formation behaviors (Hao and Xie 2002; Wu and Martinson 1993). Last, future research needs to take school, neighborhood, and peer influence into account. For all the above research prospects, findings of this study suggest a need for rigorous measurement and modeling in order to better our understanding of the relationship between family experiences and child outcomes.

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APPENDIX A

MEASUREMENT OF ADOLESCENT'S DEPRESSION

1. You were bothered by things that usually don't bother you.
2. You felt that you could not shake off the blues, even with help from your family and your friends.
3. You had trouble keeping your mind on what you were doing.
4. You felt depressed.
5. You thought your life had been a failure.
6. You felt fearful.
7. You talked less than usual.
8. You felt lonely.
9. You felt sad.
10. It was hard to get started doing.
11. You felt life was not worth living.

Table 1

Construction of Types of Transition between W1 and W2

General types	Detailed types	Transition between W1 and W2
Lose parent	Married -> Cohabit	2-Bio/Step -> Cohabit
	Married -> Single	2-Bio/Step -> Single
	Have no parent	2-Bio/Step/Single/Cohabit -> Other
	Cohabit -> Single	Cohabit -> Single
Gain parent	Unmarried -> Married	Single/Cohabit -> 2-Bio/Step
	Single -> Cohabit	Single -> Cohabit
	Get at least a parent	Other -> 2-Bio/Step/Single/Cohabit
Changes in types of parents	Divorced and Remarried	2-Bio -> Step, Step -> 2-Bio
	Custody change	Step-f <-> Step-m, Single-f <-> Single-m, Cohabit-f <-> Cohabit-m

Note.—The abbreviated family situations above are defined as follows: (2-bio) = biological mother and biological father, (step-f) = stepfather and biological mother, (step-m) = stepmother and biological father, (cohabit-f) = biological father with cohabiting partner, (cohabit-m) = biological mother with cohabiting partnering family, (single-f) = single father, (single-m) = single mother. Arrow (-> or <->) indicates change in family structure.

Table 2

Means/Percentages for Variables Used in the Analysis

	Total sample	Two bio-parents family	Step-parent family	Cohabi-ting family	Single-parent family	Other types of family
N	11,026	6,247	1,165	276	2,938	400
Depression at W2	0.38	0.34	0.38	0.47	0.44	0.52
Transition between waves (%)	16.78	4.19	20.93	63.89	35.89	32.16
General types of transition (%)						
Lose parent	5.32	3.46	16.63	33.04	2.82	-
Gain parent	10.29	-	-	30.02	31.95	32.16
Change in type of parents	1.17	0.73	4.30	0.83	1.12	-
Detailed types of transition and status (%)						
Married ->Divorced & Cohabit	0.91	0.78	4.55	-	-	-
Married -> Single	2.26	2.17	10.01	-	-	-
Have no parent	1.28	0.51	2.07	1.57	2.82	-
Cohabit -> Single	0.87	-	-	31.48	-	-
Unmarried -> Married	5.62	-	-	30.02	18.35	-
Single -> Cohabit	3.55	-	-	-	13.60	-
Get at least a parent	1.12	-	-	-	-	32.16
Married ->Divorced & Remarried	0.70	0.73	2.77	-	-	-
Custody change	0.47	-	1.54	0.83	1.12	-
Stay married	63.13	95.81	79.07	-	-	-
Stay single	16.73	-	-	-	64.11	-
Stay cohabiting	1.00	-	-	36.11	-	-
Stay as other types	2.36	-	-	-	-	67.84
Mediators (all measured at W2)						
Closeness to parent	4.12	4.25	4.03	3.87	3.91	4.01
Parental control	1.66	1.72	1.72	1.44	1.54	1.52
Receipt of public assistance (%)	8.68	4.66	10.46	18.11	14.77	16.87
Residential mobility (%)	8.56	4.07	6.61	5.09	12.69	60.37
Presence of relatives (%)	9.78	4.91	8.05	20.54	18.90	18.48
Controls (pertain to W1 and before)						
Child's characteristics						
Age	15.77	15.72	15.84	15.61	15.81	16.22
Female (%)	49.73	49.76	47.07	46.87	51.08	49.05
Race (%)						
White	70.82	77.02	73.78	70.80	59.18	46.87
Black	14.32	7.77	11.65	13.42	26.94	36.62
Hispanic	11.42	10.84	11.80	14.74	12.17	11.62
Asian	3.25	3.96	2.49	2.26	2.14	2.88

