Family Structure and Child Well-Being: Integrating Family Complexity

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Abstract

Although children's family lives are diverse, the measurement of children's living arrangements has lagged, focusing on the relationships of children to parents while largely ignoring sibling composition. Using the 2008 SIPP (n=12,994) we documented patterns of family complexity among a nationally representative sample of children ages 0-17 living in a range of family structures. We also examined the independent and joint effects of family structure and family complexity on child economic well-being. Family complexity was independently associated with economic disadvantage, namely, a lower income to needs ratio and a smaller share of income derived from earnings, although the latter finding was not robust to controls. The effects of family complexity were not contingent on family structure. This study demonstrates the utility of integrating family structure and family complexity in studies of children's well-being.

Key words: family structure, measurement, living arrangements, poverty

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It is well-established that children's living arrangements are diverse. A shrinking share of children resides with two biological married parents and growing shares live with unmarried parents, whether in two biological cohabiting parent, two cohabiting stepparents, single-mother, or single-father families. Children also reside in stepfamilies and increasingly these are unmarried (cohabiting) rather than married families (Kreider & Ellis, 2011). The rise in unmarried and stepfamily living has coincided with a rapid acceleration in family instability, with more children transitioning across multiple living arrangements over the course of childhood (Raley & Wildsmith, 2004).

This traditional approach to conceptualizing children's living arrangements emphasizes children's relationships to the parental adult(s) in the household, ignoring the constellation of siblings who may be present. Growing family instability coupled with rising unwed childbearing portends more family complexity, a term that typically describes the presence of half or step siblings. Nearly 15% of children reside with at least one half or step sibling (Kreider & Ellis, 2011). Comparatively few studies have considered family complexity, but the evidence to date suggests that family complexity is negatively associated with child well-being (Gennetian, 2005; Halpern-Meekin & Tach, 2008; Tillman, 2007; Yuan, 2009). Bridging the family structure and family complexity literatures, we illustrate how these two measures can be integrated in studies of the linkages between family composition and child well-being using data from the 2008 Survey of Income and Program Participation (SIPP).

The purpose of this study is to evaluate whether family complexity is uniquely associated with child well-being, net of the standard measures of family structure. In other words, is there value added to including a measure of family complexity in studies on family structure variation in child well-being? Additionally, is the effect of family complexity contingent on family

structure? We argue that from a theoretical standpoint, it is important to account for not just parents but also siblings in the family environment. In addition to providing a descriptive portrait of today's children in complex families, we empirically test the assertions that family complexity is (1) distinct from family structure and (2) related to child well-being. Using data from the 2008 SIPP, we focus on two indicators of economic well-being among children: the family income to needs ratio and the share of income derived from earnings.

Background

Research on family structure has burgeoned over the past few decades, as scholars have carefully investigated living arrangement patterns and their implications for child well-being (Brown, 2010; McLanahan & Sandefur, 1994). Children residing outside of two biological married parent families tend to fare less well, on average, than those in this family form. The differences among children in single-parent (mother or father only), married step, and cohabiting families (two biological parents or stepparent) are comparatively small. This pattern holds across several domains of child outcomes, including cognitive, behavioral, and physical and mental health (e.g., Artis, 2007; Brown, 2004; Fomby & Cherlin, 2007; Magnuson & Berger, 2009; Manning & Lamb, 2003). Yet this literature needs to be expanded to include the sibling complexity characterizing many children's family lives (Cancian, Meyer, & Cook, 2011).

Measures of family structure only capture parent-child relationships. This approach implicitly assumes that parents are the most salient feature of the family environment, channeling resources such as time and money to children which in turn shapes their development and well-being (Kalil & DeLeire, 2004). But the distribution of economic and parental resources to children also may depend in part on the presence of other children, especially when those children have different sets of parents. Parents tend to invest less in children that are not biologically related to them (Hofferth & Anderson, 2003; Case, Lin, & McLanahan, 2000).

These conclusions come from the extensive literature on married stepfamilies. Although the challenges associated with the formation and maintenance of married stepfamilies are well-known, this research has excluded cohabiting families and much of it is now rather dated (Sweeney, 2010).

Many children who reside in stepfamilies (as defined by the presence of a stepparent) also experience family complexity. High levels of divorce and re-partnering among single mothers set the stage for growth in stepfamilies. As parents move from one partner to the next on what Cherlin (2009) termed "the marriage-go-round," children are more likely to spend time living with half or step siblings. Further, more children are experiencing new forms of stepfamilies that exist outside the boundaries of formal marriage. A consequence of relationship dissolution and re-partnering for children is often the presence of half or step siblings (Carlson & Furstenberg, 2006; Guzzo & Furstenberg, 2007). Thus, the usual assumption that a stepfamily emerges because of the child's relationship to a parent's new spouse or that stepfamilies only occur within marriage is outmoded.

