Family Structure History and Young Adults' Receipt of Financial Assistance for College

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Abstract

As youth take longer to transition to adulthood, families are being called on to support their children well past adolescence. High rates of single parenthood and family disruption may be interfering with families' ability to provide this support. In the present study, I examine the association between young adults' family structure history and their receipt of a particularly important resource from their family—financial assistance for college. Using data from a sample of college attendees from the National Longitudinal Survey of Youth 1997 cohort (N = 3,081), I describe how students' family structure history relates to their receipt of financial assistance from their family, as well as which family members—including biological parents, stepparents, grandparents, and other relatives—provide this support. I also examine whether variation in household income helps to explain family structure differences in college students' receipt of financial assistance. This study makes an important contribution to our understanding of how the structure and stability of the family of origin continue to shape children's life chances, even as they enter adulthood.

A college degree has never been more important for earning a decent standard of living (Barrow & Rouse, 2005; Danziger & Ratner, 2010; Settersten, 2012). Young adults with a bachelor's degree can expect to earn nearly one million dollars more over their lifetime than young adults with only a high school education (Julian & Kominski, 2011). However, as the returns to a college education have increased, so too has the cost of obtaining this credential (U.S. Department of Education, 2012). While some students receive financial assistance in the form of scholarships and grants to cover a portion of these costs, families tend to bear the largest share of this financial burden (Sallie Mae, 2012). What's more, families' share of these costs appears to be on the rise, as government aid has not kept pace with the increasing price of tuition (Baum & Ma, 2012). Existing research shows that youth who receive financial assistance from their family for college are more likely to graduate and to begin their adult lives free of debt (Hamilton, 2013; Keane & Wolpin, 2001; Steelman & Powell, 1989). As a result, families' ability to invest in their children's college education has become a key mechanism for the reproduction of inequality across generations.

Prior research on familial support for college has demonstrated that household income is strongly related to students' receipt of financial assistance from their family (Wightman, Schoeni, & Robinson, 2012). Another factor that is likely to influence students' receipt of this assistance, but has received far less empirical attention, is family structure. High rates of nonmarital childbearing, divorce, and separation have led to unprecedented complexity in family life, with around 50% of children spending a portion of their childhood living apart from at least one of their biological parents (usually their father) (Cherlin, 2010; Ellwood & Jencks, 2004). Family structure has implications for families' level of financial resources (Thomas & Sawhill, 2005) as well as for norms regarding the provision of intergenerational support (Lye, 1996;

Seltzer & Bianchi, 2013; Swartz, 2009). As a result, youth from non-intact families may have fewer resources, or less access to these resources, than their peers from intact families (Swartz, 2008). On the other hand, youth from non-intact families may be more likely to turn to family members other than their biological parents for financial assistance—such as stepparents, grandparents, or other extended kin—which may help to compensate for some of this loss (Bengtson, 2001).

The present study uses data from a sample of college students from the National Longitudinal Survey of Youth 1997 cohort (NLSY97) to describe how students' family structure history from birth to age 18 is related to their receipt of financial assistance from their family for college, as well as which family members provide this assistance. The study also evaluates one possible explanation for these associations by examining the extent to which they are driven by family structure differences in household income. By addressing these questions, this research illuminates one of the ways in which family structure continues to constrain children's wellbeing and attainment as they embark on their adult lives.

Background

The cost of attending college has grown at an alarming rate in recent decades. In 1980, the average annual cost of full-time tuition, fees, room, and board at a four-year school was around $9,000 (in 2011 dollars); by 2011, this figure had increased to over $23,000 (U.S. Department of Education, 2012). While the cost of attending a two-year college is considerably lower, it is still substantial (around $9,000 per year for full-time students in 2011) (U.S. Department of Education, 2012). As college costs have grown, it has become the norm for parents to pay for some or all of children's higher education. Recent estimates suggest that between 50 and 75% of college students receive financial assistance from their parents (Henretta,

Wolf, Van Voorhis, & Soldo, 2012; Wightman et al., 2012), and the median amount of this assistance is around $4,000 per year (Turley & Desmond, 2011).

There are a number of reasons to expect that young adults' family structure history should be related to their receipt of financial assistance from their parents for college. Family structure constrains parents' ability and willingness to provide important financial resources to their children. With regards to parents' ability to pay for children's college expenses, the money parents have available to spend varies sharply with family structure (Carlson & England, 2011; Eggebeen & Lichter, 1991; Lerman, 1996; Manning & Brown, 2006; McLanahan & Sandefur, 1994; Thomas & Sawhill, 2005). Families headed by two biological parents tend to have the highest levels of income and wealth, followed by families headed by one biological parent and a stepparent. Single-parent families—particularly those headed by a single mother—display by far the lowest levels of economic resources and the highest poverty rates (Manning & Brown, 2006; Thomas & Sawhill, 2005). What's more, research indicates that these associations are not due entirely to selection—i.e., to people who initially have higher incomes and assets choosing to get and stay married. Instead, family structure itself appears to cause much of these economic differences; marriage facilitates greater wealth acquisition via income pooling and economies of scale, whereas divorce and single-parenthood deplete parents' economic resources (Thomas & Sawhill, 2005; Waite, 1995; Waite & Gallagher, 2000).

