Parent-Adolescent Closeness, Family Belonging, and Adolescent Well-Being Across Family Structures

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Abstract

Adolescents in stepfamilies and single-parent families tend to report lower levels of well-being than adolescents who live with two biological parents. Using data from Add Health ($n = 16,684$), the present study builds upon this literature by examining family-level predictors of adolescent depressive symptoms, delinquency, failing a class, heavy alcohol use, tobacco use, and marijuana use. We focus on feelings of family belonging as a predictor of adolescent well-being and find that this measure is significantly associated with well-being in all family types, and particularly in two-biological-parent families. In addition, results indicate that family belonging mediates associations between parent-adolescent closeness and well-being for most outcomes.

Recent decades have witnessed dramatic social, demographic, and family changes that have important implications for the health and well-being of family members (Cherlin, 2014). Family trends such as high divorce rates, high nonmarital birth rates, and the growth of single-parent families are associated with lower psychological and economic well-being among youth (Amato, 2010). These trends have potentially increased the importance of parents and other family members in children's lives at the same time that they have made children's ties to some family members more tenuous. Despite these changes, families remain among the most significant influences on the health and well-being of individuals because of the crucial social, psychological, and economic resources they provide (Carr & Springer, 2010).

Most studies find that children living with two biological parents have higher levels of well-being, on average, than children in stepfamilies and single-parent households, in part because two-biological-parent families are usually better equipped to provide key resources (Amato, 2010; Carr & Springer, 2010). However, there is also much variability *within* different family structures in terms of family resources and child outcomes (Amato, King, &

Thorsen, 2015; Golombok & Tasker, 2015), and non-traditional families can still be protective for children's well-being. It is important to take this variability into account and consider associations between family characteristics and well-being within each type of family in order to better understand how all families can best support children and adolescents.

Many factors contribute to children's well-being, although almost all observers agree that the role of parents is central (Golombok & Tasker, 2015). A large body of research documents a positive association between the quality or closeness of parent-child relationships and child well-being across family structures (e.g., Booth, Scott, & King, 2010; Bronte-Tinkew, Moore, & Carrano, 2006; Luthar, Crossman, & Small, 2015). A few studies also suggest that the extent to which children feel they "belong" to the family is associated with child well-being (e.g., Cavanagh, 2008), though research on this topic is more limited. Still, there are a number of reasons to expect that feelings of family belonging may contribute to child well-being above and beyond the quality of parent-child relationships. The current study is designed to further our understanding of family belonging and its association with child well-being in diverse family types.

We draw on Wave I of the National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine the relationships between parent-child closeness, adolescent perceptions of family belonging, and adolescent well-being for adolescents living in five common family structures: two-biological-parent families, married mother-stepfather families, married father-stepmother families, single-mother families, and single-father families. We address two central questions: (1) How are parent-child closeness and feelings of family belonging associated with adolescent well-being? We examine whether parent-child closeness and family belonging are independently associated with adolescent well-being. We also consider whether any positive effect of parent-child closeness on adolescent well-being could be mediated through family belonging. (2) Is family belonging associated with adolescent well-being in all of these family types, or does it appear to be more (or less) important for predicting adolescent well-being in some types of families? To address the first question, we begin by examining these associations within each family structure because parent-child closeness and family belonging are likely to vary with the constellation of parental figures in children's lives. To test the second research question, we pool the data and test for interactions between family structure and family belonging.

Adolescence can be a particularly challenging time for parents to maintain a close and active presence in their children's lives, yet parents continue to serve as important sources of support during this period (Gavazzi, 2011). Positive family relationships and feelings of belonging may help children navigate the many challenging tasks of adolescence and the transition to adulthood. To provide a comprehensive assessment of adolescent well-being, we focus on six indicators that span four major dimensions of child adjustment and well-being: depressive symptoms (an indicator of internalizing behaviors), delinquency (an indicator of externalizing behaviors), failing a class (an indicator of academic achievement), and heavy alcohol use, tobacco use, and marijuana use (indicators of substance use).

Our study seeks to contribute to the growing body of research trying to understand the implications of recent trends in children's living arrangements for adolescent well-being (e.g., Golombok & Tasker, 2015; King, Mitchell, & Hawkins, 2010), as well as the influence of family structure versus family processes in shaping outcomes for youth (Golombok & Tasker, 2015; Jaggers et al., 2017). Our study also informs the ongoing conversation in the family literature about the distinct influences of mothers and fathers on child outcomes (e.g., McMunn, Martin, Kelly, & Sacker, 2017; Waterman & Lefkowitz, 2017) by focusing on the roles of both biological and step mothers and fathers in multiple family types.

Background

As Maslow (1954/1970) argued long ago, individuals have a basic psychological need to feel they belong to a social group. Individuals function and flourish to the extent that their basic psychological needs are fulfilled (Deci & Ryan, 1985; Ryan, 1995). For children, families— and parents in particular—can help meet these needs by fostering children's sense of belonging to their families. Family belonging encompasses feelings of inclusion within one's family, including feelings of being paid attention to, understood, and of having fun together (Leake, 2007). Feelings of family belonging are conceptually distinct from the quality of an individual's relationships with each family member, although the quality of these relationships undoubtedly influences feelings of family belonging (King & Boyd, 2016; King, Boyd, & Thorsen, 2015). Family belonging is a family-level or holistic construct that refers to the entire family, rather than to specific relationships within the family. This conceptualization of family belonging and dyadic family relationships as distinct constructs is supported by family systems theory, which treats the family as a nonsummative system with properties beyond those of its constituent interpersonal relationships (Gavazzi, 2011). This framework views families as comprised of multiple interdependent subsystems that mutually influence one another and in turn determine family functioning (Gavazzi, 2011).

