Family Structure Transitions and Adolescent Well-Being

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ABSTRACT

This study examines the short-term effects of family structure transitions on adolescent well-being, as measured by depression, delinquency, and grade point average. We use data from the National Longitudinal Study of Adolescent Health (Add Health) and incorporate both a stress and life-course perspective. We first ask if the impact of family structure transitions affect adolescent well-being differently, depending on the number of parents in the household. Second, we ask, are adolescents transitioning into cohabiting family structures worse off than those transitioning into a married family structure? Finally, do adolescents transitioning into or out of single mother homes significantly differ from those transitioning into or out of single father homes? Do female or male adolescents fare better with respect to the impact of family structure transitions on adolescent well-being? Preliminary results suggest that family structure transitions do indeed differentially affect adolescent well-being, depending on the specific type of transition and well-being outcome.

INTRODUCTION

Decades of research examining the influence of family structure on adult and child outcomes (Amato 2000; Amato, Loomis, and Booth 1995; McLanahan and Booth 1989; Ross and Mirowksy 1999; Videon 2002) have potentially misrepresented the actual experiences of adults and children. Despite overwhelming statistics that children today experience multiple family structure transitions (U.S. Bureau of the Census 1996), researchers continue to examine the impact of family structure on child and adult outcomes as a static system rather than an on-going process. Rates of children living with cohabiting parents or biological parents and a cohabiting partner are at an all time high (Department of Health and Human Service 2002), making it crucial to examine these family structures, yet they are often overlooked.

Many researchers today are still left questioning if family structures really matter for adult and child outcomes. Family structures themselves may not be all that important. Most research posits that family structures only matter to the extent that they indirectly affect parenting styles (Simons et al. 1999), martial conflict (Amato et al. 1995), economic hardship (Aseltine 1996), and general parental quality (Richardson et al. 1986). Further, most studies have only examined the long-term effects of family structure at an early age with outcomes in later life.

Research in the area of marriage and adult mental health (Williams and Umberson 2004) has devised a theoretically and methodologically more appropriate way of examining these types of relationships. Instead of examining family structure at one point in time and its association with a later outcome, they instead examine a change in family structure and its association with a well-being at a later point in time. So, for

example does a woman who transitions from married to single (divorce) experience an increase or decrease in depression after the transition? Theoretically, experiencing a marital transition is stressful, which usually leads to a decline in well-being, as measured by depression. If this is the case, then methodologically, it makes more sense to examine short-term, rather than long-term effects, since stress is often an immediate and short-term mechanism associated with a transition.

CONCEPTUAL FRAMEWORK

Transitions, by definition, are the actual passage from one stage to a transitional stage marked by change, disequilibrium, and psychological distress (Walsh 2003). When a couple undergoes a transition, the effects ripple through the family system. Whether a new adult is added or subtracted from the family system, there are bound to be changes in self-identity, roles, and the quality of close relationships. Transitions require new adjustments and new means of dealing with the challenges associated with them. Marital transitions set in motion quick changes in residential relocation, economic circumstances, and family roles and relationships, which have implications for the well-being of each family member (Bray and Hetherington 1993).

With respect to adolescence, it is important to note that it may already be a stressful time. As the life course perspective agues, the consequences of family structure transitions on adolescent well-being depend upon the events that both precede and follow marital transitions. Adolescents who experience a family structure transition, coupled with the current stresses of being a teen, are likely to experience a significant increase in their stress, which, in turn, decreases their well-being. Some researchers today refer to

this as the old "Storm and Stress" perspective and view it as an outdated idea. More recent research argues that an only transition to situations of fewer resources, both financial and emotional, is actually detrimental to well-being (Mirowsky and Ross 2003). Therefore, adolescents who experience a family structure transition may take advantage of the opportunity for personal growth and more harmonious family relationships (Bray and Hetherington 1993). This is easier to suggest in cases where the marriage itself is marked by tension, violence, or unhappiness. Here, when a divorce or separation of an adolescent's parents occurs, a seemingly negative life event, an adolescent may experience what Wheaton (1990) terms "relief stress," where the end of a period of tension and emotional distress in their family is actually a relief.

The stress perspective adds a new element to the life course perspective by suggesting that the amount of stress resulting from an event is determined by the context in which the event occurs. The context of the relationship between the adolescents and their parents is crucial to the effect of these family transitions on both the well-being of the parents as well as the well-being of the adolescents. The adolescent's reaction to stress depends on the resources at their disposal and, in general, the quantity and quality of resources in children's lives not only directly improve their well-being but also helps them cope with everyday strains and major life stressors (Amato 2000). Additionally, Aneshensel (1992) points out that stress can manifest in many different outcomes and research examining the stress perspective must not limit itself to a single outcome.

Our analyses, therefore, will first focus on the quantity of an adolescent's resources—is the adolescent transitioning into or out of a two-parent family?

The Importance of Two Parents

Previous research suggests that the best situation for children is when two parents are happily married to each other, because a happy family environment makes for happy children. Yet, at least half of all first marriages will end in divorce (Cherlin 1992). In the United States alone this amounts to over 1 million children per year experiencing a divorce and 50% of all children experiencing a divorce by the age of 18 (Bumpass, Thompson, and McDonald 1984). One of the most common explanations for an increase in stress to children of divorce is the negative impact of changes in their economic situation. Many researchers argue that divorce causes a family's living standards to decline, if for no other reason than it is simply less expensive to live in one household than in two (Emery 1999). Since adolescence is already a stressful time, experiencing a divorce at this time could be extremely detrimental to their well-being. Additionally, divorce almost always means that one parent will be leaving the established home, which can be very stressful and upsetting to a child of any age. A possible exception would be an adolescent experiencing relief stress as a result of the transition. Therefore, we expect to find a significant association between the transition to a single-parent family and an adolescent's well-being, but as posited above, the direction of the association is unclear.