Moreover, family complexity is not synonymous with stepfamilies. Family complexity is evident across all family structures. It can occur among single parent families through multiple partner fertility. And, it is less realistic today to presume that children living with two biological married parents are a homogenous group. Although a majority has either no or full siblings only, a growing minority reside with either half or step siblings. Even some children in what would be labeled "traditional nuclear families" using a standard measure of family structure actually experience family complexity (Gennetian, 2005; Halpern-Meekin & Tach, 2008; Manning, Brown, & Stykes, forthcoming). And, this complexity seems to be related to child outcomes.

Family Complexity and Child Well-being

Prior research on family complexity is limited but the few studies to date generally indicate that sibling composition is associated with child and adolescent well-being. For instance, family complexity was negatively related to the academic outcomes of adolescents, including their grades and school related behavioral conduct (Tillman, 2007). Sibling composition accounted for some of the academic disadvantage exhibited by teens in stepfamilies. Both stepchildren and half siblings—even those who resided with two biological parents—experienced poorer educational outcomes than those with no or only full siblings (Ginther & Pollak, 2004). Other research has shown that among adolescents living in two-parent families, children residing with two biological parents had worse outcomes, on average, when half or step siblings were present than when they resided with only full siblings (Halpern-Meekin & Tach, 2008). This pattern emerged across a range of outcomes, not only academic performance but also depressive symptoms and delinquency. However, another study using the same data set (the National Longitudinal Study of Adolescent Health) did not find evidence that sibling composition was linked to adolescents' mental health (Yuan, 2009).

In short, the empirical evidence suggests that family complexity is related to child well-being. But this research is still in its infancy. The handful of studies largely has focused on adolescents rather than children, and has relied on sibling subsamples available in data sources such as the Add Health (Halpern-Meekin & Tach, 2008; Yuan, 2009), limiting the generalizability of the findings. Some domains of child well-being, such as economic well-being, have been ignored entirely. This particular omission is notable given that family complexity is likely to be related to the financial status of the family since divorce, cohabitation, and unmarried childbearing are more common among the economically disadvantaged (Cherlin, 2010; Edin & Kissane, 2010; McLanahan, 2004).

Another limitation of prior research is its emphasis on family complexity or sibling composition in two parent married families only (although Cancian et al., 2011 focuses only on unmarried mothers). As noted by Halpern-Meekin and Tach (2008), future research would benefit from examining family complexity in cohabiting and single parent families, two family forms that comprise growing shares of children, a sentiment echoed more recently by Manning et al., forthcoming. And, with the rise in multiple partner fertility, we anticipate that family complexity is even more salient outside the boundaries of marriage.

Why Family Complexity Matters

Several theoretical mechanisms for the negative association between family complexity and child well-being have been proposed in the literature (Gennetian, 2005; Halpern-Meekin & Tach, 2008). Specifically, from a biological perspective, parents often invest fewer resources in children to whom they are not biologically related. The presence of half or step siblings can alter the family environment through the uneven distribution of resources as well as the diversion of resources to support children residing outside the household. Conversely, nonresident fathers appear to be less likely to provide economic support to children in complex families (Meyer & Cancian, 2012). In addition, longer-term factors may play a role. Family complexity reflects prior family instability and thus may be selective of parents who are less effective at maintaining healthy relationships. Although we are not able to explicitly test these various mechanisms due to data constraints, it is notable that prior research has shown that controlling for these factors does not significantly reduce the negative effect of family complexity on a host of indicators of child well-being (Halpern-Meekin & Tach, 2008).

The ramifications of family complexity may be unique across family structures. It is possible that the consequences of family complexity are weakest in two biological parent married families given the advantages that tend to accrue to children in this family form.

Fatherhood is associated with a wage premium among married men (Hodges & Budig, 2010; Killewald, 2012). Among stepfamilies, family complexity may have a less pronounced effect on well-being for children in married stepfamilies rather than cohabiting stepfamilies in part because the formal bonds of marriage may facilitate institutionalization of roles and obligations of family members. Alternatively, the implications of family complexity may not vary substantially among children in two parent families given that the incomplete institutionalization of remarriage (Cherlin, 1978) and cohabitation (Nock, 1995) is now arguably more pervasive, characterizing first marriages today, too (Cherlin, 2004, 2009). Family complexity in single-mother (versus two parent) families may have larger negative effects on children's economic well-being because there is no additional parent in the family and the mother must rely on multiple nonresident fathers for support of her children (Meyer & Cancian, 2012).