Although a large body of research has examined how parent-child relationship quality is associated with child well-being (Luthar et al., 2015), few studies have examined whether family belonging is associated with child well-being. One exception is Cavanagh's (2008) study, which used Add Health data to predict two adolescent outcomes: emotional distress and current marijuana use. Most relevant for the current study, her study included separate indicators of parent-adolescent relationship quality and of family belonging (the latter measured with the same four items used in this study, although she referred to this measure as "family connectedness"). Both relationship quality and family connectedness were associated with less emotional distress and a lower likelihood of marijuana use among adolescents; they also partially attenuated family structure effects on these outcomes. Findings from this study suggest that parent-child relationship quality and family belonging are independently associated with adolescent well-being, and that family belonging is a potentially important protective factor for adolescents.

Several other studies using Add Health data suggest that adolescent feelings of family belonging are associated with positive adjustment (including a lower likelihood of depressed mood, suicidal thoughts and behaviors, early sexual debut, violence, and substance use), but

these studies combine indicators of family belonging and parent-child relationship quality into a single scale (e.g., Borowsky, Ireland, & Resnick, 2001; Jacobson & Rowe, 1999; Resnick et al., 1997). Therefore, it is unclear whether this association is driven by parent-child relationship factors, larger perceptions of family belonging, or both. Critics have argued that global measures of family relationships obscure the mechanisms through which family processes influence child well-being (Cavanagh, 2008; Leake, 2005).

Recent research provides empirical support for measuring family belonging as a construct that is distinct from parent-child relationship quality, rather than combining them (Leake, 2005; King et al., 2015). As Cavanagh's (2008) study suggests, parent-child relationship quality and feelings of family belonging may predict adolescent well-being independently. It is also possible that any positive effect of parent-child relationship quality is mediated through family belonging. That is, positive parent-child relationships may contribute to adolescents' perceptions of family belonging, which in turn are associated with adolescent well-being. Studies examining the predictors of adolescents' perceptions of family belonging suggest that both mother-child relationship quality and father-child relationship quality are significant predictors of family belonging among adolescents in two-biological-parent families (King & Boyd, 2016) and stepfamilies (King et al., 2015; Leake, 2007). These findings are consistent with family systems theory, which suggests that an adolescent's perception of family belonging will be influenced by the quality of relationships that exist between family members. Although all family relationships have the potential to contribute to a child's sense of belonging, relationships with parents are likely to be key (King & Boyd, 2016). Our study will examine how both parent-child relationships and feelings of family belonging are associated with several dimensions of adolescent well-being.

Parent-child relationships vary in form and closeness. For example, children tend to be closer to their biological fathers when they live with them than when they do not (Booth et al., 2010). For children living in stepfamilies, both nonresident and resident parents may play important roles in children's lives (Ganong & Coleman, 2017). Therefore, it is important to consider children's relationships with all of their parents, as each of these relationships may contribute (either positively or negatively) to well-being. The current study includes information on parent-child closeness for all resident parents and any living nonresident biological parents.[1]

We do not include cohabiting stepfamilies in the current study for a number of reasons. Most cohabiting partnerships either transition to marriages or dissolve within a few years of forming (Kennedy & Bumpass, 2008), and these transitions have different implications for child well-being. The number of cohabiting stepfamilies (especially cohabiting father-stepmother families) in Wave I of Add Health is relatively small. Most importantly, adolescents who lived with biological parents and their cohabiting partners were not asked questions about the closeness of their relationships with the cohabiting partners. Our sample of married stepfamilies does include those that began as cohabiting partnerships but transitioned to marriages by Wave I.

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[1]No information is available in Add Health on nonresident stepparents who might be living with the nonresident biological parent.

Feelings of family belonging vary by family structure. Although prior research shows that children living in two-biological-parent families report higher levels of family belonging than children living in stepfamilies or with single mothers (Brown & Manning, 2009), we are unaware of any studies that have considered whether the association between family belonging and child well-being varies by family structure. The current study addresses this gap in the literature. A strong sense of family belonging may yield greater benefits for children in two-biological-parent families because it enhances social capital to a greater extent within these families than in other types of families (Berger & McLanahan, 2015; Carlson, 2006). Conversely, family belonging may be a stronger deterrent of problem behaviors for children in stepparent or single-parent families, who are more likely to experience stressors that put them at greater risk of negative outcomes. Adolescents with other sources of advantage (e.g., the stability of living with both biological parents, higher family incomes) may derive fewer additional benefits from family belonging. Alternatively, perceptions of family belonging may be similarly associated with better outcomes, regardless of family structure.

In considering the associations between parent-child closeness, family belonging, and adolescent well-being, we control for a number of background characteristics in multivariate models. These characteristics, which are often associated with parent-child relationships, family belonging, and child well-being, include family income, parental education, number of siblings, and the adolescent's age, gender, race, immigrant status, and religiosity (e.g., Leake, 2007; King & Boyd, 2016).

