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Family Structure and Child Well-Being: Integrating Family Complexity

Susan L. Brown, Wendy D. Manning*, and J. Bart Stykes**

Bowling Green State University

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 data from the 2008 Survey of Income and Program Participation ($N = 23,985$) the authors documented patterns of family complexity among a nationally representative sample of children ages 0–17 living in a range of family structures. They also examined the independent and joint associations of family structure and family complexity on child economic well-being. Family complexity was independently related to economic disadvantage, namely, a lower income-to-needs ratio and a higher likelihood of public assistance receipt. The role of family complexity was partially contingent on family structure, with the positive association between family complexity and receipt of public assistance more pronounced for children in families with 2 married biological parents. This study demonstrates the utility of integrating family structure and family complexity in studies of children's well-being.

Keywords

family structure; measurement; living arrangements; poverty

It is well established that children's living arrangements are diverse. Fewer children reside with two biological married parents and more live with unmarried parents, whether in families with two biological cohabiting parents, two cohabiting stepparents, a single mother, or a single father. 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 relies on a measure of family structure that captures children's relationships to the parental adult(s) in the household, ignoring children's relationships to siblings as well as family members outside the household. Growing family instability coupled with rising unwed childbearing portends more *family complexity*, a term that typically describes the presence of half- or

Department of Sociology, 239 Williams Hall, Bowling Green State University, Bowling Green, OH 43403 (brownsl@bgsu.edu).

*Department of Sociology, 233 Williams Hall, Bowling Green State University, Bowling Green, OH 43403.

**Department of Sociology, 222 Williams Hall, Bowling Green State University, Bowling Green, OH.

stepsiblings in the household. Nearly 15% of children reside with at least one half- or stepsibling (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, 2008; 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; www.census.gov/sipp/).

The purpose of this study was to evaluate whether family complexity is uniquely associated with child well-being, net of the standard measure 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? In addition, is the role of family complexity contingent on family structure? We argue that from a theoretical standpoint, it is important to account not only for parents but also siblings in the family environment. In addition to providing a descriptive portrait of today's children in complex families, we empirically tested two assertions: that family complexity is (a) distinct from family structure and (b) related to child well-being. Using data from the 2008 SIPP, we focused on two indicators of economic well-being among children: (a) the family income-to-needs ratio and (b) public assistance receipt.

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 families with two biological married parents 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 stepparent, 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 that characterizes many children's family lives (Cancian, Meyer, & Cook, 2011).

Measures of family structure capture only 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). However, 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 who are not biologically related to them (Case, Lin, & McLanahan, 2000; Hofferth & Anderson, 2003). 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 repartnering 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 stepsiblings. Furthermore, more children are experiencing new forms of stepfamilies that exist outside the boundaries of formal marriage. A consequence of relationship dissolution and repartnering for children is often the presence of half- or stepsiblings (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 occur only 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. Also, it is less realistic today to presume that children living with two biological married parents are a homogeneous group. Although a majority live with either no or full siblings only, a growing minority reside with either half- or stepsiblings. 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, 2014). 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 is negatively related to the academic outcomes of adolescents, including their grades and school-related behavioral conduct (Tillman, 2008). 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—experience poorer educational outcomes than those with no or only full siblings (Ginther & Pollak, 2004). Other research showed that among adolescents living in two-parent families, children residing with two biological parents had worse outcomes, on average, when half- or stepsiblings 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 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 given that divorce,

cohabitation, and unmarried childbearing are more common among economically disadvantaged populations (Cherlin, 2010; Edin & Kissane, 2010; McLanahan, 2004).

Another limitation of prior research is its emphasis on family complexity or sibling composition only in families with two married parents (although Cancian et al. [2011] focused only on unmarried mothers). As Halpern-Meehin and Tach (2008) noted, 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 and colleagues (2014). Also, with the rise in multiple partner fertility, we anticipated that family complexity is even more salient outside the boundaries of marriage (Dorius & Guzzo, 2014).