Parents' willingness to invest in their children may also vary by family structure. Relative to families headed by two biological parents, stepfamilies and single-parent families are less "institutionalized" contexts for childrearing (Cherlin, 1978). These latter types of families may experience more conflict and less cohesion and solidarity among family members (Cherlin & Furstenberg, 1994; Lansford, Ceballo, Abbey, & Stewart, 2001), reducing the generosity of

intergenerational support (Aquilino, 1994, 2006). Fathers' provision of college assistance is likely to be particularly affected by family structure, since they are typically the "absent" parent following separation. Indeed, previous research has shown that fathers' perceived level of obligation to their children tends to decrease dramatically when their romantic relationship with their children's mother ends (Edin & Nelson, 2013; Furstenberg & Cherlin, 1991; Seltzer, 1991; Townsend, 2002). As a result, fathers who have separated from their children's mother may not feel responsible for paying much, or anything, towards their children's college costs.

The discussion thus far has primarily focused on differences between intact and non-intact families. However, family structure is more complicated than this dichotomy suggests. When considering the implications of family structure for college assistance, it may be important to distinguish between different types of non-intact families—such as single-parent and step-families—as these families tend to possess different levels of resources and different norms governing parent-child relations. It may also be important to consider changes in family structure throughout childhood. Family structure is not static—many children experience multiple transitions in their living arrangements from birth through adolescence (Cavanagh, 2008). The life course perspective emphasizes the importance of thinking holistically about the linked lives of parents and children and how they unfold over time (Elder, 1998). This perspective recognizes that youth who have identical family structures when they reach college may have had distinct family structure experiences while growing-up, and that these earlier features of their family structure history may also be relevant for how they fare later in life (Cavanagh, 2008; Hao & Xie, 2002; Lopoo & Deleire, 2013). For example, youth who lived with a single mother since birth may be less likely to receive financial assistance from their father than youth who were born to married parents but subsequently experienced their parents' divorce, given the bond that

develops between fathers and children after many years of living together (Edin & Nelson, 2013; Marsiglio & Roy, 2012; Seltzer, 1991). In light of these considerations, the present study utilizes information on college students' full family structure history from birth through age 18 in order to provide a more nuanced assessment of the role of family structure in their receipt of financial assistance for college.

Family structure may also play a role in determining *which* family members provide college assistance. Relative to biological parents, youth are probably much less likely to receive assistance from other family members, such as stepparents, grandparents, and other relatives. Norms surrounding intergenerational support from these family members are weaker than those involving biological parents, and as a result, these individuals may feel less obligated to help pay for children's higher education (Cherlin, 1978; Cherlin & Furstenberg, 1986). Even though overall levels of support from these individuals are likely to be low, family structure may be key for understanding who provides support and who does not (Jaeger, 2012). Prior research suggests that extended kin—particularly maternal grandparents—often serve as a safety net for single mothers and children, offering practical and financial assistance when resources in the immediate family are lacking (Cherlin & Furstenberg, 1986; Edin & Kefalas, 2005; Stack, 1974). If this support continues as children age, young adults who resided with a single mother while growing-up may be more likely to receive college assistance from their extended family than those who did not. Young adults from non-intact families may also have stepparents who can contribute when assistance from biological parents is low (Berger, Carlson, Bzostek, & Osborne, 2008). Nevertheless, financial support from these family members is unlikely to fully compensate for support from biological parents, leaving youth from non-intact families at a disadvantage, despite their potentially larger familial network (Wachter, 1997).

Empirical research on how youth pay for college is surprisingly scarce (Deil-Amen & Turley, 2007), with even fewer studies focusing on the role of family structure in this process. The studies that have been conducted on this topic have consistently found that students whose biological parents divorce by the time they are 18 receive less help with college expenses than those whose parents are married, even when household income or other indicators of parents' socioeconomic status are controlled (Amato, Rezac, & Booth, 1995; Henretta et al., 2012; Turley & Desmond, 2011). Remarriage appears to increase this assistance somewhat, but youth with remarried parents still receive less than youth with married, biological parents (Turley & Desmond, 2011). Moreover, when considered as a proportion of household income, remarried parents actually provide less college assistance than divorced, single parents. Studies that have examined the association between family structure and parents' attitudes about assisting their children with future college expenses have found similar results, with parents in single-parent and stepparent households reporting less favorable attitudes than parents in intact households (Aquilino, 2005; Steelman & Powell, 1991).

Although this body of work suggests that youth who grow-up in a non-intact family receive less financial assistance for college than youth who grow-up with married, biological parents, a number of questions remain unanswered. First, the extant research lacks information on which family members provide this assistance and if it varies by family structure. Given that paying for college has become a huge financial burden, the issue of *who* in the family is assuming this responsibility warrants further attention. Second, these studies have utilized simple measures of family structure that reflected a single moment in young adults' life course, such as their family structure when they entered college. It remains to be seen whether earlier dimensions of students' family structure history are also relevant for understanding their receipt

of financial assistance for college. Third, most of these studies have not examined the mechanisms driving these associations (for an exception, see Turley and Desmond 2011). Are family structure differences in college assistance driven entirely by differences in material resources, or might other factors also play a role?

One final issue that warrants attention is that of selection into college. Young adults who do not attend college are obviously not "eligible" to receive money from their family to assist with college costs. This raises problems for estimating the causal effect of family structure on financial assistance for college, because previous research has shown that growing-up in a non-intact family reduces young adults' probability of attending college (Henretta et al., 2012; Sandefur, Meier, & Campbell, 2006). Consequently, the results of the present study should be considered purely descriptive, and are likely to underestimate the true causal effect of family structure on college assistance because young adults from non-intact families who attend college probably differ from those who do not attend college in ways that make them more likely to receive financial assistance. As I continue to work on this paper, I plan to explicitly account for differential selection into college using a two-stage Heckman selection model.