Method

Data

We used adolescent interview data ($n = 20,745$) and parent interview data ($n = 17,670$) from the first wave of Add Health. Parent data were collected from one parent, usually the resident biological mother. With appropriate sample weights, Add Health is a nationally representative sample of adolescents in Grades 7–12 during the 1994–1995 school year (Harris et al., 2009). The analytic sample ($n = 16,684$) for this study was confined to adolescents with valid sample weights who reported that they were living with two biological parents ($n = 9,686$), a married biological mother and stepfather ($n = 2,085$), a married biological father and stepmother ($n = 456$), a single mother ($n = 3,916$), or a single father ($n = 541$).

Although limited in some respects, the Add Health data are the only nationally representative data that can address our research questions. Advantages of the Add Health data for the current study include the availability of separate indicators of family belonging and parent-child closeness (the latter of which are available for all resident parents and any nonresident biological parents). Its large sample size allows us to examine family processes within several family structures as well as test for interactions between family structure and family belonging. These data also include multiple measures of adolescent well-being.

Measures

Adolescent well-being—We examined six indicators of adolescent well-being that capture several facets of adolescent functioning. *Depressive symptoms* was measured using a modified version of the Center for Epidemiological Studies Depression Scale (CES-D) that is mean standardized over 19 items ($a = 0.87$). *Delinquency* was measured as a summed scale of 14 dichotomous items that indicate whether the adolescent engaged in certain delinquent behaviors over the past year (0 = *never*, 1 = *at least once;* range of scale is 0–14). *Failed a class* indicates whether the adolescent received a grade of a D or F in any of four subject areas (English, mathematics, history, or science) in the most recent grading period (0 = *did not receive a D or F*, 1 = *received at least one D or F*). Substance use was measured with three dichotomous variables. Heavy *alcohol use* reflected the number of times the adolescent had been drunk in the past year (0 = *less than three times*, 1 = *three or more times*). *Tobacco use* and *marijuana use* indicated whether the adolescent reported having smoked tobacco (0 = *no*, 1 = *yes*) or marijuana (0 = *no*, 1 = *yes*) in the previous 30 days.

Family structure categories were identified using the household roster and measured as a set of dummy variables: two biological parents, married biological mother and stepfather, married biological father and stepmother, single mother, and single father.

Parent-child closeness—*Closeness to resident mother* was measured with a single item asking adolescents how close they felt to their resident mothers (1 = *not at all close*, 5 = *very close*). An identical question was used to measure *closeness to resident father*. In some models, the closeness to resident mother and closeness to resident father scores were averaged to create *average resident parent-child closeness*. For adolescents in stepfamilies or single-parent families, we created a set of dummy variables measuring *closeness to the nonresident parent* that allowed us to incorporate cases where the nonresident parents were no longer alive or the adolescent did not know anything about them. These variables indicated whether the adolescent had a living nonresident parent and felt close to him or her (1 = *closeness score of 4–5*), had a living nonresident parent but did not feel close to him or her (1 = *closeness score of 1–3*; referent); or had no knowledge of his or her nonresident parent or had a deceased nonresident parent (1 = *nonresident parent is unknown or dead*).

Family belonging was measured as a standardized mean scale of four indicators ($a = 0.76$), each with five response options (1 = *very little*, 5 = *very much*): "How much do you feel your family understands you?"; "How much do you feel you and your family have fun together?"; "To what extent do you feel your family pays attention to you?"; and "How much do you feel you want to leave home?" (reverse-coded).

Sociodemographic variables—*Household income* was operationalized as the natural log of income.[2] *Parent's educational attainment* was a categorical measure of the educational attainment of the most highly-educated parent (either resident or nonresident): less than high school (referent), high school diploma or GED, some college, Bachelor's degree, and graduate or professional degree. *Number of siblings* was a count variable of the

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[2]Information on household income was obtained from the parent interview; all other variables were created from the adolescent interview.

number of siblings living in the adolescent's household (0–12). *Age* was the adolescent's age (in years) at the time of the Wave I interview. The adolescent's *gender* was a dichotomous variable (0 = *male*, 1 = *female*). *Race/ethnicity* was measured as a set of four dummy variables: non-Hispanic White (referent), non-Hispanic Black, Hispanic, and other race. A binary variable indicated whether the adolescent was *born in the United States* (0 = *no*, 1 = *yes*). *Religiosity* was based on the mean of three items (a = 0.80) reflecting how often the adolescent attended religious services, the importance of religion, and participation in religious activities (on a four-point scale).

Analytic Strategy

We conducted two main analyses. The first analysis addressed the question of whether parent-child closeness and family belonging were associated with the six well-being outcomes in each of the five family types. Due to the variety of parental configurations present in different family structures, we estimated these associations separately within each family type to capture all potentially important parental influences on adolescent well-being.

The second analysis pooled adolescents from the five family types and predicted each outcome for the full sample. The inclusion of interaction terms between family belonging and family structure in these models allowed us to test whether significant differences existed in the association between feelings of family belonging and adolescent well-being by family structure.