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-Meehin & 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 stepsiblings 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). Longer term factors also 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. For all of these reasons, we anticipated that family complexity is negatively associated with children's economic well-being. Although we were not able to explicitly test these various mechanisms because of data constraints, it is notable that prior research has shown that controlling for these factors does not significantly reduce the negative association between family complexity and a host of indicators of child well-being (Halpern-Meehin & Tach, 2008).

The ramifications of family complexity may be unique across family structures. On the one hand, it is possible that the consequences of family complexity are weakest in families with two biological married parents 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). On the other hand, family complexity may have an especially large negative association with economic well-being for children in families with two biological married parents precisely because it represents a form of disadvantage among a relatively advantaged group. This line of reasoning builds on research showing that the linkages between family structure and child well-being are more pronounced for White children than for Black and Hispanic children. Scholars have pointed to the possibility that single-mother families tend to be associated with greater disadvantage for a relatively advantaged group (Whites) but that this relationship is weaker among more disadvantaged groups (Blacks and Hispanics) in part because of the greater prevalence and social acceptance of diverse family forms among racial/ethnic minorities (Heard, 2007; Manning & Brown, 2006).

The Present Study

The current investigation was designed to widen the lens on the family composition of children. Family structure, which captures only 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 reveals only 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 offers only a partial view of the child's living arrangements.

To move beyond family structure, we investigated whether family complexity independently enhances our ability to account for variation in child well-being. Because prior work has focused on educational and psychological indicators of well-being among children and adolescents, we examined economic well-being, a domain that is particularly well suited to the SIPP data. Our two measures of economic well-being were (a) the family's income-to-needs ratio and (b) the family's receipt of public assistance. The former measure is a more finely grained indicator of poverty that locates the child's economic position along a continuum (vs. the simple dichotomy tapped by poverty). The latter measure taps economic disadvantage by gauging whether the child lives in a family that receives either food stamps or cash assistance, forms of economic support that are available to low-income and poor families.

In addition, our study had two other key advantages. First, it included 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 have 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 examined 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.

On the basis of the few studies conducted to date, we anticipated that family complexity is negatively associated with child well-being net of family structure (Gennetian, 2005; Ginther & Pollak, 2004; Halpern-Meekin & Tach, 2008; Tillman, 2008); that is, children living in complex families have lower average income-to-needs ratios and are more likely to receive public assistance regardless of family structure. It is possible that economic hardship may contribute to family complexity, but our cross-sectional analyses uncovered only correlations and do not shed light on causal order. Our study also addressed the possibility that the influence of family complexity depends on children's family structure. In particular, we assessed whether the role of family complexity for economic well-being is especially larger or smaller for children in families with two married biological parents compared with other family forms. 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 associations of family structure and family complexity with economic well-being, we did not expect them to fully account for these associations. The overarching goal of this study

was 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 one to identify the relationships among all children and adults within a household, which is not possible with traditional household rosters that reveal only 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., 2014).

Method

We used the 2008 SIPP panel to assess the roles of family structure and family complexity on children's economic well-being. Fielded by the U.S. 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. In addition, 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; U.S. Census Bureau, 2001). 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 (administered 2009) included the relationship matrix in which primary respondents identified the relationships among 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. Furthermore, 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 collected only 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 (U.S. Census Bureau, 2001), 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, yielding an analytic sample

of 23,985 minor children. We estimated robust standard errors that accounted for the clustering of children within 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 reestimated using household-level economic well-being measures, and the results (not shown but available on request) were substantively the same (with one exception, described in the Results section).

Dependent Variables

We examined two family-level indicators of economic well-being: (a) the *family income-to-needs ratio* and (b) the *family's receipt of public assistance*. 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. Receipt of public assistance distinguished between children who lived in a family that reported receiving either food stamps or income from public assistance (e.g., Temporary Assistance for Needy Families, Aid to Families With Dependent Children) in the previous 4 months (coded 1) versus children whose families did not receive public assistance (coded 0).