The Present Study

The present study speaks to the growing literature on how family structure contributes to children's long-term wellbeing by describing the association between young adults' family structure history from birth through age 18 and their receipt of financial assistance for college. It also explores potential explanations for this association by examining whether different levels of material resources account for family structure differences in college assistance. Specifically, this study addresses the following three research questions: 1) What percentage of college students receives financial assistance from their family for college, how much do they get, and

which family members provide this assistance? 2) Is students' family structure history related to their likelihood of receiving college assistance and the amount of this assistance (both overall and from particular family members)? 3) Does variation in household income by family structure fully or partially mediate family structure differences in students' receipt of this assistance?

Method

Data and Sample

The data for this project come from the National Longitudinal Survey of Youth 1997 cohort (NLSY97). The NLSY97 contains a nationally representative sample of 8,984 men and women who were born between 1980 and 1984 and were 12-17 years old when first interviewed in 1997. Follow-up interviews have been conducted annually, with the most recent round of available data coming from 2011 when respondents were 26-31 years old. Retention rates for the follow-up surveys have been quite high; for instance, over 82% of the original sample completed the 2011 round of data collection. During the initial round of data collection, one parent of each respondent (usually the mother) was asked to complete a supplemental parent interview: 88% of respondents had a parent complete this supplement. This portion of the survey contains important information on parents' demographic characteristics, their marital history, and other characteristics of respondents' family of origin.

To conduct the analyses, I limited my sample to 6,101 youth who attended either a two-year or four-year college between ages 17 and 26. From this sample, I excluded 1,344 cases (22.0%) whose mother did not complete the supplemental parent interview, 713 cases (11.7%) who did not live with their mother continuously throughout their childhood or who were missing information on their childhood family structure, and 486 cases (8.0%) who were missing information on whether they received financial assistance for college. I also excluded 335 cases

(5.5%) who were missing information on any of the covariates included in the multivariate analyses, although as I continue to work on this paper, I will use multiple imputation with chained equations to retain these cases in my analyses (White, Royston, & Wood, 2011). My final analytic sample consisted of 3,081 young adults ages 17-26 who attended a two-year or four-year college between 1997 and 2011.

Measures

Financial Assistance for College. Young adults who had attended college since the previous survey were asked a series of questions about how they financed their tuition and living expenses each term. In order to minimize bias from students dropping out of college, I used reports from respondents' first term in college. Specifically, respondents were asked, "Did you receive financial assistance from parents, other relatives, or friends while attending this school/institution during this term?" Those who responded "yes" were then asked to identify the relatives (or family friends) from whom they received financial assistance, as well as the amount of financial assistance (in dollars) they received from each type of relative (or family friend) during that college term that they were not expected to repay (i.e., excluding loans). Options included 'your biological parents together,' 'your mother (and stepfather),' 'your father (and stepmother),' 'your grandparents,' and 'other relatives, friends, or non-relatives.'

From this information, I created a dummy variable for whether young adults *received assistance from anyone in their family for college* and a continuous measure of the *total amount of financial assistance* (in dollars) they received from all relatives and friends combined. I also created dummy variables for whether young adults received financial assistance from *both biological parents, grandparents, other relatives/non-relatives, mother (and stepfather),* or *father (and stepmother*) and continuous variables for the amount they received from each of

these groups. It is important to note that these categories are not mutually exclusive; for instance, respondents could receive assistance from both of their biological parents and from their grandparents. I coded these variables as identical to respondents' reports except if they indicated that they received assistance from both their mother (and stepfather) and their father (and stepmother). In these cases, I coded respondents as having received assistance from *both biological parents* rather than from their *mother (and stepfather*) and *father (and stepmother*) separately. Respondents who indicated that they received financial assistance from one biological parent but not the other were retained in their original category.

Family Structure History. My measures of young adults' family structure history from birth to age 18 were created from a combination of mother and youth reports. Prior to the 1997 survey, young adults' family structure can be ascertained from mothers' reports of the start and end dates of all their marital relationships. Beginning in 1997, young adults' family structure can be ascertained from their own reports of their household roster. At each survey wave, youth indicated whether they were living with their mother and biological father, their mother and stepfather, or their mother only. (As mentioned previously, young adults who did not live with their biological mother continuously throughout their childhood were excluded from the sample). I used this information to create a three-category measure of young adults' living arrangements for each year of their life from birth through age 17 (for a total of 18 years). Categories included 'both biological parents,' 'mother and stepfather,' and 'mother only.' All family structure transitions were assumed to occur at the start of the year; for example, if mothers got married in the same year their child was born, I coded them as married when their child was born. Also, because mothers were not asked the identity of their child's biological father, I assumed that their spouse at the time of their child's birth was their child's father and that any subsequent spouse

was their child's stepfather. The only exception was if youth indicated that they were living with their biological father in a subsequent year; in these instances, I coded mothers' partner as youth's biological father rather than their stepfather.

From this information on young adults' family structure at each age, I created a detailed, categorical measure capturing the fully history of young adults' family structure from birth to age 18. This measure included the following six categories:

1) *Intact* (lived continuously with both biological parents from 0-17 years old).

2) *Stable single mother* (lived continuously with mother only from 0-17 years old).

3) *Two parent to single mother* (born to both biological parents, experienced dissolution of parents' relationship, and subsequently lived with a single mother through age 17).