We estimated ordinary least-squares (OLS) regression models to predict depressive symptoms. To predict delinquency, we estimated negative binomial regression models, which account for the over dispersion of the delinquency measure. We utilized logistic regression models to predict the dichotomous outcome measures failed a class, heavy alcohol use, tobacco use, and marijuana use. Analyses were conducted in Stata 14.2. Less than 4 percent of cases had missing data on any of the study variables, with the one exception of household income (almost 25% missing). Missing data were handled using the multiple imputation procedure ICE with 25 imputations. Results are based on weighted data, with standard errors adjusted for clustering and stratification in the Add Health sampling design.

Results

Table 1 reports unimputed descriptive statistics for study variables by family structure and for the total sample. As expected, adolescents living with both biological parents had, on average, higher levels of well-being and greater socio-economic resources compared to adolescents in other family types. These adolescents also reported significantly higher levels of family belonging than adolescents in each of the other family structures (all $p < .001$). Adolescents living with single fathers reported the lowest level of family belonging, significantly lower than adolescents in all other family structures ($p < .01$) except those living with their biological fathers and stepmothers.

To further explore differences in family belonging, we examined correlations between closeness to each parent and family belonging in each family structure (Table 2). Closeness

to resident biological parents was strongly correlated with feelings of family belonging in all family types. In two-biological-parent families, closeness to mothers and closeness to fathers were highly correlated with feelings of family belonging (both $p < .001$). In stepfamilies, closeness to stepparents was also highly correlated with feelings of family belonging (both $p < .001$). Feeling close to nonresident biological parents was more weakly correlated with feelings of family belonging (in father and stepmother families, closeness to nonresident mothers was not significant; all others $p < .001$).[3] Overall, it appeared that closeness to resident parents (biological or not) was a particularly important contributor to adolescents' feelings of family belonging.

Within-Family Type Analyses

Tables 3a–3f report results from the within-family structure models for each adolescent well-being outcome separately. In preliminary analyses we tested a series of models that considered closeness to each parent and family belonging separately as well as together, with and without control variables. Here we report the results from two models that illustrate our key findings. Model 1 includes the parent-child closeness measures for each parent, along with all control variables. The measure of family belonging is added in Model 2.

Comparing Model 1 across family structures and adolescent outcomes, it is apparent that closeness to at least one parent was significantly associated with better outcomes in the majority of these models. Exactly which parent-child relationships were associated with each adolescent outcome differed by family structure. For adolescents living with two biological parents, closeness to mothers and closeness to fathers were both significantly associated with reporting fewer problem behaviors for all six outcomes (resident mother-child closeness negatively predicted failing a class at $p < .01$; all others $p < .001$). In mother-stepfather families, closeness to each resident parent was significantly associated with fewer depressive symptoms (both $p < .001$) and less delinquent activity (resident mother-child closeness $p < .01$; resident father-child closeness $p < .001$). Closeness to stepfathers was also significantly associated with a lower likelihood of having recently failed a class or engaged in heavy alcohol use (both $p < .001$).

In father-stepmother families, closeness to fathers was significantly associated with fewer depressive symptoms ($p < .001$), less delinquency ($p < .01$), and less tobacco and marijuana use ($p < .001$ and $p < .01$, respectively; it was unrelated to failing a class or heavy alcohol use). Closeness to stepmothers was significantly associated with only one outcome, and this was in the unexpected direction: closeness to stepmothers was positively associated with tobacco use ($p < .05$).

In single-mother families, closeness to mothers was significantly associated with reporting fewer problem behaviors for all six outcomes (failing a class $p < .01$; all others $p < .001$). In single-father families, closeness to fathers was significantly associated with three outcomes: fewer depressive symptoms ($p < .001$), less delinquency ($p < .01$), and less marijuana use ($p < .05$).

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[3]Correlations were similar using the dichotomous measure of 'close' or 'not close' and the five-point closeness item; families in which nonresident parents were not known or were dead were excluded from this analysis.

Closeness to nonresident biological parents had fewer significant associations with adolescent well-being. In single-mother families, however, feeling close to nonresident fathers was associated with lower levels of depressive symptoms ($p < .001$), delinquency ($p < .05$), and marijuana use ($p < .05$) compared to adolescents who felt less close to their fathers. In mother-stepfather families, feeling close to nonresident fathers was associated with being less likely to fail a class ($p < .05$). In father-stepmother families, feeling close to nonresident biological mothers was associated with reporting fewer depressive symptoms ($p < .05$), though it was positively associated with heavy alcohol use ($p < .05$). Adolescents who knew nothing about their nonresident biological fathers or whose fathers were dead reported fewer problem behaviors than adolescents who reported not feeling close to their nonresident fathers: they reported less alcohol ($p < .05$), tobacco ($p < .01$), and marijuana use ($p < .01$) in mother-stepfather families, and less delinquency ($p < .01$) in single-mother families.

We used three dummy variables to capture nonresident parent closeness (*not close*, *close*, and *does not know or is dead*) in these models because this allowed us to include and examine the large number of adolescents who did not know their fathers or whose fathers had died, and our findings support the usefulness of this approach. Dummy variables, however, sometimes yield lower correlations than ordered measures like the ones used for resident parent closeness, making them difficult to compare. To check whether this could be the reason we found stronger associations between closeness and outcomes for resident parents, we tested the models in Tables 3a–3f using a binary variable for closeness to each resident parent (0 = *not close*, 1 = *close*) in place of the ordered variables, analogous to the closeness indicator for nonresident parents. Findings (not shown; all results referred to but not shown are available from the authors) revealed that the pattern of stronger associations with adolescent outcomes for resident parent closeness compared to nonresident parent closeness held regardless of whether resident parent closeness was measured as a binary or an ordered variable.