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) family with two biological married parents (reference category), (b) married stepfamily, (c) cohabiting family with two biological parents, (d) cohabiting stepfamily, (e) single-mother family, and (f) single-father family.

Family complexity—The household relationship matrices identified five types of sibling relationships: (a) biological, (b) adopted, (c) half, (d) step, and (e) "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).

Control Variables

The models included 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 multiracial ("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 6 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 coresident parent had earned a bachelor's degree or higher; (b) at least one coresident parent had earned a high school diploma or GED; but neither earned a bachelor's degree (reference category); and (c) no coresident parent had earned a high school diploma or GED. Finally, the *number of minor children in the family* was a continuous indicator that ranged from 1 to 11. In the multivariate analyses this variable was centered such that it reflected the number of additional children.

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, we estimated a series of ordinary least squares and logistic regression models to predict the income-to-needs ratio and receipt of public assistance, respectively (shown in Table 3). The first model regressed economic well-being onto family structure and family complexity to assess whether the presence of half- or stepsiblings was associated with economic well-being net of family structure. The second model introduced the control variables to determine whether the associations between economic well-being and family structure and family complexity were robust net of sociodemographic factors associated with family composition and child well-being. Last, we examined the interactions between family structure and family complexity on economic well-being net of all control variables (results not shown but available on request). All analyses were weighted to correct for the complex sampling design of the SIPP and to correct for the clustering of children within families.

Results

Descriptive Statistics

The descriptive statistics for all of the variables used in the analyses, including tests for statistical significance across the six family structures, are presented in Table 1. All variables differed significantly by family structure according to chi-square or analysis of variance tests for group differences. The average income-to-needs ratio among children was 2.9, suggesting that the typical child lived in a family with an income nearly three times the poverty level. The economic well-being of children varied across family structure, with those in families with two biological married parents enjoying the highest income-to-needs ratio, at 3.6, followed by children in married stepfamilies (2.8) and those in single-father families (2.3). Children in families with two biological cohabiting parents and single mother families were considerably more disadvantaged, with average income-to-needs ratios at just 1.2 and 1.3, respectively. Children in cohabiting stepfamilies fared significantly better than children in families with two biological cohabiting parents and single-mother families, with an income-to-needs ratio that averaged 1.5. We obtained the same pattern using a

household-level measure of income-to-needs ratio (results not shown), although the ratios increased for children in cohabiting families.

Nearly one in five children (18.7%) were in families that received public assistance. The levels varied dramatically by family structure, ranging from a low of 8.3% for children in families with two biological married parents to a high of 45.6% for children living in single-mother families. Receipt of public assistance was relatively low among both children in married stepfamilies (17.5%) and single-father families (15.9%). In the two types of cohabiting families, similar proportions of children received public assistance: 29.8% in families with two biological cohabiting parents and 24.5% in cohabiting stepfamilies.

More than one in 10 children (12.3%) resided in complex families, an estimate that is in line with those obtained in prior research (Kreider & Ellis, 2011; Manning et al., 2014). The levels of family complexity varied considerably by family structure. Family complexity was most common among children living in stepfamilies, and more so in married families than cohabiting ones. Roughly 53% children in married stepfamilies, and 14% in cohabiting stepfamilies, experienced family complexity. Family complexity was least prevalent in single-father families (3.3%), followed by families with two married biological parents (7.6%). Levels were a bit higher in families with two biological cohabiting parents and single-mother families (13.8% and 11.5%, respectively).