Others	1.37	1.18	1.18	2.25	1.64	2.36
Prior depression	0.37	0.32	0.41	0.42	0.45	0.54
Born within marriage (%)	73.35	84.77	58.77	57.99	58.28	51.78
Cumulative years, age 0-5						
Married	4.33	5.10	3.46	3.12	3.26	3.15
Cohabit	0.20	0.06	0.24	0.48	0.44	0.22
Single	0.34	0.12	0.35	0.67	0.70	0.91
Parental characteristics						
Number of parent's marriage	1.31	1.04	2.05	2.30	1.56	1.14
Parental depression (%)	3.68	2.16	1.79	6.29	7.17	5.98
Socioeconomic status						
Family income (%)						
$14,999 and under	13.41	5.16	9.18	20.09	30.81	26.32
$15,000-$24,999	12.23	8.13	10.70	23.70	20.31	14.72
$25,000-$34,999	12.53	11.17	13.59	18.67	13.93	16.57
$35,000-$49,999	17.22	19.37	21.25	9.90	12.22	13.30
$50,000-$74,999	20.89	27.12	20.67	11.29	9.52	11.46
$75,000 and up	12.65	17.13	14.95	5.56	3.92	2.85
income missing/refused	11.07	11.91	9.66	10.80	9.28	14.79
Parental education (%)						
Less than high school/unknown	14.25	9.74	10.14	27.70	21.60	35.12
High School	30.57	26.70	32.18	41.03	36.76	35.15
Some College	21.26	21.45	25.87	16.17	20.89	11.62
College Degree	22.95	27.37	24.18	11.68	15.40	11.84
Graduate Degree	10.97	14.74	7.64	3.42	5.35	6.28

Note.—Means are weighted by Wave 2 grand sample weights.

Table 3

Frequencies/Row Percentages of Family Situation in W1 and W2

W1 \ W2	2 bio	bio-m, stp-f	bio-f, stp-m	single-m	single-f	cohabit-m	cohabit-f	other	Total
2 bio	5964 (95.47)	35 (0.56)	5 (0.08)	144 (2.31)	0 -	6 (0.10)	55 (0.88)	38 (0.61)	6247 (100.00)
bio-m, stp-f	20 (2.10)	757 (79.35)	8 (0.84)	102 (10.69)	4 (0.42)	34 (3.56)	5 (0.52)	24 (2.52)	954 (100.00)
bio-f, stp-m	7 (3.32)	8 (3.79)	167 (79.15)	9 (4.27)	0 -	0 -	17 (8.06)	3 (1.42)	211 (100.00)
single-m	66 (2.53)	358 (13.74)	22 (0.84)	1949 (74.79)	2 (0.08)	112 (4.30)	16 (0.61)	81 (3.11)	2606 (100.00)
single-f	11 (3.31)	10 (3.01)	48 (14.46)	24 (7.23)	6 (1.81)	2 (0.60)	212 (63.86)	19 (5.72)	332 (100.00)
cohabit-m	3 (1.21)	67 (27.02)	1 (0.40)	80 (32.26)	0 -	91 (36.69)	2 (0.81)	4 (1.61)	248 (100.00)
cohabit-f	2 (7.14)	2 (7.14)	9 (32.14)	2 (7.14)	0 -	0 -	12 (42.86)	1 (3.57)	28 (100.00)
other	40 (10.00)	17 (4.25)	1 (0.25)	56 (14.00)	0 -	3 (0.75)	12 (3.00)	271 (67.75)	400 (100.00)
Total	6113	1254	261	2366	12	248	331	441	11026

Note.—The abbreviated family situations above are defined as follows: (2-bio) = biological mother and biological father, (bio-m, step-f) = biological mother and stepfather, (bio-f, step-m) = biological father and stepmother, (cohabit-f) = biological father with

cohabiting partner, (cohabit-m) = biological mother with cohabiting partnering family, (single-f) = single father, (single-m) = single mother.