Comparing Model 2 across family structures and adolescent outcomes leads to two conclusions. First, feelings of family belonging were significantly associated with better adolescent outcomes in the vast majority of cases. The few exceptions were found for adolescents living in father-stepmother or single-father families, but even in these families a strong sense of family belonging was significantly associated with several positive outcomes. Family belonging was not significantly associated with failing a class, tobacco use, or marijuana use for adolescents in father-stepmother families, nor was it associated with failing a class or tobacco use for adolescents living with single fathers. The second finding from Model 2 is that the inclusion of family belonging in models either partially or fully attenuated the effects of parent-child closeness in most cases. These findings suggest that closeness to parents is associated with greater feelings of family belonging, which in turn are associated with reporting fewer problem behaviors.

Pooled Analyses with Family Type-Family Belonging Interactions

Results from the within-family structure models suggested that family belonging was associated with adolescent well-being in each family structure. The inclusion of the

interaction terms between family structure and family belonging (see Table 4) provided a formal test of the premise that this association might differ by family type. A measure of average resident parent-child closeness was used in these models in order to allow for the inclusion of adolescents in all family structures in a single model.[4]

We first estimated the pooled models without interaction terms (tables not shown). These results revealed that family belonging was significantly associated with reporting fewer negative outcomes across all indicators of well-being. Adolescents who reported higher levels of family belonging were significantly less likely to report depressive symptoms, engagement in delinquent activities, having failed a class, or alcohol, tobacco, or marijuana use (all $p < .001$). As revealed in Table 4, for depressive symptoms and alcohol use, there were no significant interactions between family structure and family belonging. Results for the four remaining indicators of well-being suggested that the association between family belonging and adolescent well-being was statistically significantly stronger for adolescents in two-biological-parent families compared to adolescents in other family structures. There were fewer significant differences in the association between family belonging and adolescent well-being for adolescents in other family structures. Overall, results from these models suggest that family belonging was associated with a range of well-being outcomes for children in all of these family structures, with occasionally stronger associations for children living with two biological parents and weaker associations for children living in father-stepmother families.

Supplementary Analyses

The finding that adolescents living with two biological parents benefitted most from high levels of belonging for several outcomes prompted us to conduct an additional analysis to address the following question: Which group is better adjusted, adolescents living with two biological parents who feel low levels of belonging, or adolescents in other family types who feel high levels of belonging? To conduct this analysis, scores of 4–5 on the unstandardized family belonging scale were coded as high belonging and scores below 4 were coded as low belonging. A binary variable that compared adolescents in two-biological-parent families with low levels of belonging to adolescents in all other family structures with high levels of belonging was used to predict each of the six adolescent outcomes, net of control variables and average resident parent closeness.

Results (not shown) revealed that adolescents in non-two-biological-parent families who reported high levels of belonging were significantly less likely to report depressive symptoms, or engage in delinquent activities, alcohol, or tobacco use than adolescents in two-biological-parent families who reported low levels of family belonging. There were no significant differences between these two groups of adolescents in marijuana use or failing a class. Thus, adolescents living in non-two-biological-parent families who felt high levels of belonging appeared to be better adjusted than adolescents living with two biological parents who felt low levels of family belonging. Although living with two biological parents appears to confer advantages with respect to adolescents' feelings of family belonging and well-

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[4]Similar results were obtained in models that used a variable reflecting the highest level of closeness (not shown).

being, low levels of family belonging undermine these advantages, highlighting the important role of belonging as a contributor to healthy family functioning and adolescent adjustment.

In the pooled models, parent-child closeness was negatively associated with reporting depressive symptoms ($p < .01$) and engaging in delinquent activities ($p < .05$), but not with the remaining outcomes. However, the evidence suggested that feelings of family belonging mediated much of the association between parent-child closeness and adolescent well-being. In models including average parent-child closeness and all of the control variables in Table 4, but excluding family belonging (and interactions with family belonging), parent-child closeness was significantly associated with all of the well-being indicators (tables not shown). It was only when feelings of family belonging were added to the models that the coefficients for parent-child closeness became substantially reduced and often non-significant, providing evidence for a mediating effect of family belonging.

Finally, as a robustness check on the observed cross-sectional associations between parent-child closeness, family belonging, and well-being, we re-estimated our models using the same Wave I predictors but substituted measures of adolescent well-being at Wave II (approximately one year later).[5] These analyses (not shown) revealed a similar pattern of findings to those observed cross-sectionally, and our conclusions remained unchanged.

Discussion

This study contributes several important findings to the literature on adolescent well-being in diverse family types. It confirms that differences in levels of perceived family belonging exist among adolescents in different types of families, but also establishes that family belonging is associated with enhanced adolescent well-being for a range of problem behaviors in all family types. Our results support the idea, demonstrated previously by King and colleagues (2015), that parent-child closeness and family belonging are not the same construct, although they are significantly associated with each other. Further, some parent-child relationships are more strongly correlated with feelings of family belonging than others. Study findings suggest that family belonging is an important mediator of the association between parent-child closeness and adolescent well-being. Finally, we find that the association of parent-child closeness with adolescent well-being is not uniform across family types. These findings contribute to an understanding of how various family types may confer advantage or disadvantage on the adolescents living in them.