The racial/ethnic composition of children in the sample was 57% White, 13% Black, 22% Hispanic, and 8% Other. Children in families with two biological parents and in married stepfamilies were disproportionately White (64% and 62%, respectively), whereas children in two families with two biological cohabiting parents, cohabiting stepfamilies, and single-mother families were disproportionately non-White. Among children in single-father families, Black children (17%) were slightly overrepresented, and Hispanic children (18%) were underrepresented. The age distribution of children was even across the three age categories, with roughly one third of children ages 12–17, another one third age 6–11, and the remaining 34% under age 6. Children in families with two biological parents largely mirrored this pattern. Children in stepfamilies—both married and cohabiting—and single-parent families tended to be older, with 54% in married stepfamilies; 41% in cohabiting stepfamilies; and 36% and 43% in single-mother and single-father families, respectively, between 12 and 17 years old. Children in families with two biological cohabiting parents were youngest, with 68% under age 6. More than one quarter (28%) 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 parents who did not have a high school degree. Parental education levels were highest in families with two biological parents, followed by single-father families. Last, families averaged 2.5 minor children, with little substantive variation across family structures, although married stepfamilies were largest, with 2.7 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

stepsiblings. The mean income-to-needs ratio for children in complex families was 2.0 versus 3.0 for children who did not live in complex families. Similarly, receipt of public assistance was more common among children in complex families (28.3%) than noncomplex families (17.4%), on average. The relationship between family complexity and family structure was discussed earlier in regard to Table 1. Children's characteristics also varied by family complexity status. Children who experienced family complexity were less often White and more often Hispanic. 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 (34.8) versus noncomplex families (36.9). Parental education was negatively related to family complexity. For example, just 13% 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 (3.2) compared with those who were not in a complex family (2.4).

Multivariate Models

The coefficients from the regression models predicting the two indicators of economic well-being are depicted in Table 3. The first panel shows the ordinary least squares models estimating the income-to-needs ratio. In the initial model, both family structure and family complexity were independently associated with the income-to-needs ratio. Relative to children residing in families with two biological parents, children in all other family structures had significantly lower income-to-needs ratios, on average. Also, 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 (see Table 3), were largely comparable (results not shown). In short, the presence of half- or stepsiblings was associated with lower economic well-being net of family structure.

The family structure differentials persisted with the inclusion of controls in the full model, 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 80%). Black and Hispanic children, as well as children of "Other" races, 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 that family size was positively linked to economic disadvantage.

The second panel of Table 3 shows the odds ratios from the logistic regression models predicting the receipt of public assistance. Similar to the pattern obtained for the income-to-needs ratio, we found that children who lived outside of families with two biological married parents were in families that were significantly more likely to have received public assistance. The odds ratios ranged from more than 9 for single-mother families to about 1.7 for children in married stepfamilies. Family complexity was positively related to public assistance receipt net of family structure. The odds that children in complex families received public assistance were almost twice as high (1.87) as the odds for children in

noncomplex families. The strength of the family structure coefficients was largely comparable to that of the family complexity coefficient, as indicated by the partially standardized coefficients (results not shown).

The full model introduced the controls. Both family structure and family complexity remained significantly associated with receipt of public assistance, although the odds ratios diminished somewhat in terms of magnitude. All of the control variables operated in a fashion parallel to those for the income-to-needs ratio.

We estimated a final set of models to test for interactions between family structure and family complexity for the two indicators of economic well-being (results not shown but available on request). In particular, we examined whether the association between family complexity and economic well-being was larger or smaller for children living in families with two biological married parents versus other family structures. For the income-to-needs ratio, family complexity neither advantaged nor disadvantaged children in families with two biological married parents relative to other family structures. The size of negative association between family complexity and children's income-to-needs ratios was similar regardless of family structure. However, the positive association between family complexity and receipt of public assistance was larger for children in families with two biological parents than other two-parent family structures (i.e., married stepfamilies, families with two biological cohabiting parents, and cohabiting stepfamilies). It was comparable to that for children in single-parent families. By alternating the family structure reference group, we confirmed that family complexity was significant only for those children living in families with two married biological parents (the coefficient for family complexity was positive and marginally significant for children in single-mother families). Overall, our expectation that the influence of family complexity on economic well-being would depend on family structure was partially supported.