Although less attention has been given to remarriage, stepfamilies have also increased rapidly, from 4.5 million children in 1990 to 5.2 million 1996. Most research that has examined stepfamily life suggests that remarriage is an "incomplete institution" (Cherlin 1978). As compared to married couple families, stepfamilies have increased role conflict, especially over parenting roles, a lack of shared family histories, and less cohesion (Beer 1998). Perhaps most importantly, stepfamilies have less integration

because pre-existing sub-systems are combined in the new family – making boundaries ambiguous. Moreover, children of remarriage fare worse than children living with two biological parents in terms of academic achievement, years of schooling completed, depression, and behavioral problems including increased risk of becoming single parents themselves (Coleman, Ganong, and Fine 2000; McLanahan and Booth 1989; McLanahan and Sandefur 1994). In contrast, Bray (1999) finds that adolescents in stepfamilies *did not* have significantly more behavioral problems than those in nuclear families during the early transitional phase after stepfamily formation. Rather, adolescents made a seemingly healthy adjustment to stepfamily life after several years. If it is the case that the effect of stepfamily formation is at first negatively associated with adolescent well-being and only after several years does the direction reverse, then we posit that over a one year time frame, adolescents who transition to a stepfamily will experience a decrease in well-being, as compared to those who stay in a stable two-parent family.

The Effect of Cohabitation

The rapid increase of children living in cohabiting families, nearly 3.3 million in 1996 (U.S. Department of Health and Human Services 2002), has spurred an increase in research examining the effects of cohabitation on children's well-being. Researchers who have examined cohabitation in comparison to married couples claim that they are qualitatively different. Manning and Lichter (1996) find that although children living in cohabiting families have two potential caretakers and economic providers, parental resources are substantially less than their married-couple counterparts. This socioeconomic difference explains a substantial portion of the gap in overall well-being

between adolescents of cohabiting families versus those in remarried families. Teenagers of single unmarried mothers are similar to teens living with cohabiting stepparents, except that teens of cohabiting parents have lower grade point averages and higher levels of delinquency (Manning and Lamb 2003). Cohabiting couples are less likely than married couples to pool income, although income sharing often increases when a child was born into the cohabiting union (Greene et al. 2003).

Economic circumstances being equal, it is unclear why children of cohabiting families should have lower well-being than those of remarried families. If in fact, more parents in the home increase support and supervision, then we predict that having two parents regardless of marital status, would be positive for adolescents' well-being. With that said, it is possible that certain characteristics associated with depression, delinquency, and grade point average are the same factors that select some couples into cohabitation. Thus, it will be necessary for us to examine if there is an actual association between the family structure transition and the adolescent's outcome, or if the association is actually due to a similar set of factors for both cohabitation and the outcome.

The Importance of Mothers and Fathers

Little support has been found for the claim that parent' gender accounts for family structure differences in parental socialization of children (Thomson, McLanahan, and Curtin 1992) that lead to negative child outcomes. One exception is Videon's (2002) study, which found that opposite-sex parents constitute a significant influence on adolescents' depression regardless of family structure, suggesting that research needs to continue to focus on gender-specific differences. This idea of same-sex parents is also

supported by Amato (2000) who found that divorce does not appear to weaken the bonds of affection between sons and fathers or between daughters and mothers if it occurs during late adolescence. Presumably, by this point, the adolescent has developed a strong enough relationship with the same gender parent that the divorce is not damaging to the relationship. However, if the divorce is experienced at an earlier age, or if it is followed by remarriage, bonds of affection are weaker regardless of gender.

Economic hardship is considered to be one of the biggest problems resulting from divorce and is the most severe in mother only families. Although many single mothers who live below the poverty line were poor prior to becoming single mothers, a sizable majority became poor at the time of the marital disruption (McLanahan and Booth 1989). This problem is exacerbated by the low earnings potentials of women, especially single mothers, although it is often difficult to disentangle these elements of stress, poverty, class, and discrimination.

Another major stressor on children of divorce is loss of contact with one parent, most typically the father (Emery 1999). Many researchers speculate that the loss of contact with the father explains, at least in part, the high prevalence of emotional and behavioral problems in children of divorce (Simons and Beamen 1996). Only one quarter of all fathers see their children once a week or more and as time passes the time spent with children decreases (Seltzer 1991). When the father is the residential parent, similar situations exist with the mother; she spends little time with the children.

Considering theory, past research, and a one-year time frame, we hypothesize that children transitioning into a single mother family will fare worse than those transitioning into a single father family with respect to well-being.

Adolescent's Gender, Parent-Child Relationships, and Well-Being

With respect to delinquency, the direct effect of family structure transitions on delinquent outcomes appears to be stronger for boys. Buchanan and colleagues (1996) found that boys in cohabiting post-divorce households scored higher on almost every problem measured, including substance use, school deviance, antisocial behavior, poor grades, and problem peer relations compared to remarried families.

Since boys tend to be more accepting of a step-parent than girls, we posit that the effect of a transition from a single parent home to a stepfamily will more determinately affect the well-being of girls than boys. However, this will most likely show as increased depression or decreased grade point average for girls. Boys on the other hand, who have transitioned from a cohabiting post-divorce family, will have higher levels of changes in delinquency than girls.

THE PRESENT STUDY

The present study examines the short-term effects of family structure transitions on the well-being of adolescents, as measured by depression, delinquency, and grade point average. We use data from the National Longitudinal Study of Adolescent Health (Add Health) and incorporate both a stress and life-course perspective. We first ask if the impact of family structure transitions affect adolescent well-being differently, depending on the number of parents in the household. Specifically, is transitioning to a single-parent family bad for adolescent well-being? Second, we examine if marriage matters with respect to the effect of family structure transitions on adolescent well-being. So, are adolescents transitioning into cohabiting family structures worse off than those

transitioning into a married family structure? Additionally, we question the influence of gender. Do adolescents transitioning into or out of single mother homes significantly differ from those transitioning into or out of single father homes? Do female or male adolescents fare better with respect to the impact of family structure transitions on adolescent well-being?