As expected, we found that adolescents living with two biological parents reported higher levels of both family belonging and well-being than their counterparts who resided in married stepfamilies or with single parents. Reported levels of family belonging were lowest among adolescents living with single fathers, followed by those living with married biological fathers and stepmothers. Children who live with fathers after their biological

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[5]Although this approach better captures the correct temporal ordering between the independent and dependent variables, which is assumed in the cross-sectional analysis, a drawback of this analysis is that it relied on a smaller, less representative sample. In additional to some attrition, the Wave II sample design purposively excluded adolescents who were in the 12th grade at Wave I, reducing the longitudinal sample to $n = 12,308$.

parents separate are in a select group (Golombok & Tasker, 2015) who sometimes enter these arrangements due to difficulties experienced by biological mothers (e.g., financial, employment, or emotional). Further, step-parenting is often more difficult for stepmothers than stepfathers (Ganong & Coleman, 2017), and resident stepmothers may be more likely than resident stepfathers to bring their own biological children into new stepfamilies, thereby increasing the complexity of family relationships within households. It is difficult to know which aspects of these families – the characteristics that select them into these arrangements, the absence of biological mothers, or the complexity or other characteristics of newly formed stepfamilies – contribute most to the lower levels of family belonging experienced by adolescents living with their biological fathers after parental separations. How these processes unfold and how family belonging might be enhanced in these families are key questions for future research.

Despite differences in levels of family belonging and well-being, our analyses showed that family belonging was predictive of high levels of well-being across all family types for most of the outcomes examined. In the within-family-type analyses, family belonging was a significant predictor of positive outcomes for nearly every well-being measure in every family type. This predictive strength is what one might expect to see when predicting well-being with parent-child closeness or another well-established measure, such as family structure. However, family belonging seems to be just as important an indicator of family functioning as parent-child closeness for the outcomes in the present study. Although parent-child closeness was also a significant predictor of the outcomes we studied, these effects were all at least partially mediated by family belonging when it was introduced to the models. In many cases family belonging *fully* attenuated the existing relationship between parent-child closeness and problem behaviors, pointing to the important and largely unacknowledged role of this aspect of family functioning. It appears that one of the mechanisms explaining why parent-child closeness is linked to child outcomes is that close parent-child relationships may help foster children's feelings of family belonging. Although other family members may also contribute to children's feelings of family belonging, the strong association between parent-child closeness and family belonging suggests that parents are key contributors to this process. Our findings regarding the linkages between parent-child closeness, family belonging, and adolescent well-being point toward important new avenues for research. Do different factors contribute to a strong sense of belonging than contribute to close parent-child relationships? How can both these aspects of family be cultivated, and what family experiences undermine them?

Results from the pooled models indicated that family belonging was associated with a lower likelihood of reporting problem behaviors for each of the six well-being measures. For depressive symptoms and alcohol use, this association appeared to be the same across family types. However, the association between family belonging and the four remaining outcomes varied between different family types, with family belonging acting as a stronger predictor of well-being for adolescents in two-biological-parent families than in other family configurations.

There were few differences in the association between family belonging and adolescent well-being for adolescents in other family structures. The exceptions we observed were

among adolescents living with biological fathers and stepmothers or with single fathers. It is possible that small analytic sample size may be partially responsible for the lack of an association between family belonging and certain outcomes in these groups. It may also be that strong, close relationships with parents, a sense of unity derived from living in the same stable household, and a sense of family belonging are mutually reinforcing. If any of these factors are missing, or has had less time to develop as a result of biological parents exiting the household and/or stepparents entering the household, these factors will be less strongly correlated with one another and with high levels of well-being. This may help explain why the association between family belonging and well-being was stronger in two-biological-parent families than in family types characterized by less household stability. It may also be one reason why adolescents living with two biological parents who reported low levels of family belonging had lower levels of well-being than adolescents in non-two-biological-parent families who reported high levels of family belonging.

The results regarding parent-child relationships are also noteworthy, even though these were not the primary focus of the study. Closeness to residential parents (biological and, when present, stepparents) was highly correlated with feelings of family belonging in all family types, but closeness to nonresident biological parents was more weakly correlated with feelings of family belonging. This latter finding is consistent with recent research indicating that adolescents' relationships with nonresident biological fathers is unrelated to perceptions of family belonging in married mother-stepfather families (King et al., 2015). Future research would benefit from more attention to why this might occur. One possibility is that adolescents do not consider nonresident biological parents to be a part of the families in which they live—perhaps some adolescents see these parents as constituting separate families of which they are also members. Another possibility is that residence is of primary importance in determining who an adolescent considers to be a family member (Schmeeckle et al., 2006); relationships outside the household may simply exert less influence (King et al., 2015).

Closeness to at least one parent was usually associated with better adolescent outcomes, but exactly which parent-child relationships were associated with each outcome differed by family structure. Some of our findings are consistent with prior research, but few studies have considered all resident and nonresident biological parents across a number of family structures or for as many outcomes. Future studies could build on the current findings by considering how these relationships exist across different gendered parent-child dyads.