Discussion

Despite the considerable research attention to family structure in recent decades, important gaps remain in this literature (Brown, 2010). In this study, 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 stepsiblings in the household, was experienced by more than 12% 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. More than one half of children in married stepfamilies, and 28% of children in cohabiting stepfamilies, were in complex families. Among children in families with two biological cohabiting parents, nearly 14% experienced family complexity. The share in single-mother families was similar, at about 12%. 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 varies by 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 intent was to distinguish stepfamilies from families with two biological married parents (Cherlin, 1978; Cherlin & Furstenberg, 1994). However, this approach did not challenge the basic measurement of family structure because it still captured only parent–child relationships. Nor did more finely grained distinctions among two-parent families distinguish families with two biological cohabiting parents 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 coresidential unions (Carlson & Furstenberg, 2006; Dorius & Guzzo, 2014; Guzzo & Furstenberg, 2007). Multiple partner fertility can occur outside of either marriage or cohabitation, given 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 broadens the scope by shifting 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 demonstrates that family complexity is negatively associated with children's economic well-being. Extending prior literature that has shown family complexity to be negatively associated with children's academic and behavioral adjustment (Gennetian, 2005; Halpern-Meekin & Tach, 2008; Tillman, 2008), the current investigation established that family complexity is linked to economic disadvantage among children across a range of family structures. For both indicators of economic well-being, this finding persisted with the inclusion of controls.

We anticipated that the association between family complexity and economic well-being might depend on family structure. Specifically, we proposed competing hypotheses about the role of family complexity for the economic well-being of children in families with two biological married parents versus other family structures. Our findings indicated that children with family complexity in families with two married biological parents are especially likely to receive public assistance. In short, family complexity appears to be particularly detrimental in the family form that is ostensibly the most protective for children:

families with two biological married parents. Now it seems that not all children in this family type enjoy the same level of benefits. The presence of half- or stepsiblings has a sizable, negative association with economic well-being. This study provides new evidence that the link between family complexity and child well-being may play out differently across family structures, introducing an important avenue for future research that should aim to pinpoint the underlying mechanisms driving the association between family complexity and child outcomes.

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. It also is possible that eligibility for public assistance is confounded with family structure. 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, this study extended prior research by considering both family structure and family complexity (as well as their interactive effects) but focused exclusively on children's familial relationships within the household. A direction for future research is to capture family ties that exist beyond the child's household. Finally, our analyses were cross-sectional, and thus causal conclusions are not warranted. Our assumption was that family structure and family complexity help shape children's economic well-being, but it is possible that a family's economic situation may influence family structure and complexity. 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 study 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. For children in families with two biological married parents, the negative association between family complexity and well-being was magnified, underscoring the importance of capturing both dimensions of children's family lives. To achieve a more nuanced understanding of variation in child well-being, family scholars must widen the lens on children's family composition.

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Table 1

Descriptive Statistics by Family Structure (N = 23,985)