DATA

We use Waves I and II of the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative sample of seventh to twelfth grade students from the 1994-1995 school year. In addition to completing brief in-school surveys, 20,745 students and 17,670 parents were interviewed in their homes during the summer of 1995. Approximately fourteen thousand of these individuals were re-interviewed in their homes during the summer of 1996. Our sample includes all adolescent respondents who participated in the in-school survey and both in-home interviews and who have non-missing information on all sampling weights, control, and independent variables (N=7,149).

Add Health data provide comprehensive measures of adolescent physical, mental, and emotional health. These data work well for the research at hand because the data include comprehensive measures of family structure, which allow us to investigate changes in family structure between Waves I and II and the impact of these transitions on self-reports of depressive symptoms, delinquency, and academic achievement. Below, we briefly discuss our measures.

MEASURES

DEPENDENT VARIABLES

Depression

A summed CES-D depression scale (Cronbach's alpha=.8774) serves as our first dependent variable. During the second in-home interview, adolescents were asked about their experiences of depressive symptoms in the past seven days. Adolescents reported how often they felt bothered by things that normally did not bother them, had a poor appetite, could not shake the blues, had trouble concentrating, felt depressed, felt too tired to do things, felt life was a failure, felt fearful, felt lonely, talked less than usual, felt others were unfriendly, felt sad, felt others disliked them, lacked motivation, and felt life was not worth living (0=never or rarely – 3=most of the time or all the time).

Additionally, adolescents were asked how often they felt happy, enjoyed life, felt hopeful about the future, and felt as good as other people; all of these variables were reverse-coded and included in the scale with the indicators of depression.

Delinquency

A summed delinquency scale (Cronbach's alpha=.8029) serves as our second dependent variable. During the second in-home interview, adolescents were asked about their participation in a wide variety of delinquent activities, both property and violent. Adolescents were asked how many times they had committed each delinquent activity in the previous 12 months: painted graffiti, damaged property, took something without paying, took a car without the owner's permission, stole more than \$50, stole less than \$50, entered a house or building to steal something, used/threatened to use a weapon to

get something that you wanted, and participated in a group fight. Responses ranged from 0, never, to, 3, five or more times. All items were summed into a delinquency index.

Academic Achievement

We assess adolescents' academic achievement by computing their grade point average from all courses taken either currently (if interviewed during the school year) or during the previous school year (if interviewed during the summer). During the second in-home interview, respondents indicated the grades that they received in English, math, science, and history/social studies. These responses were coded 4, indicating an A in the course, to, 1, indicating a D or below in the course. After the grades were coded on a 4-point scale, they were summed and divided by the number of courses taken, resulting in a grade point average.

INDEPENDENT VARIABLES

Family Structure Change

During both in-home interviews, respondents completed a comprehensive household roster questionnaire, which assessed the number of people residing with the respondent and the relations of these people to the respondent. We use the household roster to code changes in family structure between Waves I and II.

We code each adolescent's family structure at each wave. As we previously mentioned, we retrieved this information using the Wave I and Wave II in-home interviews, specifically the household roster section. We coded the family structures using a series of arrays in SAS, which resulted in an 81-category variable for family

structure at each wave. The eighty-one family structures include many common family structures, such as two biological parents, biological mother and stepfather, biological father and stepmother, single biological mother, single biological father, and several less common family structures, such as biological mother and partner, biological father and partner, two adoptive parents, single non-biological parents, and married or cohabiting non-biological parents, just to name a few.

As our arguments at the outset of the paper suggest, we limit ourselves to analyzing four specific transitions: transitioning from a two-parent family to a single parent family versus staying in a stable two-parent family, transitioning to a two-parent stepfamily versus staying in a stable two-parent family, transitioning to cohabitation versus transitioning to a stepfamily, and transitioning to a single mother family versus transitioning to a single father family.

Control Variables

T1 depression, T1 delinquency, and T1 academic achievement are controlled for in the specific regressions for each (e.g., we control for Wave 1 GPA in our investigation of Wave II GPA). We control for T1 depression using the same CES-D depression scale that serves as our dependent variable (Cronbach's alpha=.8731). During the Wave I inhome interview, respondents were asked the same series of questions about depressive symptoms that they answered during Wave II. We also control for T1 delinquency using the same delinquency scale that serves as our dependent variable (Cronbach's alpha=.8084). During the Wave I in-home interview, respondents were asked the same series of questions about their involvement in delinquent activities that they answered

during Wave II. Finally, we also control for Wave I academic achievement. During the Wave I in-home interview, respondents were asked about their courses taken and grades received; we used this information to calculate respondent's Wave I GPA as we did our dependent variable.

We also control for a variety of demographic and family characteristics recognized in previous transition, depression, and delinquency research as important: sex, race, age, recent residential move, recent school change, lifetime death of a biological parent, and family socioeconomic status. Sex is measured using a dichotomous dummy variable with males serving as the reference category. To control for an adolescent's race, we include dummy variables to compare Whites, Blacks, Hispanics, Asians, and other races with whites serving as the reference category. Age is measured in years at Wave I. We include dichotomous measures of residential moves and school changes that occurred prior to the Wave I interview (1=yes), and the experience of a death of a biological parent prior to Wave I (1=yes)¹. Finally, family socioeconomic status is measured using both parent and adolescent responses to questions about their parents' education, occupation, and income. The socioeconomic status score used here is the sum of an education scale, an occupation scale, and an income scale (a score of 6 reflects true "middle class" status). This measure was devised by Bearman and Moody (2004) and has been used successfully in their research.

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¹ We ran all of our analyses twice: once with adolescents who experienced the death of a biological parent between Waves I and II (N=166) and once without these adolescents (because these adolescents most likely experienced an increase in depression and decrease in GPA during this time, which may not have been due to the transition experienced, but due to the loss of their biological parent). We are also trying to rule out the possibility that adolescents had experienced a transition due to death rather than family structure changes. There were no differences in findings between the two samples, so our final results include those adolescents who experienced the death of a parent between Waves I and II.