4) *Two parent to single mother to stepfather* (born to both biological parents, experienced dissolution of parents' relationship, and subsequently lived with a stepfather through age 17).

5) *Single mother to stepfather* (born to a single mother and subsequently lived with a stepfather through age 17).

6) *Other* (experienced more transitions or a different sequence of transitions than the remaining categories).

This measure parsimoniously captures young adults' family experiences over the life course, both in terms of the types of families in which they lived and the amount of stability/instability to which they were exposed. In addition to this detailed measure, I also created a simple, dichotomous measure of whether young adults were raised in an *intact* versus a *non-intact* family.

Household income at age 16. During the first five waves of data collection (1997-2001), parents of respondents were asked to provide detailed information on their own income and the income of their co-residential spouse or partner. Specifically, parents were asked to report their income from wages, salaries, commissions, tips, and other sources (such as from a business or farm, government program, or pension plan). From this information, I created a continuous measure of respondents' household income from the survey wave in which they were closest to 16 years old. I chose this age because it was subsequent to most family structure transitions but prior to youth's enrollment in college.

Controls. Finally, I included a set of control variables in my multivariate models in order to account for socio-demographic factors that may confound my estimates of interest. These included respondents' age (in years) at the first survey following enrollment in college, their gender, their race/ethnicity (categories included White, Black, Hispanic, and other), and their total number of full and half siblings. I also included several measures pertaining to respondents' parents. These consisted of parents' highest level of educational attainment (categories included less than high school, high school, some college, and bachelor's degree or higher), a dummy variable for whether both parents were born in the United States, a continuous measure mother's self-reported physical health on a scale ranging from *1* = (*poor*) to *5* = (*excellent*), a categorical variable for mother's attendance at religious services (responses included never, less than once a month, 1-2 times per month, and once a week or more), and a dummy variable for whether the mother lived with both biological parents at age 14. Finally, I included a measure of the highest level of education attained by respondents' maternal grandparents (categories included less than high school, high school, some college, and bachelor's degree or higher).

Analytic Strategy

My analyses proceeded as follows. First, I estimated descriptive statistics for the family structure history and socio-demographic characteristics for all members of my sample. Next, I examined the percentage of students who received financial assistance for college from anyone in their family and from particular family members, as well as the amount of this assistance (research question 1). All of the descriptive statistics were weighted using custom weights provided by the NLSY97 in order to account for differential sampling probabilities and attrition from the survey over time.

Following these descriptive analyses, I used regression models to examine the association between youth's family structure history and their receipt of financial assistance for college (research question 2). I used logistic regression models to examine students' likelihood of receiving financial assistance (both overall and from particular family members) and tobit models to examine the amount of assistance received. I chose tobit models over ordinary least squares regression models because the former have been shown to produce less biased estimates when a large number of cases have a value of zero on the dependent variable (Wooldridge, 2006). Standard errors were adjusted to account for clustering of respondents at the household level (about 30% of respondents had a sibling in the sample).

I began by examining students' likelihood of receiving any financial assistance from their family for college and the total amount of financial assistance they received. For each outcome, I estimated three separate models. In Model 1, I regressed each outcome on the simple, dichotomous measure of family structure. In Model 2, I replaced this measure of family structure with the more detailed, six-category measure of family structure history. Finally, in Model 3, I added the measure of household income at age 16, in order to examine whether family resources

help explain the associations between family structure and receipt of financial assistance for college (research question 3). I then repeated this process for the outcomes of financial assistance from particular family members.

Results

Sample Characteristics

Descriptive information on the family structure history and demographic characteristics of youth who attended college are displayed in Table 1. Over 60% of the sample grew-up in an intact family—i.e., in a family that was continuously headed by their biological mother and father. About 8% of the sample grew-up in a stable, single-mother family, and 11% was born to both biological parents but subsequently lived with a single mother through age 17. About 7% of the sample was born to both biological parents, experienced their parents' relationship dissolution, and subsequently lived with a stepfather through age 17. About 3% was born to a single mother but subsequently lived with a stepfather through age 17. Finally, about 9% of the sample experienced a different family structure trajectory than those described here. Because this category contains a variety of different family structure experiences, I will not focus on it when describing the remainder of my results.

With regards to the demographic characteristics of the sample, the average age of respondents was just over 19 years. Over half of the sample was female. Nearly 80% of respondents were White, 11% were Black, and nearly 10% were Hispanic. About 30% of parents had a high school degree or less, about 30% attended some college, and about 40% had a bachelor's degree or higher. On average, mothers were 27 years old at the time of respondents' birth. Finally, the average household income for the sample was just over $62,000 per year. For details on the remaining covariates, see Table 1.

Research Question 1: Patterns of Financial Assistance for College

Table 2 displays the percentage of college students who received financial assistance from their family during their first term in college and the amount of financial assistance they received (and were not expected to repay), both overall and from particular family members. Looking first at overall assistance, 70% of college students reported that they received money from a relative or family friend to assist with the costs of attending college. On average, students received just over $2,000 during their first term in college. If we only consider young adults who reported receiving assistance, this figure increased to nearly $3,000.