The Present Study

The current investigation is designed to widen the lens on the family composition of children. Family structure, which only captures children's relationships to parents, does not provide a full portrait of children's living arrangements. Even the more recent emphasis on family instability still only reveals changes in family structure, disregarding transitions in the residence and composition of siblings. Family structure is certainly closely tied to child well-being, but it only offers a partial view of the child's living arrangements.

To move beyond family structure, we investigate whether family complexity independently enhances our ability to account for variation in child well-being. Since prior work has focused on educational and psychological indicators of well-being among children and adolescents, we examine economic well-being, a domain that is particularly well-suited to the SIPP data. Our two measures of economic well-being are the family's income to needs ratio and the share of the family income that is derived from earnings. The former measure is a finer

grained indicator of poverty that locates the child's economic position along a continuum (versus the simple dichotomy tapped by poverty). The latter measure gauges the extent to which earnings (from work) compose the family income versus unearned income (e.g., public transfers).

In addition, our study has two other key advantages. First, it includes children spanning the entire age range of 0-17. Nearly all previous research has been restricted to subgroups of children, typically adolescents. Second, unlike prior studies, which typically focused on either children in two parent families (Ginther & Pollak, 2004; Halpern-Meekin & Tach, 2008) or children born to unmarried mothers (Cancian et al., 2011), we examine children living in an array of two parent and single parent family structures. Thus, the present study offers a detailed descriptive portrait of family complexity among today's children in addition to testing whether and how family complexity is linked to children's economic well-being.

Based on the few studies conducted to date, we anticipate that family complexity is negatively associated with child well-being net of family structure (Gennetian, 2005; Ginther & Pollak, 2004; Halpern & Meekin, 2008; Tillman, 2007). Our study also addresses the possibility that the influence of family complexity may depend on children's family structure. The models include controls for factors associated with family structure and economic well-being, including race and age of the child, maternal age, parental education, and the number of children in the family. Although these factors may attenuate the direct effects of family structure and family complexity, we do not expect them to fully account for these effects. The overarching goal of this paper is to illustrate how researchers can more accurately and completely gauge the family living arrangements of children which will not only enhance our understanding of demographic patterns and trends in children's family experiences but also shed new light on how children's family circumstances are linked to their well-being.

Part of the reason why studies of family complexity are sparse reflects data constraints.

To measure this construct, surveys must include information on how children are related to all other members of the family. The SIPP is the only nationally representative data set that permits a full assessment of this construct for children of all ages (i.e., 0-17). The detailed relationship matrices in the SIPP allow us to identify the relationships among all children and adults within a household, which is not possible with traditional household rosters that only reveal how the household head is related to other members, obscuring the myriad relationships among other members. The SIPP household relationship matrix is superior to standard household survey questions that capture the relationship of a child only to the household head (Brandon, 2007). Roughly 11% of children live in households in which their parent is not the household head (Manning et al., forthcoming).

Method

The 2008 SIPP panel was used to assess the roles of family structure and family complexity on children's economic well-being. Fielded by the Census Bureau, the SIPP is a nationally representative data source with economic information obtained at the household, family, and individual levels. It was designed to serve as a longitudinal complement to the Current Population Survey (U.S. Census Bureau, 2006). Thus, the SIPP features detailed information about economic well-being. Additionally, its relationship matrix allowed us to determine all children's relationships to every person in the household, which was essential for constructing a measure of family complexity.

The 2008 SIPP Panel administered 14 core waves of data spanning 2008-2013 (SIPP User's Guide). Each wave included a supplemental topical module along with the core data on household and demographic characteristics as well as economic well-being. The Wave 2 Topical Module (2009) included the relationship matrix in which primary respondents identified the relationships between all household members. Thus, we were able to identify the relationships

among all children and adults within a household regardless of children's ties to the household head. Further, the 2008 SIPP panel included 52,031 households, providing more than adequate cell sizes to examine less common family forms such as single-father families. The SIPP's large sample, relationship matrix, and indicators of economic well-being made these data an excellent source to assess the effects of family structure and family complexity on children's economic well-being.

The household relationship matrix was only collected for the last reference month of the Wave 2 topical module. We linked the Wave 2 topical module data with the core Wave 2 data (SIPP User's guide), which yielded 98,504 individuals. Next, we limited the analytic sample to the 25,197 individuals who were under age 18 and then excluded the 1,212 minor children who did not live with a biological parent. Thus, our unit of analysis is the child. To avoid the biases associated with the clustering of children within families, we randomly selected one child from each family yielding a final sample of 12,994 minor children living in 12,994 families.