METHOD OF ANALYSIS

Our study is longitudinal in nature with our dependent variables, depression, delinquency, and academic achievement, measured at Time 2 (T2) and all of our other control variables measured at Time 1 (T1). Our independent variables, the four specific family structure transitions, are measured by variables measuring change between Waves I and II. Our longitudinal analysis allows us to control for the T1 value of the dependent variable, for example. This represents an improvement over cross-sectional models because it minimizes the probability that associations we observe between change in family structure and our dependent variables are due to a reverse causal process—the influence of adolescent depression, delinquency, and academic achievement on family structure transitions.

We analyze the effect of family structure transition on each dependent variable separately by regressing each dependent variable on the family structure transition and control variables. All analyses are conducted using survey-corrected statistical procedures available in STATA (version 8) to correct for the clustered and stratified nature of the Add Health sample. STATA allows for the incorporation of sampling weights to yield nationally representative estimates and ensures that the standard errors are not deflated, which reduces the likelihood of rejecting the null hypothesis when it should have been accepted (see Chantala and Tabor 1999; Chantala 2001).

RESULTS

Mean Differences between the Transitions

Table 1 presents mean differences between adolescents experiencing the transitions of interest (discussed above). Panel A examines mean level differences between adolescents transitioning to a single parent household compared to adolescents living in stable two-parent families. In terms of our dependent variables, those adolescents experiencing a transition to a single parent home are, on average, more depressed and have lower GPAs than adolescents from stable two-parent homes. On average, adolescents experiencing such a transition are Black, have experienced both a recent move and the death of a biological parent, and reside in families that have a lower SES than adolescents in stable two-parent families. Adolescents living in stable two parent families come from families that are White with a higher SES scores as compared to those transitioning to a single parent family. Interestingly, adolescent who experience a transition to a single parent family have, on average, higher quality relationships with their parents at Wave I than adolescents in stable two-parent families.

Panel B of Table 1 examines mean level differences between adolescents transitioning into a stepfamily compared to those in a stable two-parent family. Here, we find that adolescents transitioning into a stepfamily have higher mean levels of depression at both waves, higher delinquency scores at Wave I, and lower grade point averages than adolescents living in stable two-parent families. On average, adolescents residing in a stable two-parent family are White, while, on average, adolescents transitioning into a stepfamily are Black. Adolescents who transitioned into a stepfamily have recently moved and experienced the death of a biological parent when compared to

adolescents in a stable two-parent family. Adolescents in stable two-parent families have higher SES scores than those experiencing the stepfamily transition. Similar to the results discussed for adolescents transitioning into a single parent family, adolescents transitioning into a stepfamily have higher Wave I measures of parent-child relationship quality.

Panel C of Table 1 examines mean level differences between adolescents transitioning into a cohabiting family and adolescents transitioning into a stepfamily. There are few mean level differences between these groups; adolescents transitioning to a stepfamily have higher mean levels of depression at time 1. On average, adolescents transitioning into a cohabiting family structure are White, while those transitioning to a stepfamily are, on average, Asian.

Panel D of Table 1 examines mean level differences between adolescents transitioning into a single mother family compared to adolescents transitioning into a single father family. Once again, there are few mean level differences between these two groups. Adolescents transitioning to single mother families have higher time 2 GPAs than adolescents transitioning into a single father family. On average, adolescents transitioning to a single father family are slightly older and White, while those transitioning to a single mother family are, on average, Black or Asian.

Depression

Table 2 examines the effect of each of the transitions of interest on depression.

Model 1 demonstrates a significant positive statistic for transitioning to a single parent family versus staying in a stable two-parent family. Model 2-4 do not demonstrate

significant statistics for the transition variables. Transitioning from a single parent family into a stepfamily (compared to residing in a stable two-parent family), transitioning into a cohabiting family (compared to transitioning into a stepfamily), and transitioning into a single mother family (compared to transitioning into a single father family) are not statistically significant predictors of depression. In sum, the only transition that is significantly associated with depression is transitioning into a single parent family versus those staying in a stable two-parent family. Consistent with our predictions, this significant association is positive, which means experiencing such a transition leads to an increase in depression. Looking to the control variables, we find that T1 depression is the only consistent significant predictors of depression. Overall, our models explain between 36% and 42% of the variance in depression.

Delinquency

Table 3 examines the effect of our four transition variables on delinquency.

Model 1 indicates that there are no significant differences between adolescents transitioning to a single parent family and adolescents residing in a stable two-parent family. Model 2 also does not demonstrate any significant differences between those transitioning to a two-parent stepfamily and those staying in a stable two-parent family. Model 3 demonstrates a positive and significant coefficient for our transition variable, which compares those who transition into a cohabiting household to those who transitioned into a stepfamily. Finally, Model 4 demonstrates no significant differences between those transitioning into a single mother family and those transitioning into a single father family. In sum, the only transition that is significantly associated with

delinquency is transitioning into a cohabiting family versus transitioning into a stepfamily. Contrary to our predictions, this significant association is positive, which means transitioning into a cohabiting household leads to an increase in delinquency. In terms of the controls, T1 delinquency is positively associated with delinquency; it is the only control that is significant across all models.

GPA

Table 4 examines the effect of our four specific transition comparisons on adolescent's GPA. We find no significant differences between those transitioning into a single parent family and those residing in a stable two-parent family (Model 1), transitioning into a two-parent stepfamily and those staying in a two-parent family (Model 2), and those transitioning into cohabitation compared to those transitioning into a stepfamily (Model 3). Model 4 demonstrates a significant difference between adolescents transitioning into a single mother family compared to those transitioning into a single father family. It appears that those transitioning into a single mother family have higher GPAs than those transitioning into a single father family. Here, it is obvious that it is not the number of parents that matter for adolescent GPA, but possibly the sex of the parent that matters. As with our other two dependent variables, the only consistent control variable predictors of GPA across all models is the T1 measure of GPA. Overall, our models explain between 26% and 36% of the variance in T2 GPA.