Turning to assistance from particular family members, over 50% of students reported receiving college assistance from both of their biological parents. Parents contributed an average of around $1,800 to their child's first term in college, and among parents who contributed some assistance, this figure was closer to $3,500. Just under 6% of students reported receiving assistance from their grandparents. On average, grandparents contributed just under $100 to students' first term in college, but among grandparents who contributed, this figure was around $2,000. About 4% of respondents received assistance from other relatives (i.e., aunts, uncles, cousins, siblings) or non-relatives. The average amount contributed by this group was about $60, but among those who contributed, it was closer to $1,600. Nearly 11% of respondents received assistance from their mother and/or stepfather (but not from their other biological parent). On average, mothers and stepfathers contributed about $200 to assist with college expenses, but among those who contributed some amount, this figure was about $2,000. Finally, only 2% of students reported receiving assistance from their father and/or stepmother (but not from their other biological parent). On average, fathers and stepmothers contributed $69 to assist with students' first term in college, but among those who contributed, this figure was over $3,500.

Research Question 2: Association between Family Structure History and Financial Assistance for College

Table 3 displays the results from the regression models used to examine the association between students' overall receipt of financial assistance and their family structure history. The first column shows the results from the logistic regression models for the outcome of students' odds of receiving any assistance from their family for college, and the second column shows the results from the tobit regression models for the outcome of the amount of financial assistance students received (in thousands of dollars). Model 1 regressed each outcome on the basic measure of family structure history, Model 2 regressed each outcome on the detailed measure of family structure history, and Model 3 (which I will discuss later in the Results section) added students' household income at age 16 as a mediator. All of these models included all of the socio-demographic control variables, although to conserve space they are not included in the table and will not be discussed further here.

Looking first at students' odds of receiving financial assistance, the results from Model 1 indicate that students who grew-up in a non-intact family had 43% lower odds of receiving financial assistance for college than students who grew-up in an intact family. However, as the results from Model 2 show, these odds varied across different types of non-intact families. Students who grew-up in a stable single-mother family, as well as those who were born to two parents but subsequently lived with a single mother, had about half the odds of receiving financial assistance as those who grew-up in an intact family. In contrast, students who lived with a stepfather by the time they were 18 did not have significantly lower odds of receiving financial assistance relative to their peers from intact families.

Turning to the tobit models for the amount of financial assistance students received, the results from Model 1 indicate that students who grew-up in a non-intact family received about $1,180 dollars less during their first term in college than students who grew-up in an intact family. Again, the results from Model 2 indicate that this finding varied across different types of non-intact families. Relative to students from intact families, students who experienced their parents' relationship dissolution and subsequently lived with a single mother were the most disadvantaged, receiving about $1,770 less in college assistance. Students who grew-up with a stable single mother were also quite disadvantaged, receiving $1,230 less than students from intact families. Students who experienced their biological parents' relationship dissolution and subsequently lived with a stepfather received $910 less than students from intact families. Only students who were born to a single mother and subsequently lived with a stepfather did not receive significantly less for college than students from intact families.

Tables 4 and 5 present the results for the regression models of financial assistance from particular family members. Looking first at students' odds of receiving any financial assistance (Table 4), family structure played a large role in students' receipt of financial assistance from both of their biological parents. In Model 1, students who grew-up in a non-intact family had 87% lower odds of receiving financial assistance from both biological parents than students who grew-up in an intact family. As can be seen in Model 2, these odds were roughly similar across all different types of non-intact families. Turning to the outcomes of financial assistance from grandparents and other relatives/non-relatives, the results indicate that family structure did not play a role in students' odds of receiving support from these family members: None of the associations between family structure and these outcomes were statistically significant, even at the $p < 0.10$ level. The final two columns show the results for the outcomes of financial

assistance from mother and/or stepfather and father and/or stepmother. Because only a handful of students from intact families reported receiving assistance from one biological parent but not the other, these students were excluded from these analyses. These models therefore compared across different types of non-intact families, using 'stable single mother' families as the reference category. The only significant result of interest indicated that students who experienced the dissolution of their biological parents' relationship and subsequently lived with a stepfather had about 88% higher odds of receiving financial assistance from their mother and/or stepfather than students from stable single-mother families.

Turning to the amount of financial assistance students received from particular family members (Table 5), again, family structure played a large role in assistance from both biological parents. The results from Models 1 and 2 indicate that students who grew-up in any type of non-intact family received about $4,000-$6,000 less in financial assistance from their parents than students from intact families. For the outcome of financial assistance from grandparents, one association was statistically significant: Students who were raised in a stable single-mother family received about $1,740 more in financial assistance from grandparents than students from intact families. Family structure did not play a role in the amount of financial assistance provided by other relatives/non-relatives or by fathers and/or stepmothers, but it was associated with the amount of financial assistance provided by mothers and/or stepfathers. Students who lived with a stepfather at age 18 reported receiving $1,500-$2,000 more in financial assistance from these family members than students in a stable single mother family.

Research Question 3: Household Income as a Mediator

Finally, in order to examine whether family resources help to explain the associations between family structure and financial assistance for college, in Model 3 for each of these

regressions I added the measure of students' household income at age 16. Returning to Table 3, a comparison of the results from Model 3 to those from Model 2 revealed that, in both the logit and tobit regressions, household income attenuated the associations between family structure and financial assistance for students who resided with a single mother prior to attending college, but not for those who lived with a stepfather. Moreover, even the associations for students who resided with a single mother tended to remain statistically significant in Model 3, suggesting that factors other than material resources may also have accounted for their lower levels of college assistance. The only exception was for students who were raised in stable single-mother families. In the tobit model, the coefficient for 'stable single mother' was no longer significant in Model 3, suggesting that differences in household income fully accounted for the lower amount of financial assistance given to students from stable single-mother families relative to students from intact families.