The SIPP includes individual (i.e., adult), family, and household level measures of economic well-being. Because our study focused on children's family structure and family complexity, we relied on family-level indicators of economic well-being. Still, an advantage of the household-level economic well-being measures is that the cohabiting partner's presence and income are included (they are excluded in the family-level measures) and prior work indicates that cohabiting partners contribute to the economic well-being of families (Manning & Brown, 2006). All models were re-estimated using household-level economic well-being measures and the results (not shown, available upon request) were substantively the same (with one exception described in the Results section).

Measures: Dependent Variables

Economic well-being. We examined two family-level indicators of economic well-being:

the family income to needs ratio and *the share of family income derived from earnings*. The first measure benchmarked total family income against family poverty thresholds to yield a continuous indicator of economic-well-being. Children whose total family income was below the poverty threshold had a value of less than 1.0 whereas those living in families whose income exceeded the poverty threshold had values greater than 1.0. The s*hare of family income derived from earnings* was constructed by dividing the family's total earnings for the month by the family's total income for the month. This measure was coded as a continuous variable that ranged from 0 (no income from earnings) to 1 (all income from earnings). There were 347 children whose families had no income for the month and thus the share of family income derived from earnings was coded 0. For both measures, higher values indicated greater economic well-being.

Measures: Independent Variables

Family structure. *Family structure* was constructed using the parental pointers and relationship matrix. It was a dummy indicator with six mutually exclusive, exhaustive categories for children living with at least one biological (or adoptive) parent: (a) two biological parent married family (reference category), (b) married stepfamily, (c) two biological parent cohabiting family, (d) cohabiting stepfamily, (e) single-mother family, and (f) single-father family.

Family complexity. The household relationship matrices identified five types of sibling relationships: biological, adopted, half, step, and "other" regardless of sibling's age. We constructed a dummy indicator for *family complexity* that differentiated between children who lived with at least one half, step, or other sibling (coded 1) and children who lived with only full or adoptive siblings (coded 0).

Measures: Control Variables

The models include controls for the child's race-ethnicity and age as well as maternal

age, parental education, and the number of children in the family. *Race-ethnicity* was coded as a four-category, mutually exclusive dummy indicator: (a) non-Hispanic White (White) (reference category), (b) non-Hispanic Black (Black), (c) Hispanic, and (d) non-Hispanic other, including multi-racial (other). *Child's age* was coded as a three-category, mutually exclusive indicator: (a) 12- 17 years-old, (b) 6- 11 years-old, and (c) under six years-old (reference). *Maternal age* was coded in years as a continuous variable. Paternal age was used for children living in single-father families. *Parental education* was coded using three mutually exclusive, exhaustive categories: (a) at least one co-resident parent earned a Bachelor's degree or higher, (b) at least one co-resident parent earned a high school diploma or GED, but neither earned a Bachelor's degree (reference category), and (c) no co-resident parent had earned a high school diploma nor GED. Finally, the *number of minor children in the family* was a continuous indicator ranging from 1 to 11.

Analytic Strategy

The first step in the analysis was to document levels of family complexity among all children and then separately by family structure to evaluate whether complexity is more common in stepparent and unmarried (i.e., cohabiting and single-parent) families (shown in Table 1). Additional descriptives were generated to compare children who experienced family complexity with those who did not (shown in Table 2). Next, a series of OLS regression models were estimated to predict the two continuous indicators of economic well-being (shown in Table 3). The first model regressed economic well-being on family structure and family complexity to assess whether the presence of half or step siblings was associated with economic well-being net of family structure. The second model introduced the control variables to determine whether the effects of family structure and family complexity were robust net of sociodemographic factors associated with family composition and child well-being. A final model examined the interactive

effects of family structure and family complexity on economic well-being. All analyses were weighted to correct for the complex sampling design of the SIPP.

Results

Descriptive Statistics

Table 1 presents the descriptive statistics for all of the variables used in the analyses and includes tests for statistical significance across the six family structures. All variables differed significantly by family structure according to chi-square or ANOVA tests for group differences. The average income to needs ratio among children was 3.34, suggesting that the typical child lived in a family with an income more than three times the poverty level. The economic well-being of children varied across family structure, with those in two biological parent married families enjoying the highest income to needs ratio at 4.14, followed by children in married stepfamilies (3.56), and single-father families (2.78). Children in both types of cohabiting families and single-mother families were considerably more disadvantaged. In two biological parent cohabiting families, the income to needs ratio averaged 1.51. Children in cohabiting stepfamilies and single mother families fared significantly better than children in two biological parent cohabiting families with incomes nearly two times the poverty level (1.92 and 1.93, respectively).