Closeness to nonresident biological parents had fewer significant associations with adolescent well-being than closeness to resident parents, although for adolescents in single-mother families feeling close to nonresident fathers was associated with fewer depressive symptoms, less delinquency, and less marijuana use, when compared to adolescents who did not feel close to their nonresident fathers. Adolescents living with single mothers may especially benefit from the active support of their nonresident fathers for these types of problem behaviors. Adolescents in mother-stepfather families appear to benefit more from close ties to resident stepfathers than to nonresident biological fathers, supporting the notion of the importance of residency (King, 2006).

Finally, for some outcomes and family types, it appears that having a poor relationship with a nonresident parent is associated with worse outcomes than not knowing one's nonresident parent or having a deceased nonresident parent. This finding is consistent with a recent study by Amato, King, & Thorsen (2015), who found that that adolescents in stepfather families who were close to mothers and stepfathers but did not know their nonresident biological fathers reported less substance use than adolescents who were living in families characterized by lower levels of closeness to mothers, stepfathers, and nonresident fathers. These authors suggested that adolescents in families where nonresident fathers were not known had a number of characteristics (e.g., many were born outside of marriage, entered stepfamilies at an early age and had many years of residing together) that probably contributed to closely knit stepfamilies where stepfathers may "substitute" for missing biological fathers.

Overall, it is clear that the associations between parent-child relationship quality, family belonging, and well-being are the least straightforward for adolescents with nonresident parents. An important goal for future research is to identify particular mechanisms by which the presence—or absence—of a nonresident parent may influence an adolescent's well-being.

Like all studies, the current one has limitations. Our findings are from data collected in the mid-1990s. Although it is unclear why our findings regarding the linkages between parent-adolescent closeness, family belonging, and adolescent well-being would be any different today, the rapid pace of family change opens the possibility to cohort differences in many aspects of family life. Examining within-family-type associations necessitated dividing the Add Health sample into several groups, two of which were relatively small. These small analytic sample sizes may have made it difficult to detect significant associations or mediation processes in these family types.

Add Health does not provide detailed information about all family relationships. For example, we cannot incorporate information on adolescents' relationships with siblings because the necessary information is not available. We lack information on non-parental relationships with grandparents or other adult relatives who may reside with the adolescent and provide emotional support or otherwise contribute to the adolescent's sense of family belonging. In general, some amount of uncertainty exists as to who the adolescent considers to be a family member and whether the data capture all the key relationships that may contribute to family belonging and enhanced well-being. These judgments on the part of adolescents about who is in their families may be especially important to know for adolescents who do not live in two-biological-parent families and for whom family belonging may be harder to achieve.

Our study makes important contributions toward understanding the role that feelings of family belonging can play in fostering adolescent well-being. Our findings demonstrate that family belonging is a key predictor of several important dimensions of adolescent well-being. Findings also reveal that high-quality relationships with parents encourage a strong sense of family belonging, suggesting a new pathway by which family dynamics influence well-being outcomes. This study also demonstrates that although levels of well-being and

feelings of family belonging are higher on average for adolescents living with two biological parents, feelings of family belonging are positively associated with adolescent well-being *across* family structures. Adolescence can be a challenging time for parents to maintain a close and active presence in their children's lives, but our study suggests that both positive family relationships and feelings of family belonging may help children navigate the many challenging tasks of adolescence and the transition to adulthood.

Acknowledgments

References

Amato PR. Research on divorce: Continuing trends and new developments. Journal of Marriage and Family. 2010; 72:650–666. DOI: 10.1111/j.1741-3737.2010.00723.x

Amato PR, King V, Thorsen ML. Parent-child relationships in stepfather families and adolescent adjustment: A latent class analysis. Journal of Marriage and Family. 2015; 78:730–743. DOI: 10.1111/jomf.12267

Berger LM, McLanahan SS. Income, relationship quality, and parenting: Associations with child development in two-parent families. Journal of Marriage and Family. 2015; 77:996–1015. DOI: 10.1111/jomf.12197 [PubMed: 26339104]

Booth A, Scott ME, King V. Father residence and adolescent problem behavior: Are youth always better off in two-parent families? Journal of Family Issues. 2010; 31:585–605. DOI: 10.1177/0192513X09351507 [PubMed: 20379350]

Borowsky IW, Ireland M, Resnick MD. Adolescent suicide attempts: Risks and protectors. Pediatrics. 2001; 107:485–493. DOI: 10.1542/peds.107.3.485 [PubMed: 11230587]

Bronte-Tinkew J, Moore KA, Carrano J. The father-child relationship, parenting styles, and adolescent risk behaviors in intact families. Journal of Family Issues. 2006; 27:850–881. DOI: 10.1177/0192513X05285296

Brown SL, Manning WD. Family boundary ambiguity and the measurement of family structure: The significance of cohabitation. Demography. 2009; 46:85–101. DOI: 10.1353/dem.0.0043 [PubMed: 19348110]

Carlson MJ. Family structure, father involvement, and adolescent behavioral outcomes. Journal of Marriage and Family. 2006; 68:137–154. DOI: 10.1111/j.1741-3737.2006.00239.x

Carr D, Springer KW. Advances in families and health research in the 21st century. Journal of Marriage and Family. 2010; 72:743–761. DOI: 10.1111/j.1741-3737.2010.00728.x

Cavanagh SE. Family structure history and adolescent adjustment. Journal of Family Issues. 2008; 29:944–980. DOI: 10.1177/0192513X07311232

Cherlin, AJ. Labor's love lost: The rise and fall of the working-class family in America. New York: Russell Sage; 2014.