Table 4

Effects of Family Structure at W1 on Adolescent's Depression

	Model 1		Model 2	
Family structure at W1				
(ref. = two-biological-parent family)				
Step			0.975	
Cohabit			1.296	
Single			1.1	
Others			1.217	
Controls (pertain to W1 and before)				
Child's characteristics				
Age	1.094	***	1.093	***
Female	1.558	***	1.559	***
Race (ref. = White)				
Black	1.19	*	1.166	
Hispanic	1.25	*	1.256	*
Asian	1.259		1.264	
Others	1.465		1.462	
Prior depression	4.872	***	4.857	***
Born within marriage	1.203		1.183	
Cumulative years, age 0-5				
Married	0.984		0.99	
Cohabit	1.028		1.028	
Single	1.01		1.006	
Parental characteristics				
Number of marriage	1.038		1.024	
Parental depression	1.182		1.16	
Socioeconomic status				
Family income (ref. = $14,999 and under)				
$15,000-$24,999	0.803		0.809	
$25,000-$34,999	0.824		0.84	
$35,000-$49,999	0.766	**	0.792	*
$50,000-$74,999	0.916		0.952	
$75,000 and up	0.784	*	0.82	
income missing/refused	0.938		0.965	
Parental education				
(ref. = less than high school or unknown)				

High School	0.918		0.931	
Some College	0.831	*	0.848	
College Degree	0.687	***	0.701	***
Graduate Degree	0.709	**	0.723	*

Note.—*p<.05, **p<.01, ***p<.001

Table 5

Effects of Transition between W1 and W2 on Adolescent's Depression

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Transition	1.13		1.13		1.13		1.14		1.11		1.13		1.19	
Mediators (all measured at W2)														
Closeness to parent			0.66	***									0.66	***
Parental control					1.07	***							1.08	***
Receipt of public assistance							1.24	*					1.26	**
Residential mobility									1.16				1.17	
Presence of relatives											0.93		0.93	
Family structure at W1														
(ref. = two-biological-parent family)														
Step	0.96		0.89		0.96		0.96		0.96		0.96		0.88	
Cohabit	1.21		1.03		1.25		1.2		1.21		1.21		1.05	
Single	1.06		0.92		1.08		1.05		1.05		1.06		0.93	
Others	1.17		1.08		1.2		1.16		1.16		1.22		1.12	
Controls (pertain to W1 and before)														
Child's characteristics														
Age	1.09	***	1.07	***	1.12	***	1.09	***	1.09	***	1.09	***	1.1	***
Female	1.56	***	1.43	***	1.57	***	1.57	***	1.56	***	1.57	***	1.44	***
Race (ref. = White)														
Black	1.17		1.25	**	1.15		1.17		1.17		1.18		1.23	*
Hispanic	1.26	*	1.31	**	1.23	*	1.26	*	1.26	*	1.26	*	1.28	*
Asian	1.27		1.23		1.24		1.26		1.27		1.28		1.21	
Others	1.46		1.46		1.48		1.48		1.46		1.47		1.49	

Prior depression	4.85	***	4.63	***	4.81	***	4.83	***	4.84	***	4.85	***	4.56	***
Born within marriage	1.19		1.19		1.2		1.2		1.2		1.19		1.21	
Cumulative years, age 0-5														
Married	0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Cohabit	1.03		1.03		1.03		1.02		1.03		1.03		1.03	
Single	1.01		1.01		1.01		1.01		1.01		1.01		1.01	
Parental characteristics														
Number of marriage	1.02		1.02		1.02		1.01		1.02		1.02		1.01	
Parental depression	1.16		1.08		1.15		1.13		1.15		1.16		1.06	
Socioeconomic status														
Family income (ref. = $14,999 and under)														
$15,000-$24,999	0.81		0.8		0.81		0.84		0.81		0.81		0.85	
$25,000-$34,999	0.83		0.82		0.85		0.88		0.84		0.83		0.89	
$35,000-$49,999	0.79	*	0.78	*	0.8	*	0.83		0.79	*	0.78	*	0.86	
$50,000-$74,999	0.94		0.93		0.96		1		0.95		0.94		1.02	
$75,000 and up	0.81		0.81		0.83		0.86		0.82		0.81		0.89	
income missing/refused	0.96		0.97		0.97		1		0.96		0.96		1.04	
Parental education														
(ref. = less than high school or unknown)														
High School	0.94		0.94		0.95		0.95		0.94		0.94		0.97	
Some College	0.85		0.83	*	0.87		0.87		0.86		0.85		0.87	
College Degree	0.71	***	0.68	***	0.72	***	0.72	**	0.71	***	0.7	**	0.71	***
Graduate Degree	0.73	*	0.71	**	0.75	*	0.75	*	0.73	*	0.73	*	0.75	*