The results for financial assistance from particular family members also fit this general pattern. Lower levels of household income in single-mother families, and to a lesser extent in stepfather families, attenuated the associations between family structure and the amount of financial support provided by both biological parents (Table 5), although it did not account for differences in students' odds of receiving this assistance (Table 4). Lower levels of household income in single-mother families also partially accounted for the higher amount of financial assistance provided by grandparents to students in single-mother families relative to intact families (Table 5). Finally, higher levels of household income in stepfather families relative to single-mother families partially accounted for higher levels of financial assistance provided by mothers (and potentially their partner) in families with a stepfather versus families headed by a single mother (Tables 4 and 5).

Discussion

This paper sheds new light on how the family of origin continues to matter for children's attainment during the transition to adulthood. It is one of the first papers to describe young adults' receipt of financial assistance for college from their family and how this assistance varies by family structure. Overall, the results suggest that family structure plays a large role in college students' receipt of financial assistance, leaving students from non-intact families at a considerable disadvantage as they begin their adult lives. The fact that this association is observed over and above the likely effect of family structure on young adults' probability of entering college in the first place (Henretta et al., 2012; Sandefur et al., 2006) is particularly striking.

The first aim of this paper was to describe the percentage of college students who receive financial assistance from their family to assist with tuition and living expenses, how much they receive, and which family members provide this assistance. Around 70% of students enrolled in a two-year or four-year college received some financial assistance from their family, and among those who received assistance, the average amount was around $3,000. Most of this assistance came from students' biological mother and father—over 50% of students received assistance from both of their parents. Support from extended family members was not very common—only 6% of students received assistance from grandparents and 4% received assistance from another relative or non-relative. Finally, around 13% of students received assistance from only one of their biological parents—11% from their mother (and possible a stepfather) and 2% from their father (and possibly a stepmother).

The second aim of this paper was to examine the extent to which family structure influences young adults' receipt of college assistance, both overall and from particular family

members. In general, students from non-intact families were severely disadvantaged in their receipt of assistance relative to students from intact families. However, there also existed a great deal of variation in financial assistance across different types of non-intact families. Students who lived with a single mother just prior to attending college had the lowest odds of receiving this assistance and received the lowest amount of support. Students who lived with a stepfather just prior to attending college were also disadvantaged relative to students from intact families, particularly if they were born into a two-parent household and experienced their parents' relationship dissolution. In contrast, students who were born to a single mother and then resided with a stepfather did not differ from students in intact families in terms of their likelihood or amount of support. One possible explanation for this finding is that stepfathers play a more central parenting role when children do not have a close relationship with their biological father (Marsiglio, 2004), which in turn leads to higher amounts of financial assistance from stepfathers when children go to college.

With regards to financial assistance from particular family members, students from all types of non-intact families were much less likely to receive assistance from both biological parents, and received much lower amounts of this assistance, compared to students from intact families. Grandparents and other relatives and non-relatives did little to compensate for this reduction in support, with the exception of grandparents contributing more to students from stable single-mother families than to students from intact families. This finding echoes previous research on the importance of grandparents for the provision of practical, financial, and emotional support in single-mother families (Cherlin & Furstenberg, 1986; Stack, 1974). Among students from non-intact families, those who resided with a stepfather just prior to attending college were much more likely to receive assistance, and received larger amounts of assistance,

from their mother's household than students who lived with a single mother. Unfortunately, the data do not allow me to identify whether this additional assistance stemmed from stepfathers' personal contributions to students' college costs, or from the greater contributions of mothers who re-partnered (versus those who remained single). Finally, students from all types of non-intact families were about equally unlikely to receive financial assistance from their non-resident father and/or stepmother.

The third aim of this paper was to evaluate whether differences in financial assistance by family structure were driven by differences in the availability of material resources. In general, household income accounted for a portion of the lower levels of assistance received by students who lived with a single mother prior to attending college, but not for students who lived with their mother and a stepfather. This finding makes sense, given that single-mother families tend to have much lower household incomes than intact or step-families (which tend to have similar levels of income) (Thomas & Sawhill, 2005). Nevertheless, even when controlling for income, family structure was significantly related to students' receipt of financial assistance, suggesting that other, unmeasured characteristics, such as the value parents place on higher education or their willingness to support their children's educational endeavors (Aquilino, 2005, 2006), may also play a role in this association.

As I continue to work on this paper, I intend to run a number of additional analyses in order to strengthen the contribution of this paper to our understanding of the role of family structure for young adults' receipt of college assistance. First, I will address the issue of unequal selection into college by family structure using a two-stage Heckman selection model, in order to provide a more robust estimate of the causal association between family structure and young adults' receipt of financial assistance for college. Second, I will account for students' age at

various family structure transitions (such as their parents' divorce or mother's remarriage) in order to evaluate whether this helps to explain further variation in students' receipt of college assistance. Third, because students likely make choices about where to attend college based on the school's cost, and these choices may vary systematically by family structure, I plan to measure financial assistance as a proportion of the total cost of attending college, in addition to measuring it as an absolute number. Finally, I will run my models separately for students who attended two-year and four-year colleges, in order to evaluate whether the association between family structure and financial assistance differs between these types of institutions.