[Table 1 about here]

The share of income from earnings averaged 0.82 among all children. Thus, in most families the vast majority of the economic resources accrued through earnings. The share from earnings was highest in two biological parent married families at 0.91, followed by married stepfamilies at 0.84, single-father families at 0.76, cohabiting stepfamilies at 0.70, and lastly two biological parent cohabiting and single-mother families who did not differ from each other at 0.64. Both economic well-being measures yielded similar conclusions in terms of family

structure variation, with those in two biological parent married families faring best, followed by married stepfamilies, single-father families, and cohabiting stepfamilies. Children in two biological parent cohabiting families were consistently the most economically disadvantaged group, on average, although for the share of income from earnings this group did not differ significantly from single-mother families.

Nearly 1 in 10 children (9%) resided in complex families, an estimate that is in line with those obtained in prior research (Kreider and Ellis, 2011; Manning et al., forthcoming). The levels of family complexity varied considerably by family structure. Family complexity was most common among children living in stepfamilies, either married or cohabiting. Roughly 39% children in married stepfamilies and 21% in cohabiting stepfamilies experienced family complexity. Family complexity was least prevalent in single-father families (3%) followed by two biological parent married families (5.6%). Levels were a bit higher in two biological parent cohabiting families and single-mother families (7.7 and 8.5%, respectively).

The racial-ethnic composition of children in the sample was 57% White, 13% Black, 21% Hispanic, and 9% other. Children in two biological parent married families and married stepfamilies were disproportionately White (64% and 61%, respectively) whereas children in two biological parent cohabiting families, cohabiting stepfamilies, and single-mother families were disproportionately non-White. Among children in single-father families, Black children (15%) were slightly overrepresented and Hispanic children (18%) were underrepresented. Children in two biological parent married families largely mirrored this pattern. Children in stepfamilies—both married and cohabiting—and single-parent families tended to be older with 57% in married stepfamilies, 44% in cohabiting stepfamilies and 37% and 46% in single-mother and single-father families, respectively, between 12-17 years old. Children in two biological parent cohabiting families were youngest with 72% under age six. More than one-quarter (29%) of

children resided with at least one college educated parent, but most (63%) children resided in a moderately educated family in which at least one parent had a high school degree. Only 9% were living with less parents who did not have a high school degree. Parental education levels were highest in two biological parent married families and single-father families. Lastly, families averaged 1.85 minor children with little substantive variation across family structures, although married stepfamilies were largest with 2.02 children per family, on average.

Additional descriptive statistics are shown in Table 2, which distinguishes children by whether they experienced family complexity (yes or no). Family complexity was negatively associated with both indicators of economic well-being. Children in complex families had significantly lower income to needs ratios, on average, than children without half or step siblings. The mean income to needs ratio for children in complex families was 2.47 versus 3.43 for children who did not live in complex families. Similarly, the share of income from earnings was significantly smaller for children in complex families (0.78) than non-complex families (0.82), on average. The relationship between family complexity and family structure was discussed above for Table 1. Children's characteristics also varied by family complexity status. Children who experienced family complexity were more often Black and less often of other race. Children in complex families were disproportionately ages 6-11 whereas children in families that were not complex tended to be under age 6. Mothers were slightly younger in complex families (35.7) versus non-complex families (37.2) Parental education was negatively related to family complexity. For example, just 14% of children who experienced family complexity resided with a college educated parent versus 30% of children who did not experience family complexity. The number of children in the family was considerably larger, on average, for children who experienced family complexity (2.55) compared with those who were not in a complex family (1.77).

[Table 2 about here]

Multivariate Models

Table 3 depicts the coefficients from the OLS regression models predicting the two indicators of economic well-being. The first panel shows the models estimating the income to needs ratio. In the initial model, both family structure and family complexity had independent effects on the income to needs ratio. Relative to children residing in two biological parent married families, children in all other family structures had significantly lower income to needs ratios, on average. And, family complexity was negatively associated with the income to needs ratio. The strength of the family structure and family complexity coefficients as indicated by standardized betas were largely comparable (results not shown). In short, the presence of half or step siblings was detrimental to children's economic well-being net of family structure.

[Table 3 about here]

The inclusion of controls in the full model reduced to nonsignificance the difference between children in married stepfamilies versus two biological parent married families. All other family structure differentials persisted, although the magnitudes of the coefficients dropped by roughly one-third. Family complexity remained significantly negatively related to the income to needs ratio although here again the magnitude greatly decreased (by about 75%). Black, Hispanic, and other race children were in families with lower average income to needs ratios than White families. Child age was not significantly associated with the income to needs ratio. Both maternal age and parental education were positively related to the income to needs ratio. The larger the number of children in the family, the lower the income to needs ratio, indicating family size was positively linked to economic disadvantage.