DISCUSSION AND CONCLUSIONS

We find support for previous research that the number of parents is very important for adolescent well-being. Specifically, we find that transitioning from a two-parent family to a single parent family, is associated with increased depression compared to adolescents who resided in a stable two-parent family. However, in terms of delinquency, adolescents transitioning from a single parent family to a cohabiting family experience increased delinquency compared with those who transition into a stepfamily. Both of these family structures involve two parents, so why are adolescents transitioning to cohabitation experiencing an increase in delinquency? Additionally, why do adolescents transitioning from a two-parent family to a single mother family fare better in terms of GPA compared to those transitioning from a two-parent family to a single father family?

This paper is a step toward furthering our understanding of the short-term effects of specific family structure transitions on adolescent well-being. As argued by Aneshensel (1992), our research reinforces the idea that different stresses manifest in different outcomes. Therefore, all family structure transitions are not uniformly damaging to adolescent mental health, some lower their GPA, and some increase their delinquency. The next step is to develop and test the causal mechanisms that help to explain why the stress associated with each of these transitions appears to manifest in such vastly different ways. Is it something about the transition itself or some characteristics of those who experience these specific transitions? Our next step will be to test for the latter, specifically we will test for potential adolescent gender differences in stress response.

REFERENCES

- Amato, Paul R. 1993. "Children's Adjustment to Divorce: Theories, Hypotheses, and Empirical Support." *Journal of Marriage and the Family* 55:23-38.
- Amato, Paul R. 1999a. "Children of Divorced Parents as Young Adults." Pp. 147-163 in Coping with Divorce, Single Parenting, and Remarriage, A Risk and Resiliency Perspective, edited by E. Mavis Hetherington. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Amato, Paul R. 1999b. "The Postdivorce Society: How Divorce Is Shaping the Family and Other Forms of Social Organization." Pp. 161-190 in *The Postdivorce Family, Children, Parenting, and Society,* edited by Ross A. Thompson and Paul R. Amato. Thousand Oaks, CA: Sage Publications.
- Amato, Paul R. 2000. "The Consequences of Divorce for Adults and Children." *Journal of Marriage and the Family* 62:1269-87.
- Amato, Paul R., Laura Spencer Loomis, and Alan Booth. 1995. "Parental Divorce,

 Marital Conflict, and Offspring Well-being during Early Adulthood." *Social*Forces 73:895-915.
- Anderson, Carol. 2003. "The Diversity, Strength, and Challenges of Single-Parent

 Households." Pp. 121-152 in *Normal Family Processes, Third Edition, Growing Diversity and Complexity*, edited by Froma Walsh. NY: The Guildford Press.
- Aneshensel, Carol S. 1992. "Social Stress: Theory and Research." *Annual Review of Sociology* 18:15-38.
- Aseltine, Jr., Robert H. 1992. "The Impact of Parental Divorce on Adolescents." PhD

- dissertation, Department of Sociology, The University of Michigan, Ann Arbor, MI.
- Aseltine, Jr., Robert H. 1996. "Pathways Linking Parental Divorce With Adolescent Depression." *Journal of Health and Social Behavior* 37:133-148.
- Bearman, Peter S. and James Moody. 2004. "Suicide and Friendship among American Adolescents." *American Journal of Public Health* 94:89-95.
- Beer, William R. 1988. *Relative Strangers: Studies of Stepfamily Processes*. Totowa, NJ: Rowman and Littefield.
- Bell, R.R. 1981. Worlds of Friendship. Beverly Hills, CA: Sage.
- Bray, James H. 1999. "From Marriage to Remarriage and Beyond, Findings From the

 Developmental Issues in StepFamilies Research Project." Pp. 253-271 in *Coping*with Divorce, Single Parenting, and Remarriage, A Risk and Resiliency

 Perspective, edited by E. Mavis Hetherington. Maywah, NJ: Lawrence Erlbaum

 Associates, Inc.
- Bray, James H. and E. Mavis Hetherington. 1993. "Families in Transition: Introduction and Overview." *Journal of Family Psychology* 7:3-8.
- Brown, B.G., S.A. Eicher and S. Petrie. 1986. "The Importance of Peer ("Crowd")

 Affiliation in Adolescence." *Journal of Adolescence* 9:73-96.
- Buchanan, C.M., E.E. Maccoby, and S.M. Dornbusch. 1996. *Adolescents after Divorce*. Cambridge, MA: Harvard University Press.
- Bumpass, L.L., E. Thompson, and E. McDonald. 1984. "Children and Marital Disruption: a Replication and Update." *Demography* 21:71-82.
- Cherlin, Andrew J. 1999. "Going to Extremes: Family Structure, Children's Well-Being,

- and Social Science." Demography 36:421-428.
- Cherlin, Andrew. 1978. "Remarriage as an Incomplete Institution." *American Journal of Sociology* 84:634-650.
- Cherlin, Andrew. 1992. *Marriage, Divorce, Remarriage*. Cambridge, MA: Harvard University Press.
- Coleman M., L. Ganong, and M. Fine. 2000. "Reinvestigating Remarriage: Another Decade of Progress. *Journal of Marriage and the Family* 62:1288-1307.
- Department of Health and Human Services. 2002. *Cohabitation, Marriage, Divorce, and Remarriage in the United States*. Washington, DC: U.S. Government Printing

 Office. Retrieved November 18, 2003

 (http://www.cdc.gov/nchs/data/series/sr_23/sr23_022.pdf).
- Emery, Robert E. 1988. *Marriage, Divorce, and Children's Adjustment*. Thousand Oaks, CA: Sage Publications.
- Emery, Robert E. 1999. "Postdivorce Family Life for Children: An Overview or

 Research and Some Implications for Policy." Pp. 3-28 in *The Postdivorce Family, Children, Parenting, and Society,* edited by Ross A. Thompson and Paul R.