Note.—*p<.05, **p<.01, ***p<.001

Table 6

Effects of General Types of Transition on Adolescent's Depression

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
General types of transition (ref.= no transition)														
Lose parent	1.4	*	1.33	*	1.42	*	1.39	*	1.37	*	1.42	*	1.34	
Gain parent	0.94		0.95		0.93		0.95		0.93		0.93		0.93	
Change in type of parents	1.54		1.64		1.55		1.54		1.5		1.53		1.61	
Mediators (all measured at W2)														
Closeness to parent			0.66	***									0.66	***
Parental control					1.07	***							1.08	***
Receipt of public assistance							1.22	*					1.25	*
Residential mobility									1.14				1.15	
Presence of relatives											0.89		0.9	
Family structure at W1 (ref. = two-biological-parent family)														
Step	0.92		0.85		0.92		0.92		0.92		0.92		0.85	
Cohabit	1.2		1.03		1.24		1.19		1.2		1.2		1.05	
Single	1.13		0.98		1.17		1.12		1.13		1.15		1	
Others	1.28		1.16		1.31		1.26		1.26		1.37		1.24	
Controls (pertain to W1 and before)														
Child's characteristics														
Age	1.09	***	1.07	***	1.12	***	1.09	***	1.09	***	1.09	***	1.1	***
Female	1.56	***	1.43	***	1.57	***	1.56	***	1.56	***	1.56	***	1.44	***
Race (ref. = White)														
Black	1.15		1.23	**	1.13		1.15		1.15		1.16		1.21	*
Hispanic	1.26	*	1.31	**	1.23	*	1.26	*	1.26	*	1.27	*	1.29	*

Asian	1.26		1.23		1.23		1.26		1.26		1.28		1.21	
Others	1.46		1.45		1.47		1.47		1.45		1.46		1.48	
Prior depression	4.84	***	4.62	***	4.8	***	4.83	***	4.84	***	4.84	***	4.56	***
Born within marriage	1.19		1.2		1.2		1.2		1.2		1.2		1.21	
Cumulative years, age 0-5														
Married	0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Cohabit	1.03		1.03		1.03		1.03		1.03		1.03		1.03	
Single	1.01		1.01		1.01		1		1.01		1.01		1.01	
Parental characteristics														
Number of marriage	1.03		1.02		1.02		1.02		1.02		1.02		1.01	
Parental depression	1.14		1.07		1.13		1.12		1.13		1.14		1.04	
Socioeconomic status														
Family income (ref. = $14,999 and under)														
$15,000-$24,999	0.82		0.81		0.83		0.85		0.82		0.82		0.86	
$25,000-$34,999	0.85		0.84		0.87		0.9		0.85		0.85		0.91	
$35,000-$49,999	0.81	*	0.8	*	0.83		0.85		0.81	*	0.81	*	0.88	
$50,000-$74,999	0.96		0.95		0.99		1.02		0.97		0.97		1.05	
$75,000 and up	0.84		0.83		0.86		0.88		0.84		0.84		0.91	
income missing/refused	0.98		0.99		1		1.02		0.98		0.98		1.06	
Parental education														
(ref. = less than high school or unknown)														
High School	0.93		0.94		0.95		0.94		0.94		0.94		0.97	
Some College	0.85		0.83	*	0.87		0.87		0.85		0.85		0.86	
College Degree	0.7	***	0.68	***	0.71	***	0.72	***	0.71	***	0.7	***	0.7	***
Graduate Degree	0.73	*	0.71	**	0.74	*	0.74	*	0.73	*	0.73	*	0.74	*