The second panel shows the OLS coefficients for the models predicting the share of total family income derived from earnings. Similar to the pattern obtained for the income to needs

ratio, we found that children who lived outside of two biological parent married families were in families in which significantly lower shares of income were derived from earnings. However, the evidence for an independent effect of family complexity was weak. Family complexity only had a marginally significant ($p < .10$) negative association with the share of income from earnings. The strength of the family structure coefficients was larger than that of the family complexity coefficient as indicated by standardized betas (results not shown).

The full model introduced the controls. The significance and magnitudes of the family structure coefficients were largely unchanged although the effect of family complexity was no longer significant (additional analyses not shown revealed that parental education and number of children in the family reduced the family complexity coefficient to nonsignificance). All of the control variables operated in parallel fashion to those for the income to needs ratio with two exceptions. First, Hispanic children were more economically advantaged, on average, than were White children. Second, adolescents tended to be more economically advantaged than very young children.

Additional analyses were conducted to test for interaction effects between family structure and family complexity for the two indicators of economic well-being (results not shown). The association between family complexity and economic well-being was similar according to family structure with one exception. Family complexity had a positive interactive effect with cohabiting stepfamilies ($b = 0.79$, $p < .01$) on the income to needs ratio. Supplemental analyses (not shown, available upon request) indicated it was not robust as the interaction term did not quite achieve significance ($b = 0.60$, $p < 0.10$) using a household-level measure of the income to needs ratio. The household-level measure included the cohabiting partner as part of the economic and consuming unit whereas the family-level indicator did not. Overall, our

expectation that the influence of family complexity on economic well-being would depend on family structure was not supported.

Discussion

Despite the considerable research attention to family structure in recent decades, important gaps remain in this literature (Brown, 2010). In this paper, we illustrated why the picture of children's living arrangements is not adequately captured using the traditional measure of family structure, which focuses on parent-child relationships, ignoring family complexity. Family complexity, or the presence of half or step siblings, was experienced by 9% of children and was related negatively to children's economic well-being.

Family complexity was evident across family structures, but was especially common among children in stepparent and unmarried (cohabiting and single-mother) families. About 39% of children in married stepfamilies and 21% of children in cohabiting stepfamilies were in complex families. Among children in two biological parent cohabiting families, 8% experienced family complexity. The share in single mother families was similar at 9%. This pattern of findings confirmed our initial assertion that it is important to consider family complexity in single-parent families, not just two parent families. In short, family complexity is a reality for many of today's children and its prevalence depends on family structure. For this reason, we maintain that the current approach to measuring family structure must be reconsidered to integrate family complexity.

Tracing the historical arc of the measurement of family structure, the initial enhancement was to distinguish stepfamilies from two biological parent married families (Cherlin, 1978; Cherlin & Furstenberg, 1994). But this approach did not challenge the basic measurement of family structure because it still only captured parent-child relationships. Nor did more fine grained distinctions among two parent families to distinguish two biological parent cohabiting

families and cohabiting stepfamilies transcend the tunnel vision on parents and children (Artis, 2007; Brown, 2004; Seltzer, 2000). More recently, scholars have attempted to shift the lens through research on multiple partner fertility, which seems to largely overlap with stepfamilies but is not confined to marriage or even co-residential unions (Carlson & Furstenberg, 2007; Guzzo & Furstenberg, 2007). Multiple partner fertility can occur outside of either marriage or cohabitation, recognizing the dramatic increase in nonmarital childbearing and single-mother families in recent years. Yet, the perspective remains exclusively focused on the parent.

The concept of family complexity truly widens the lens by shifting our attention away from the parent(s) to siblings. Whereas family structure is a parent centered measure, by combining it with family complexity, we can achieve a child centered approach to children's living arrangements that encompasses how a child is related to other family members. As children's family lives continue to be less stable and more varied, it seems essential to capture all relationship ties, not just those to parents.