Variable	Full sample	Married biological family (n = 14,477)	Married stepfamily (n = 1,678)	Cohabiting biological family (n = 829)	Cohabiting stepfamily (n = 808)	Single-mother family (n = 5,434)	Single-father family (n = 759)
Dependent variables (family level)							
Income-to-needs ratio*	2.9	3.6 ^{a,c,d,e,f}	2.8 ^{a,c,d,e,f}	1.2 ^{a,b,d,f}	1.5 ^{a,b,c,e,f}	1.3 ^{a,b,d,f}	2.3 ^{a,b,c,d,e}
Receipt of public assistance*	18.7	8.3 ^{b,c,d,e,f}	17.5 ^{a,c,d,e}	29.8 ^{a,b,e,f}	24.5 ^{a,b,e,f}	45.6 ^{a,b,c,d,f}	15.9 ^{a,c,d,e}
Family complexity*	12.3	7.6 ^{b,c,d,e,f}	52.5 ^{a,c,d,e,f}	13.8 ^{a,b,d,f}	28.2 ^{a,b,c,e,f}	11.5 ^{a,b,d,f}	3.3 ^{a,b,c,d,e}
Additional characteristics							
Child's race/ethnicity*							
White	56.7	63.9 ^{c,d,e,f}	61.6 ^{c,e}	44.0 ^{a,b,d,e,f}	55.8 ^{a,c,e}	37.9 ^{a,b,c,d,f}	58.2 ^{a,c,e}
Black	13.2	6.5 ^{b,c,d,e,f}	11.0 ^{a,e,f}	12.5 ^{a,e}	14.3 ^{a,e}	31.5 ^{a,b,c,d,f}	16.6 ^{a,b,e}
Hispanic	22.1	20.8 ^{c,e}	21.5 ^c	35.0 ^{a,b,d,e,f}	22.7 ^c	24.2 ^{a,c,f}	17.6 ^{c,e}
Other	8.0	8.8 ^b	5.9 ^a	8.5	7.2	6.4 ^a	7.6
Child's age*							
12–17 years	33.2	30.1 ^{b,c,d,e,f}	54.3 ^{a,c,d,e,f}	12.0 ^{a,b,d,e,f}	40.6 ^{a,b,c,e}	36.1 ^{a,b,c,d,f}	43.1 ^{a,b,c,e}
6–11 years	32.4	33.0 ^c	34.5 ^c	19.9 ^{a,b,d,e,f}	36.2 ^{c,e}	31.7 ^{c,d}	32.9 ^c
Under 6	34.4	36.9 ^{b,c,d,e,f}	11.2 ^{a,c,d,e,f}	68.1 ^{a,b,d,e,f}	23.2 ^{a,b,c,e}	32.2 ^{a,b,c,d,f}	24.0 ^{a,b,c,e}
Maternal age*	36.6	37.7 ^{b,c,d,e,f}	35.6 ^{a,c,e,f}	29.7 ^{a,b,d,e,f}	34.9 ^{a,c,f}	35.0 ^{a,b,c,f}	39.8 ^{a,b,c,d,e}
Parents' education*							
At least one parent has a bachelor's	27.9	36.9 ^{b,c,d,e,f}	17.5 ^{a,c,d,e}	9.3 ^{a,b,e,f}	12.0 ^{a,b,f}	13.0 ^{a,b,c,f}	21.3 ^{a,c,d,e}
One parent has HS degree, but no bachelor's	62.5	56.3 ^{b,c,d,e,f}	76.8 ^{a,e,f}	78.3 ^{a,e,f}	72.7 ^a	70.1 ^{a,b,c}	68.6 ^{a,b,c}
Neither parent has HS degree	9.6	6.8 ^{c,d,e,f}	5.7 ^{c,d,e,f}	12.4 ^{a,b,e}	15.3 ^{a,b}	16.9 ^{a,b,c,f}	10.1 ^{a,b,e}
Total children in family*	2.5	2.5 ^{b,c,d,f}	2.7 ^{a,c,d,e,f}	2.2 ^{a,b,e}	2.3 ^{a,b,f}	2.5 ^{b,c,f}	2.0 ^{a,b,d,e}
Overall		60.9	6.7	3.5	3.3	22.4	3.2

Note: All table values are percentages or means. All means and percentages are weighted, and standard errors are adjusted to account for clustering of multiple children living in families. An asterisk denotes a significant ($p < .05$) difference between family structures using a χ^2 test or analysis of variance. HS = high school.

- ^a A significant difference from married, biological families.
- ^b A significant difference from married stepfamilies.
- ^c A significant difference from cohabiting, biological families.
- ^d A significant difference from cohabiting stepfamilies.
- ^e A significant difference from single-mother families.
- ^f A significant difference from single-father families.