 Amato. Thousand Oaks, CA: Sage Publications.
- Furstenberg, F.F., Jr., S. Philip Morgan, and P.D. Allison. 1987. "Paternal Participation and Children's Well-being after Marital Dissolution." *American Sociological Review* 52:695-701.
- Greene, Shannon M., Edward Anderson, E. Mavis Hetherington, Marion S. Forgatch, and David S. DeGarmo. 2003. "Risk and Resilience after Divorce." Pp. 96-120 in *Normal*

- Family Processes, Third Edition, Growing Diversity and Complexity, edited by Froma Walsh. NY: The Guildford Press.
- Hetherington, E. Mavis. 1993. "An Overview of the Virginia Longitudinal Study of Divorce and Remarriage With a Focus on Early Adolescence." *Journal of Family Psychology* 7:39-56.
- Manning, Wendy D. and Kathleen A. Lamb. 2003. "Adolescent Well-Being in Cohabiting, Married, and Single-Parent Families." *Journal of Marriage and the Family* 65:876-894.
- Manning, Wendy D. and Daniel T. Lichter. 1996. "Parental Cohabitation and Children's Economic Well-Being." *Journal of Marriage and the Family* 58:998-1010.
- Manski, Charles F., Gary D. Sandefur, Sara McLanahan, and Daniel Powers. 1992.

 "Alternative Estimates of the Effect of Family Structure During Adolescence on High School Graduation." *Journal of the American Statistical Association* 87:25-37.
- McLanahan, Sara S. and Alan K. Booth. 1989. "Mother-only Families: Problems, Prospects, and Politics." *Journal of Marriage and the Family* 51:557-580.
- McLanahan, Sara S. and G. Sandefur. 1994. *Growing Up with a Single Parent*.

 Cambridge, MA: Harvard University Press.
- Nolen-Hooeksema and Joan S. Girgus. 1994. "The Emergence of Gender Differences in Depression During Adolescence." *Psychological Bulletin* 115:424-443.
- Richardson, Rhonda A., Robert H. Abramowitz, C. Elliott Asp, Anne C. Petersen. 1986. "Parent-Child Relationships in Early Adolescence: Effects of Family Structure." *Journal of Marriage and the Family* 48:805-811.

- Roberts, Robert E; Vern L. Bengston. 1993. "Relationships with Parents, Self-Esteen, and Psychological Well-Being in Young Adulthood." *Social Psychology Quarterly* 56:263-277.
- Rosenfield, Sarah. 1980. "Sex Differences in Depression; Do Women Always Have Higher Rates?" *Journal of Health and Social Behavior* 21:33-42.
- Ross, Catherine E. and John Mirowksy. 1999. "Parental Divorce, Life-Course Disruption, and Adult Depression." *Journal of Marriage and the Family* 61:1034-1045.
- Salem, Deborah A., Marc A. Zimmerman, and Paul C. Notaro. 1998. "Effects of Family Structure, Family Process, and Father Involvement on Psychosocial Outcomes among African American Adolescents." *Family Relations* 47:331-341.
- Seltzer, Judith A. 1991. "Relationships Between Fathers and Children Who Live Apart:

 The Father's Role After Separation." *Journal of Marriage and the Family* 53:79101.
- Simons, Ronald L. and Jay Beaman. 1996. "Father's Parenting." Pp. 94-103 in

 *Understanding Differences Between Divorced and Intact Families, Stress,

 Interaction, and Child Outcome, edited by Ronald Simons and Associates.

 Thousand Oaks, CA: Sage Publications.
- Simons, Ronald L. and Christine Johnson. 1996. "Mother's Parenting." Pp. 81-93 in *Understanding Differences Between Divorced and Intact Families, Stress, Interaction, and Child Outcome*, edited by Ronald Simons and Associates.

 Thousand Oaks, CA: Sage Publications.
- Simons, Ronald L., Kuei-Hsiu Lin, Leslie C. Gordon, Rand D. Conger, and Frederick O.

- Lorenz. 1999. "Explaining the Higher Incidence of Adjustment Problems among Children of Divorce Compared with Those in Two-Parent Families." *Journal of Marriage and the Family* 61:1020-1033.
- Starbuck, Gene H. 2002. *Families in Context*. Belmont, CA: Wadsworth Thomas Learning.
- Thomson, Elizabeth, Sara S. McLanahan, and Roberta Braun Curtin. 1992. "Family Structure, Gender, and Parental Socialization." *Journal of Marriage and the Family* 54:368-378.
- Umberson, Debra, Meichu D. Chen, James S. House, Kristine Hopkins, and Ellen Slaten. 1996. "The Effect of Social Relationships on Psychological Well-Being:

 Are Men and Women Really So Different?" *American Sociological Review* 61:837.857.
- U.S. Census Bureau. 1996. Living Arrangements of Children. Washington DC:
 U.S. Government Printing Office. Retrieved November 19, 2003
 (http://www.census.gov/prod/2001pubs/p70-74.pdf).
- Videon, Tami M. 2002. "The Effects of Parent-Adolescent Relationships and Parental Separation on Adolescent Well-Being." *Journal of Marriage and Family* 64:489-503.
- Wallerstein, J.S. and J.B. Kelly. 1980. Surviving the Breakup: How Children and Parents

 Cope With Divorce. NY: Basic.
- Wallerstein, J.S. and J. Lewis. 1997. "The Long-Term Impact of Divorce on Children: A First Report From a 25-Year Study." Presented at the Second World Congress of Family Law and the Rights of Children and Youth, June 2-7, San Francisco CA.

- Walsh, Froma. 2003. "Changing Families in a Changing World, Reconstructing Family Normality." Pp. 3-26 in *Normal Family Processes, Third Edition, Growing Diversity and Complexity*, edited by Froma Walsh. NY: The Guildford Press.
- Warr, Mark. 1993. "Parents, Peers, and Delinquency." Social Forces 72:247-264.
- Wenk, Dee Ann, Constance L. Hardesty, Carolyn S. Morgan, and Sampson Lee Blair.