Our study contributes to the nascent literature on family complexity by providing a thorough assessment of how to measure and model family complexity in research on child well-being. It also offers the first nationally representative descriptive portrait of family complexity among U.S. children. Using data from the 2008 SIPP, which permits identification of all children, not just those related to the household head, and each child's relationship to all other family members, we provided rigorous national estimates of family complexity experienced by children of all ages (0-17) living in a range of two parent and one parent family structures. Our study demonstrated that family complexity had negative effects on children's economic well-being. Extending prior literature that has shown family complexity is negatively associated with children's academic and behavioral adjustment (Gennetian, 2005; Halpern-Meekin & Tach, 2008; Tillman, 2007), the current investigation established that family instability is linked to

economic disadvantage among children across a range of family structures. For the income to needs ratio, this finding persisted with the inclusion of controls. For the share of income derived from earnings, the independent effect of family complexity net of family structure was reduced to nonsignificance in the full model (driven primarily by parental education and number of children in the family according to supplemental analyses not shown). The modest findings for a linkage between family complexity and the share of income from earnings simply may reflect the fact that the range to be explained was relatively narrow to begin with. In contrast, the variation in the income to needs ratio was quite large. Contrary to our expectations, the association between family complexity and economic well-being did not depend on family structure. Certainly, there was variation in the prevalence of family complexity across family structures, but it appears family complexity is negatively associated with economic well-being regardless of family structure.

Although there are several notable strengths characterizing this study, we also acknowledge that it has some limitations. First, by relying on the SIPP, our indicators of child well-being were limited to economic well-being. We could not examine other domains of child adjustment such as academic performance or physical or mental health. Nonetheless, the strengths of the SIPP in providing such a large sample of minor children of all ages as well as detailed household matrices and parental pointers outweighed this limitation, in our view. Second, our analyses were cross-sectional and thus causal conclusions are not warranted. Ideally, we would have preferred to have longitudinal (or retrospective) data to incorporate measures of family instability. The present analysis can be viewed as a first step that established the conceptual and methodological rationales for incorporating family complexity in research on child well-being. It is the task of future studies to determine how to integrate family structure and family complexity in a longitudinal framework to capture change in structure and complexity.

This paper lays the groundwork for a new, child centered approach to conceptualizing and measuring children's living arrangements. Recognizing that the ripple effects of dramatic changes in family and fertility behaviors extend well beyond the diversification of children's family structure, we demonstrated the utility of integrating family complexity into research on child well-being. Family scholars can achieve a more nuanced understanding of variation in child well-being by widening the lens on children's family composition.

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Table 1. Descriptive Statistics by Family Structure

	Full Sample (n=12,994)		Married Biological Family (n=7,487)		Married Stepfamily (n=853)		Cohabiting Biological Family (n=488)		Cohabiting Stepfamily (n=489)		Single-Mother Family (n=3,160)		Single-Father Family (n=517)	
	% or μ	SD	% or μ	SD	% or μ	SD	% or μ	SD	% or μ	SD	% or μ	SD	% or μ	SD
Dependent Variables (family level)														
Income to needs ratio*	3.34	0.03	4.14	0.04 bcdef	3.56	0.12 acdef	1.51	0.08 abdef	1.92	0.10 abcf	1.93	0.03 abcf	2.78	0.15 abcde
Share of Income from earnings[12]*	0.82	0.00	0.91	0.00 bcdef	0.84	0.00 acdef	0.64	0.02 abdf	0.70	0.02 abcef	0.64	0.00 abdf	0.76	0.02 abde
Family complexity *	9.2		5.6	bdef	39.1	acdef	7.7	bdf	21.3	abcef	8.5	abdf	3.0	abcde
Additional Characteristics														
Child's race/ethnicity *														
White	56.8		63.5	cdef	61.2	ce	46.0	abdef	57.5	ace	40.2	abcdf	58.1	ace
Black	13.0		6.5	bcdef	12.1	aef	11.1	ae	13.6	ae	29.6	abcdf	14.9	abe
Hispanic	21.4		20.3	ce	19.9	c	34.6	abdef	20.7	c	22.9	acf	18.4	ce
Other	8.8		9.7	be	6.8	a	8.3		8.2		7.3	a	8.6	
Child's age *														
12-17 years old	36.0		33.5	bcdef	57.1	acdef	11.8	abdef	43.6	abce	37.4	abcdf	45.7	abce
6-11 years old	29.2		29.3	c	32.1	c	15.8	abdef	31.8	c	29.6	c	30.5	c
Under 6	34.8		37.2	bcdef	10.8	acdef	72.4	abdef	24.6	abce	33.0	abcdf	23.8	abce
Maternal age [3] *	37.1	0.08	38.2	0.09 bcdef	36.5	0.28 acdef	29.0	0.38 abdef	35.1	0.38 abcf	35.3	0.18 abcf	40.2	0.44 abcde
Parent's Education *														
At least one parent has a Bachelor's	28.6		37.8	bcdef	19.7	acde	9.8	abef	11.7	abef	15.3	abcdf	21.6	acde
One parent has HS, but no Bachelor's	62.6		56.0	bcdef	75.7	aef	79.1	aef	75.2	aef	69.7	abcd	67.9	abcd
Neither parent has HS	8.8		6.2	bcdef	4.6	acdef	11.1	abe	13.1	ab	15.0	abcf	10.5	abe
Total children in family *	1.85	0.00	1.92	0.01 bcdef	2.02	0.03 acdef	1.59	0.04 abd	1.75	0.05 abcf	1.73	0.01 abcf	1.49	0.03 abde
Overall			58.3		6.4		4.0		3.8		23.1		4.4	