Table 2

Descriptive Statistics by Family Complexity (N = 23,985)

Variable	Full sample	Family complexity (<i>n</i> = 3,051)	No family complexity (<i>n</i> = 20,930)
Dependent variables (family level)			
Income-to-needs ratio*	2.9	2.0	3.0
Receipt of public assistance*	18.7	28.3	17.4
Focal characteristics			
Married biological family*	60.9	37.8	64.1
Married stepfamily*	6.7	28.7	3.6
Cohabiting biological family	3.5	4.0	3.5
Cohabiting stepfamily*	3.3	7.7	2.7
Single-mother family	22.4	21.0	22.6
Single-father family*	3.2	0.8	3.5
Control variables			
Child's race/ethnicity			
White*	56.7	53.2	57.2
Black	13.2	14.9	13.0
Hispanic*	22.1	25.1	21.7
Other	8.0	6.8	8.1
Child's age			
12–17 years	33.2	34.0	33.1
6–11 years *	32.4	34.5	32.1
Under 6*	34.4	31.5	34.8
Maternal age*	36.6	34.8	36.9
Parents' education			
At least one parent has a bachelor's*	27.9	12.9	30.0
One parent has HS degree, but no bachelor's*	62.5	75.9	60.6
Neither parent has HS degree	9.6	11.2	9.4
Total number of children in family*	2.5	3.2	2.4
Overall		12.3	87.7

Note: All table values are percentages or means. All means and percentages are weighted, and standard errors are adjusted to account for clustering of multiple children living in families. An asterisk denotes a significant difference ($p < .05$) between children experiencing sibling complexity and those who do not using χ^2 and t tests for significance. HS = high school.

Table 3

Multivariate Regression Models Predicting Economic Well-Being (N = 23,985)

Variable	Income-to-needs ratio				Receipt of public assistance			
	Initial model		Full model		Initial model		Full model	
	B	SE	B	SE	Odds ratio	SE	Odds ratio	SE
Intercept	3.75***	0.04	3.64***	0.06	0.08***	0.00	0.04***	0.00
Family type: (ref.: married biological)								
Married stepfamily	-0.43***	0.10	-0.17***	0.09	1.73***	0.19	1.64***	0.19
Cohabiting biological family	-2.35***	0.11	-1.40***	0.10	4.55***	0.57	2.68***	0.36
Cohabiting stepfamily	-1.93***	0.11	-1.36***	0.11	3.13***	0.43	2.43***	0.40
Single-mother family	-2.30***	0.05	-1.48***	0.05	9.18***	0.62	6.22***	0.47
Single-father family	-1.37***	0.17	-1.22***	0.15	2.17***	0.33	2.36***	0.39
Family complexity (ref.: none)								
Family complexity	-0.84***	0.07	-0.15*	0.07	1.87***	0.18	1.31**	0.13
Race/ethnicity (ref.: White)								
Black			-0.56***	0.07			2.96***	0.25
Hispanic			-0.70***	0.06			1.62***	0.13
Other			-0.24*	0.11			1.17***	0.19
Age (ref.: under 6 years)								
12-17 years			-0.01	0.06			0.94	0.06
6-11 years			-0.09	0.05			0.94	0.05
Maternal age			0.04***	0.00			0.94***	0.00
Parent's education (ref.: one parent has a HS degree, but no bachelor's)								
At least one parent has a bachelor's			2.15***	0.08			0.22***	0.02
Neither parent has HS degree			-0.67***	0.05			2.49***	0.23
Number of additional children in family			-0.30***	0.02			1.34***	0.04
F statistic (Wald χ^2 for logistic regression)	297.44***		238.82***		1131.21***		1615.59***	

Variable	Income-to-needs ratio				Receipt of public assistance			
	Initial model		Full model		Initial model		Full model	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	Odds ratio	<i>SE</i>	Odds ratio	<i>SE</i>
<i>R</i> ² (<i>RL</i> ² analog for logistic regression)	.10		.26		.15		.27	

Note: Coefficients and odds ratios are weighted and standard errors are adjusted to account for clustering of multiple children living in families. ref. = reference category; HS = high school.

* *p* < .05.
** *p* < .01.
*** *p* < .001.