 1994. "The Influence of Parental Involvement on the Well-Being of Sons and

 Daughters." *Journal of Marriage and the Family* 56:229-234.
- Wheaton, Blair 1990. "Life Transitions, Role Histories, and Mental Health." *American Sociological Review* 55:209-223.
- Williams, Kristi and Debra Umberson. (forthcoming) 2004. "Marital Status, Marital Transitions
 - and Health: A Gendered Life Course Perspective." *Journal of Health and Social Behavior*
- Zill, N and C.W. Nord. "Running in Place: How American Families Are Faring in a Changing Economy and An Individualistic Society. Washington DC: Child Trends, Inc. 1994.
- Zimmerman, Marc A., D. A. Salem, and K.I. Malton. 1995. "Family Structure and Psychosocial Correlates Among Urban African American Adolescent Males." *Child Development* 66:1598-1613.

PANEL A compares adolescents transitioning to a single parent family to those living in a stable two-parent family. PANEL B compares adolescents transitioning to a stepfamily to those living in a stable two-parent family. Table 1: Means, by Transition Status

	PA	PANEL A		PAN	PANEL B	
	Transition	Stable	Z	Transition	Stable	Z
T2 Depression	12.195 ***	996.6	7256	11.991 ***	996.6	7188
T1 Depression	11.964 ***	10.091	7253	12.580 ***	10.091	7182
T2 Delinquency	1.418	1.259	7237	1.482	1.259	7167
T1 Delinquency	1.994	1.539	7232	2.068*	1.539	7160
T2 GPA	2.747 ***	2.926	2619	2.688	2.926	6745
T1 GPA	2.699 ***	2.906	6442	2.614 ***	2.906	6378
Female	0.524	0.497	7257	0.530	0.497	7189
Age	15.056	14.866	7255	14.859	14.866	7185
White	0.524 ***	0.725	7257	0.599 ***	0.725	7189
Black	0.259 ***	0.095	7257	0.221 ***	0.095	7189
Hispanic	0.023	0.016	7257	0.132	0.105	7189
Asian	0.053	0.045	7257	0.026	0.045	7189
Other Race	0.048	0.031	7257	0.022	0.031	7189
Recent Move	0.264 ***	0.164	7207	0.044 ***	0.008	7136
New School	0.301	0.276	7237	0.271	0.276	7168
Parental Death	0.054 ***	0.014	7241	0.073 ***	0.014	7172
Family SES	5.512 ***	6.350	7238	4.811 ***	6.350	7160
Parent-Child Relationship Quality	5.813 ***	4.895	7238	7.044 ***	4.895	7157

^{***}p<.001, **p<.01, *p<.05

PANEL C compares adolescents transitioning to a cohabiting family to those transitioning to a stepfamily. Table 1 cont.

PA	PANEL C		PAN	PANEL D	
Cohabiting	Stepfamily	Z	Mother	Father	Z
10.641	12.429	549	12.339	11.855	507
10.971*	12.823	544	12.323	11.793	505
1.979	1.347	546	1.500	1.726	909
2.273	2.068	541	2.046	2.264	503
2.778	2.664	498	2.760*	2.494	444
2.684	2.579	477	2.690	2.576	446
0.594	0.484	549	0.531	0.454	507
14.656	14.858	547	15.013*	15.493	507
*869.0	0.556	549	0.505 ***	0.732	507
0.175	0.220	549	0.266*	0.150	507
0.103	0.150	549	0.118	0.076	507
800.0	0.046	549	0.061	0.020	507
0.015	0.028	549	0.050	0.022	507
0.392	0.356	538	0.269	0.274	502
0.283	0.292	548	0.283	0.306	504
0.104	0.052	546	0.052	0.043	505
4.666	5.020	524	5.453	5.172	492
6.406	7.194	523	5.735	5.720	494
	1.979 2.273 2.273 2.778 2.684 0.594 14.656 0.103 0.103 0.008 ** 0.015 0.392 0.283 0.104 4.666 6.406		1.347 2.068 2.068 2.579 0.484 14.858 0.556 0.020 0.046 0.028 0.356 0.028 0.356 0.028	1.347 546 2.068 541 2.068 541 2.664 498 2.579 477 0.484 549 14.858 547 0.556 549 0.020 549 0.046 549 0.046 549 0.056 538 0.029 548 0.052 546 5.020 524 7.194 523	1.347 546 1.500 2.068 541 2.046 2.664 498 2.760* 2.579 477 2.690 0.484 549 0.531 14.858 547 15.013* 0.256 549 0.266* 0.150 549 0.066* 0.046 549 0.061** 0.028 549 0.050 0.356 538 0.269 0.292 548 0.283 0.052 546 0.052 5.020 524 5.453 7.194 523 5.735

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

Table 2: OLS Regression Analysis of T2 Depression

	Model 1	Model 2	Model 3	Model 4
	b	b	b	b
	s.e.	s.e.	s.e.	s.e.
CONTROL VARIABLES				
T1 Depression	0.567 ***	0.565 ***	0.608 ***	0.645 ***
	0.018	0.017	0.067	0.054
Female	0.753 ***	0.770 ***	1.366	1.326
A ~~	0.180 0.175 **	0.167 0.165 *	0.757	0.750
Age	0.173 · · · 0.062	0.163	0.158 0.232	-0.073 0.222
Black ^{&}				
Black	0.252	0.397	1.306	1.116
. &	0.300	0.345	0.796	0.823
Hispanic ^{&}	0.779 *	0.682 *	1.442	3.484 *
9.	0.351	0.332	0.787	1.473
Asian ^{&}	1.125 *	1.195*	1.552	0.247
	0.446	0.462	1.602	1.216
Other Race ^{&}	0.899	0.755	-0.523	1.748
	0.608	0.552	1.827	2.290
Recent Move	0.630 *	0.624*	-0.207	-0.586
N 01 1	0.308	0.280	0.609	0.869
New School	0.105	-0.048	-0.558	1.658
Parental Death	0.190 0.908	0.191 1.279	0.716 0.345	0.922 -1.529
i arentar Death	0.792	0.729	1.182	1.239
Family SES	-0.157 ***	-0.175 ***	0.016	0.191
Tuning 525	0.041	0.038	0.148	0.172
Parent-Child Relationship Quality	0.106	0.156 **	0.132	0.042
	0.054	0.059	0.143	0.154
TRANSITION VARIABLES				
Into Single Parent Family	0.791			
Ç ,	0.480			
Into Stepfamily		-0.186		
, and the second		0.458		
Into Cohabiting Family ^{\$}			-0.729	
into condoming running			0.795	
Into Single Mother Family%				-0.540
into single Mother Funniy				1.144
Constant	1.393	1.467	0.352	2.973
	0.953	1.038	3.704	3.762
N	7,149	7,066	511	486
R^2	0.369	0.371	0.414	0.417
***p<.001, **p<.01, *p<.05				
^{&} White is the reference category				