Note.—*p<.05, **p<.01, ***p<.001

Table 7

Effects of Detailed Types of Transition and Status on Adolescent's Depression

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Detailed types of transition and status (ref. = stay married)														
Married ->Divorced & Cohabit	1.86	*	1.71	*	1.96	**	1.85	*	1.85	*	1.86	*	1.78	*
Married -> Single	1.55	*	1.39		1.58	*	1.54	*	1.52	*	1.55	*	1.39	
Have no parent	1.38		1.3		1.39		1.38		1.3		1.48		1.33	
Cohabit -> Single	1.13		0.95		1.18		1.11		1.11		1.12		0.95	
Unmarried -> Married	1.26	*	1.15		1.28	*	1.26	*	1.24	*	1.26	*	1.14	
Single -> Cohabit	0.96		0.83		0.98		0.96		0.95		0.97		0.85	
Get at least a parent	1.05		0.92		1.07		1.04		1.02		1.06		0.9	
Married ->Divorced & Remarried	2.06	*	2.09	*	2.06	*	2.06	*	2.02		2.05	*	2.07	*
Custody change	1.17		1.17		1.21		1.17		1.13		1.17		1.16	
Stay single	1.16		1.01		1.2		1.15		1.15		1.17		1.03	
Stay cohabiting	1.81		1.59		1.87		1.82		1.79		1.81		1.63	
Stay as other types	1.4		1.33		1.44		1.39		1.4		1.56		1.5	
Mediators (all measured at W2)														
Closeness to parent			0.66	***									0.66	***
Parental control					1.07	***							1.08	***
Receipt of public assistance							1.12	*					1.26	*
Residential mobility									1.15				1.15	
Presence of relatives											0.87		0.87	
Controls (pertain to W1 and before)														
Child's characteristics														
Age	1.09	***	1.07	***	1.12	***	1.09	***	1.09	***	1.09	***	1.1	***

Female	1.56	***	1.43	***	1.57	***	1.57	***	1.56	***	1.56	***	1.44	***
Race (ref. = White)														
Black	1.15		1.23	*	1.12		1.15		1.14		1.15		1.21	*
Hispanic	1.25	*	1.3	**	1.22	*	1.25	*	1.25	*	1.26	*	1.28	*
Asian	1.26		1.23		1.23		1.26		1.26		1.28		1.21	
Others	1.45		1.45		1.46		1.46		1.44		1.45		1.48	
Prior depression	4.85	***	4.62	***	4.81	***	4.84	***	4.84	***	4.85	***	4.56	***
Born within marriage	1.22		1.23		1.23		1.23		1.22		1.22		1.24	
Cumulative years, age 0-5														
Married	0.99		0.99		0.99		0.99		0.99		0.99		0.99	
Cohabit	1.03		1.04		1.03		1.03		1.03		1.03		1.04	
Single	1.01		1.01		1.01		1.01		1.01		1.01		1.01	
Parental characteristics														
Number of marriage	1		0.99		1		1		1		1		0.98	
Parental depression	1.14		1.08		1.14		1.12		1.14		1.14		1.05	
Socioeconomic status														
Family income (ref. = $14,999 and under)														
$15,000-$24,999	0.82		0.81		0.83		0.85		0.82		0.82		0.86	
$25,000-$34,999	0.84		0.82		0.85		0.89		0.84		0.84		0.9	
$35,000-$49,999	0.8	*	0.79	*	0.82	*	0.84		0.8	*	0.8	*	0.87	
$50,000-$74,999	0.96		0.95		0.98		1.01		0.96		0.96		1.04	
$75,000 and up	0.83		0.82		0.85		0.88		0.84		0.83		0.91	
income missing/refused	0.97		0.98		0.99		1.01		0.97		0.98		1.05	
Parental education														
(ref. = less than high school or unknown)														
High School	0.93		0.94		0.95		0.94		0.94		0.94		0.97	
Some College	0.85		0.82	*	0.86		0.86		0.85		0.85		0.86	

College Degree	0.7	***	0.68	***	0.71	***	0.72	***	0.71	***	0.7	***	0.7	***
Graduate Degree	0.73	*	0.71	**	0.74	*	0.74	*	0.73	*	0.72	*	0.74	*

Note.—*p<.05, **p<.01, ***p<.001