It is important to bear in mind a number of limitations when interpreting the results of this study. First, the NLSY97 data did not allow me to distinguish stepparents' separate contributions to young adults' college expenses. Respondents could only indicate whether they received assistance from their stepfather and mother together or their stepmother and father together. As a result, it was not possible to determine whether stepparents themselves contributed to their stepchild's higher education, or if this support came solely from biological parents. Second, my measure of family structure did not capture mothers' cohabiting relationships when children were young, and it confounded mothers' cohabiting and marital relationships when children were older. This is because children's family structure prior to 1997 was derived from mothers' reports of their marital history, whereas their family structure since 1997 was derived from youth's reports of their household roster (which did not distinguish between marital and cohabiting relationships). My measure of family structure also excluded children who did not live continuously with their mother while growing-up, due to the small size of this group. Third, my measure of household income only captured the income of respondents' mother's household and overlooked the income of nonresident fathers. Because I am likely underestimating the total

income of non-intact families relative to intact families, I may be overestimating the role of household income in explaining family structure differences in financial assistance for college.

In sum, as a college degree becomes more important for individuals' economic success later in life, families are increasingly being called on to finance children's pursuit of this credential. Unfortunately, not all families are equally equipped to provide this critical form of support. The results of this paper show that family structure plays a key role in constraining families' provision of financial assistance for college. Students from non-intact families are less likely to receive college assistance, and receive lower amounts of assistance, than students from intact families. Biological parents are the primary source of this assistance, and extended family members do not fully compensate for the lower levels of parental support received by students from non-intact families. Taken together, these results shed light on one of the many ways in which patterns of family life serve to perpetuate social and economic inequalities as children embark on their adult lives.

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Table 1. Sample Characteristics

	M or %	(SD)
Family structure history		
Intact	62.1	
Stable single mother	7.9	
Two parent to single mother	11.1	
Two parent to single mother to stepfather	7.1	
Single mother to stepfather	2.8	
Other	9.1	
Age (in years)	19.22	(1.64)
Gender		
Female	52.6	
Male	47.4	
Race		
White	78.5	
Black	11.0	
Hispanic	9.5	
Other	1.0	
Number of siblings	2.03	(1.59)
Parents' educational attainment[a]		
Less than high school	4.9	
High school	24.0	
Some college	28.4	
Bachelor's degree or higher	42.8	
Both parents born in U.S.	86.5	
Mother's physical health (*range* = 1 - 5)	4.02	(0.96)
Mother's religious attendance		
Never	11.9	
Less than once a month	23.2	
1-2 times per month	21.0	
Once a week or more	43.9	
Mother lived with both parents at age 14	80.5	
Mother's age at focal child's birth (in years)	26.77	(4.99)
Grandparent's Educational Attainment[b]		
Less than high school	25.3	
High school	37.3	
Some college	13.9	
Bachelor's degree or higher	23.5	
Household income at age 16 (in thousands)	62.41	(53.37)
N	3,081	

Note : All values weighted to correct for differential sampling probabilities and attrition.

[a] Reflects the highest level of education attained by youth's biological parents.

[b] Reflects the highest level of education attained by youth's maternal grandparents.

Table 2. Descriptive Statistics on Financial Assistance from Family (N = 3,081)

	Overall Assistance		Assistance from Particular Family Members									
			Both Biological Parents		Grandparents		Other Relatives/ Non-Relatives		Mother and/or Stepfather		Father and/or Stepmother	
	M or %	(SD)	*M* or %	(SD)	*M* or %	(SD)	*M* or %	(SD)	*M* or %	(SD)	*M* or %	(SD)
Any assistance	70.4		54.6		5.6		4.1		10.9		2.0	
Amount of assistance	$2,047.70	$4,161.44	$1,768.93	$3,911.12	$93.87	$789.40	$59.73	$662.90	$194.54	$1,351.39	$68.86	$960.22
Amount of assistance (for those who received assistance)	$2,906.47	$4,577.96	$3,475.41	$4,692.13	$1,947.73	$2,964.83	$1,602.44	$3,268.07	$2,069.09	$4,067.34	$3,546.47	$5,634.01

Note : All values are weighted to account for differential sampling probabilities and attrition.

Table 3. Regression Models of Overall Financial Assistance on Family Structure (N = 3,081)

	Logistic Regression Models (Odds Ratios)		Tobit Models (Thousands of Dollars)	
	exp(β)	*z*- statistic	β	*t*- statistic
Model 1: Basic Family Structure History				
Intact	--	--	--	--
Non-intact	0.57 **	-5.92	-1.18 **	-4.93
Model 2: Detailed Family Structure History				
Intact	--	--	--	--
Stable single mother	0.55 **	-4.10	-1.23 **	-3.06
Two parent to single mother	0.48 **	-5.40	-1.77 **	-5.10
Two parent to single mother to stepfather	0.76	-1.49	-0.91 *	-2.39
Single mother to stepfather	0.78	-1.13	0.29	0.43
Other	0.53 **	-4.08	-0.97 **	-2.48
Model 3. Adds household income				
Intact	--	--	--	--
Stable single mother	0.69 **	-2.47	-0.58	-1.46
Two parent to single mother	0.61 **	-3.56	-1.08 **	-3.19
Two parent to single mother to stepfather	0.77	-1.39	-0.91 *	-2.38
Single mother to stepfather	0.82	-0.89	0.39	0.59
Other	0.61 **	-3.26	-0.62 †	-1.65
Household Income (in thousands of dollars)	1.01 **	6.06	0.02 **	5.98

Note : Models control for respondents' age, gender, race, and number of siblings, parents' educational attainment and nativity status, mothers' phsyical health, religious attendance, family structure at age 14, and age at respondent's birth, and grandparents' educational attainment. Dashes '--' indicate omitted category.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$.