Stable two-parent is the reference

^{\$}Into stepfamily is the reference

[%]Into single father is the reference

Table 3: Negative Binomial Regression Analysis of T2 Delinquency

or 12 2 om quency	Model 1	Model 2	Model 3	Model 4
	b	b	b	b
	s.e.	s.e.	s.e.	s.e.
CONTROL VARIABLES				
T1 Delinquency	0.254 ***	0.256 ***	0.207 ***	0.213 ***
	0.013	0.014	0.034	0.039
Female	-0.309 ***	-0.280 ***	0.060	-0.410*
	0.059	0.061	0.166	0.196
Age	-0.133 ***	-0.129 ***	-0.049	-0.098
	0.019	0.021	0.058	0.058
Black ^{&}	-0.041	-0.088	-0.262	0.097
	0.079	0.095	0.234	0.246
Hispanic ^{&}	0.191*	0.204*	0.205	-0.269
	0.095	0.098	0.265	0.370
Asian ^{&}	-0.222	-0.237	-0.083	-0.429
	0.140	0.147	0.500	0.312
Other Race&	0.280	0.289	0.332	0.017
o mer reace	0.209	0.215	0.452	0.359
Recent Move	0.065	0.111	0.337	-0.071
	0.108	0.113	0.223	0.229
New School	-0.078	-0.074	0.016	0.144
	0.082	0.083	0.230	0.239
Parental Death	-0.253	-0.211	0.198	0.284
	0.178	0.215	0.495	0.378
Family SES	-0.014	-0.016	0.045	0.019
•	0.014	0.014	0.038	0.044
Parent-Child Relationship Quality	0.067 ***	0.067 ***	0.044	0.053
	0.017	0.017	0.032	0.045
TRANSITION VARIABLES				
Into Single Parent Family	-0.052			
	0.115			
Into Stepfamily		0.026		
into stepianiny		0.138		
Into Cohabiting Family ^{\$}		0.120	0.440 **	
into Conabiting Family			0.440	
			0.103	0.026
Into Single Mother Family [%]				0.026
				0.248
Constant	1.396 ***	1.319 ***	-0.358	0.828
Constant	0.352	0.359	0.948	0.985
	0.332	0.557	0.740	0.763
N	7115	7030	507	484
R^2	, 110	, 350	20,	
***p<.001, **p<.01, *p<.05				
&White is the reference category				

Stable two-parent is the reference

^{\$}Into stepfamily is the reference

[%]Into single father is the reference

Table 4: OLS Regression Analysis of GPA

	Model 1	Model 2	Model 3	Model 4
	b	b	b	b
CONTROL MARIARIES	s.e.	s.e.	s.e.	s.e.
CONTROL VARIABLES	0.472 ***	0 477 ***	0.275 ***	0.221 ***
T1 GPA	0.473 ***	0.477 ***	0.375 ***	0.321 ***
Famala	0.016 0.109 ***	0.016	0.051	0.067
Female	0.109	0.108 ***	0.109	0.102
Ago	0.021	0.021 0.008	0.081 0.002	0.096 -0.005
Age	0.008	0.008	0.002	0.003
D1 18				
Black ^{&}	-0.174 ***	-0.168 ***	-0.177	-0.253 *
	0.036	0.035	0.116	0.102
Hispanic ^{&}	-0.122*	-0.103 *	-0.013	-0.346*
	0.050	0.051	0.129	0.138
Asian ^{&}	0.070	0.077	0.248	-0.023
	0.055	0.053	0.198	0.164
Other Race ^{&}	-0.130 *	-0.095	0.239	-0.321
	0.062	0.058	0.294	0.328
Recent Move	0.021	0.000	-0.140	0.021
	0.034	0.034	0.091	0.091
New School	-0.030	-0.027	0.064	0.064
	0.033	0.033	0.099	0.102
Parental Death	0.113	0.106	0.130	0.175
	0.069	0.071	0.129	0.167
Family SES	0.035 ***	0.034 ***	0.004	0.040*
	0.005	0.004	0.016	0.017
Parent-Child Relationship Quality	-0.019 **	-0.017 **	-0.008	-0.023
	0.007	0.006	0.013	0.017
TRANSITION VARIABLES				
Into Single Parent Family	-0.041			
	0.053			
Into Stepfamily		0.016		
		0.046		
Into Cohabiting Family ^{\$}			0.039	
, , , , , , , , , , , , , , , , , , ,			0.085	
Into Single Mother Family [%]				0.308*
into Single Women Laminy				0.123
				0.123
Constant	1.319 ***	1.279 ***	1.718 **	1.630 ***
	0.152	0.153	0.556	0.491
N	5988	5926	412	383
R^2	0.358	0.361	0.269	0.272
***p<.001, **p<.01, *p<.05				-
*White is the reference category				
, mic is the reference category				

Stable two-parent is the reference

^{\$}Into stepfamily is the reference

[%]Into single father is the reference