Note. * denotes a significant ($p<0.05$) difference across family structures using X^2 or ANOVA tests. A denotes a significant ($p<0.05$) difference from married, biological; B denotes a significant difference from married, step; C denotes a significant difference from cohabiting, biological; D denotes a significant difference from cohabiting, step; E denotes a significant difference from single mother; and F denotes a significant difference from single father.

1. Continuous but bound between 0 and 1.
2. 347 children who lived in a family that reported no income are coded as 0 on this indicator.
3. Father's age was used for single-father families.

Table 2. Descriptive Statistics by Family Complexity

	Full Sample (n=12,994)		Family Complexity (n=1,233)		No Family Complexity (n=11,761)	
	% or $\bar{x}$	SD	% or $\bar{x}$	SD	% or $\bar{x}$	SD
Dependent Variables (family level)						
Income to needs ratio *	3.34	0.03	2.47	0.07	3.43	0.03
Share of Income from earnings[12] *	0.82	0.00	0.78	0.01	0.82	0.00
Focal Characteristics						
Married Bio Family *	58.3		37.6		60.4	
Married Stepfamily *	6.4		27.3		4.3	
Cohabiting Bio Family	4.0		3.3		4.0	
Cohabiting Stepfamily *	3.8		8.8		3.3	
Single-mother Family	23.1		21.5		23.3	
Single-father Family *	4.4		1.5		4.7	
Control Variables						
White	56.8		53.9		57.1	
Black *	13.0		15.4		12.8	
Hispanic	21.4		23.4		21.2	
Other *	8.8		7.3		8.9	
12-17 years old	36.0		38.0		35.8	
6-11 years old *	29.2		33.3		28.8	
Under 6 *	34.8		28.7		35.4	
Maternal age [3] *	37.1	0.08	35.7	0.21	37.2	0.08
At least one parent has a Bachelor's *	28.6		14.7		30.0	
One parent has HS, but no Bachelor's *	62.6		75.4		61.3	
Neither parent has HS	8.8		9.9		8.7	
Total children in family *	1.85	0.00	2.55	0.03	1.77	0.00
Overall			9.2		90.8	

Note. * denotes a significant ($p<0.05$) difference between children experiencing sibling complexity and those who do not using X^2 and t-tests for significance.

1. Continuous but bound between 0 and 1.
2. 347 children who lived in a family with no income are coded as 0 on this indicator.
3. Father's age was used for single-father families.

Table 3. OLS Regression Models Predicting Economic Well-being

	Income to Needs Ratio		Share Total Income derived from Earnings	
	Initial Model	Full Model	Initial Model	Full Model
Intercept	4.20***	4.38***	0.91***	0.92***
(Married, bio)				
Married step	-0.29*	0.04	-0.05***	-0.06***
Cohabiting bio	-2.61***	-1.56***	-0.26***	-0.26***
Cohabiting step	-2.08***	-1.42***	-0.20***	-0.19***
Single Mother	-2.19***	-1.43***	-0.26***	-0.24***
Single Father	-1.38***	-1.19***	-0.15***	-0.13***
(No family complexity)				
Family complexity	-0.87***	-.19*	-0.02†	-0.00
(White)				
Black		-0.56***		-0.04***
Hispanic		-0.81***		0.02**
Other		-0.23*		-0.02*
(Under 6 years old)				
12-17 years old		-0.11		0.02*
6-11 years old		-0.12		0.01
Maternal age [12]		0.04***		-0.00***
(One parent has HS, but no Bachelor's)				
At least one parent has a Bachelor's		2.21***		0.06***
Neither parent has HS		-0.79***		-0.12***
Total children in family		-0.40***		-0.01***
Model Fit				
F Statistic	287.03***	252.29***	191.13***	106.11***
R^2	0.09	0.25	0.11	0.13
N	12,994	12,994	12,994	12,994

Note. † p<0.10, * p<0.05, ** p<0.01, *** p<0.001

1. Father's age was used for single-father families.
2. Centered at the mean age.