Table 4. Logistic Regression Results: Odds of Receiving Any Financial Assistance from Particular Family Members on Family Structure

	Both Biological Parents		Grandparents		Other Relatives/ Non-Relatives		Mother and/or Stepfather		Father and/or Stepmother	
	exp(β)	*z*	exp(β)	*z*	exp(β)	*z*	exp(β)	*z*	exp(β)	*z*
Model 1. Basic family structure history										
Intact	--	--	--	--	--	--				
Non-intact	0.13 **	-20.05	0.94	-0.35	0.96	-0.20				
Model 2. Detailed family structure history										
Intact	--	--	--	--	--	--				
Stable single mother	0.11 **	-12.12	1.53	1.32	1.21	0.66	--	--	--	--
Two parent to single mother	0.10 **	-14.60	0.77	-0.88	0.96	-0.15	1.03	0.13	1.40	0.65
Two parent to single mother to stepfather	0.09 **	-11.96	0.76	-0.79	1.11	0.29	1.88 **	2.93	0.64	-0.72
Single mother to stepfather	0.17 **	-6.66	1.03	0.06	0.91	-0.20	1.37	1.21	1.22	0.28
Other	0.29 **	-7.75	0.96	-0.13	0.60	-1.43	0.51 **	-3.14	0.29 †	-1.76
Model 3. Adds household income										
Intact	--	--	--	--	--	--				
Stable single mother	0.13 **	-11.13	1.30	0.81	1.18	0.56	--	--	--	--
Two parent to single mother	0.12 **	-13.39	0.66	-1.38	0.93	-0.23	1.02	0.10	1.40	0.66
Two parent to single mother to stepfather	0.09 **	-11.53	0.74	-0.89	1.11	0.28	1.66 *	2.29	0.68	-0.64
Single mother to stepfather	0.17 **	-6.46	0.99	-0.02	0.91	-0.21	1.24	0.82	1.29	0.34
Other	0.32 **	-7.31	0.87	-0.45	0.59	-1.45	0.48 **	-3.36	0.30 †	-1.68
Household Income (in thousands of dollars)	1.01 **	4.43	0.99 **	-3.11	1.00	-0.43	1.01 *	2.23	1.00	-0.35
N	3,081		3,081		3,081		1,312		1,312	

Note. Models control for respondents' age, gender, race, and number of siblings, parents' educational attainment and nativity status, mothers' phsyical health, religious attendance, family structure at age 14, and age at respondent's birth, and grandparents' educational attainment. Coefficients presented as odds ratios. Dashes '--' indicate omitted category. Young adults from 'intact' families dropped from models for assistance from 'mother and/or stepfather' and 'father and/or stepmother'.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$.

Table 5. Tobit Regression Results: Amount of Financial Assistance (In Thousands of Dollars) from Particular Family Members on Family Structure

	Both Biological Parents		Grandparents		Other Relatives/ Non-Relatives		Mother and/or Stepfather		Father and/or Stepmother	
	β	*t*	β	*t*	β	*t*	β	*t*	β	*t*
Model 1. Basic family structure history										
Intact	--	--	--	--	--	--				
Non-intact	-4.79 **	-12.84	0.33	0.70	0.15	0.30				
Model 2. Detailed family structure history										
Intact	--	--	--	--	--	--				
Stable single mother	-5.23 **	-8.95	1.74 *	2.23	0.67	1.03	--	--	--	--
Two parent to single mother	-5.68 **	-10.19	-0.42	-'0.54	0.35	0.52	0.10	0.18	-0.01	-0.00
Two parent to single mother to stepfather	-5.75 **	-8.86	0.06	0.08	0.29	0.32	1.53 **	2.62	-3.13	-0.91
Single mother to stepfather	-4.02 **	-4.87	-0.13	-0.09	-0.09	-0.09	2.08 *	2.13	-2.20	-0.62
Other	-2.85 **	-6.23	0.50	0.64	-0.93	-1.18	-0.84	-1.30	-6.68 †	-1.69
Model 3. Adds household income										
Intact	--	--	--	--	--	--				
Stable single mother	-4.41 **	-8.11	1.32 †	1.70	0.65	0.98	--	--	--	--
Two parent to single mother	-4.81 **	-9.39	-0.84	-1.04	0.34	0.48	0.07	0.13	0.16	0.01
Two parent to single mother to stepfather	-5.67 **	-8.76	-0.06	-0.07	0.29	0.32	1.25 *	2.11	-2.97	-0.92
Single mother to stepfather	-3.84 **	-4.65	-0.26	-0.19	-0.10	-0.10	1.86	1.97	-2.09	-0.59
Other	-2.46 **	-5.75	0.29	0.36	-0.94	-1.17	-0.95 **	-1.47	-6.62 †	-1.69
Household Income (in thousands of dollars)	0.02 **	5.91	-0.01 **	-2.66	-0.00	-0.09	0.01 †	1.85	-0.00	-0.21
N	2,865		3,057		3,066		1,253		1,312	

Note. Models control for respondents' age, gender, race, and number of siblings, parents' educational attainment and nativity status, mothers' phsyical health, religious attendance, family structure at age 14, and age at respondent's birth, and grandparents' educational attainment. Dashes '--' indicate omitted category. Young adults from 'intact' families dropped from models for assistance from 'mother and/or stepfather' and 'father and/or stepmother'.

† $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$.