Deci, EL., Ryan, RM. Intrinsic motivation and self-determination in human behavior. New York: Plenum; 1985.

Ganong, LH., Coleman, M. Stepfamily relationships: Development, dynamics, and interventions (2nd ed.). New York: Springer; 2017.

Gavazzi, S. Families with adolescents: Bridging the gap between theory, research, and practice. New York: Springer; 2011. doi.org/10.1007/978-1-4419-8246-9

Golombok, S., Tasker, F. Socioemotional development in changing families. In: Lamb, ME., Lerner, RM., editors. Handbook of child psychology and developmental science, Socioemotional processes. Hoboken, NJ: Wiley; 2015. p. 419-463.

Harris, KM., Halpern, CT., Whitsel, E., Hussey, J., Tabor, J., Entzel, P., Udry, JR. The National Longitudinal Study of Adolescent to Adult Health: Research Design. 2009. Available: http://www.cpc.unc.edu/projects/addhealth/design

Jacobson KC, Rowe DC. Genetic and environmental influences on relationships between family connectedness, school connectedness, and adolescent depressed mood: Sex differences. Developmental Psychology. 1999; 4:926–939. DOI: 10.1037/0012-1649.35.4.926

Jaggers JW, Bolland AC, Tomek S, Church WT II, Hooper LM, Bolland KA, Bolland JM. Does biology matter in parent-child relationships? Examining parental warmth among adolescents from low-income families. Journal of Family Issues. 2017; 38:225–247. DOI: 10.1177/0192513X15610156

Kennedy S, Bumpass L. Cohabitation and children's living arrangements: New estimates from the United States. Demographic Research. 2008; 19:1663–1692. DOI: 10.4054/DemRes.2008.19.47 [PubMed: 19119426]

King V. The antecedents and consequences of adolescents' relationships with stepfathers and nonresident fathers. Journal of Marriage and Family. 2006; 68:910–928. DOI: 10.1111/j.1741-3737.2006.00304.x [PubMed: 18270551]

King V, Boyd LM. Factors associated with perceptions of family belonging among adolescents. Journal of Marriage and Family. 2016; 78:1114–1130. DOI: 10.1111/jomf.12322 [PubMed: 27725784]

King V, Boyd LM, Thorsen ML. Adolescents' perceptions of family belonging in stepfamilies. Journal of Marriage and Family. 2015; 77:761–774. DOI: 10.1111/jomf.12181 [PubMed: 26166845]

King V, Mitchell KS, Hawkins DN. Adolescents with two nonresident biological parents: Living arrangements, parental involvement, and well-being. Journal of Family Issues. 2010; 31:3–30. DOI: 10.1177/0192513X09345833 [PubMed: 20161514]

Leake VS. Steps between, steps within: Adolescents and stepfamily belonging. ProQuest Dissertations and Theses. 2005 Publication Number 3231196.

Leake VS. Personal, familial, and systemic factors associated with family belonging for stepfamily adolescents. Journal of Divorce & Remarriage. 2007; 47:135–155. DOI: 10.1300/J087v47n01_08

Luthar, SS., Crossman, EJ., Small, PJ. Resilience and adversity. In: Lamb, ME., Lerner, RM., editors. Handbook of child psychology and developmental science, Socioemotional processes. Hoboken, NJ: Wiley; 2015. p. 247-286.doi.org/10.1002/9781118963418.childpsy307

Maslow, AH. Motivation and personality. New York: Harper & Row; 1954/1970.

McMunn A, Martin P, Kelly Y, Sacker A. Fathers' involvement: Correlates and consequences for child socioemotional behavior in the United Kingdom. Journal of Family Issues. 2017; 38:1109–1131. DOI: 10.1177/0192513X15622415 [PubMed: 28503014]

Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, Tabor J, Beuhring T, Sieving R, Shew M, Ireland M, Bearinger LH, Udry JR. Protecting adolescents from harm. Journal of the American Medical Association. 1997; 278:823–832. DOI: 10.1001/jama.1997.03550100049038 [PubMed: 9293990]

Ryan RM. Psychological needs and the facilitation of integrative processes. Journal of Personality. 1995; 63:397–427. [PubMed: 7562360]

Schmeeckle M, Giarrusso R, Feng D, Bengtson VL. What makes someone family? Adult children's perceptions of current and former stepparents. Journal of Marriage and Family. 2006; 68:595–610. DOI: 10.1111/j.1741-3737.2006.00277.x

Waterman EA, Lefkowitz ES. Are mothers' and fathers' parenting characteristics associated with emerging adults' academic engagement? Journal of Family Issues. 2017; 38:1239–1261. DOI: 10.1177/0192513X16637101 [PubMed: 28529398]

Table 1

Descriptive Statistics by Family Structure

Variables	Two Biological Parents (N=9,686)		Biological Mother and Stepfather (N=2,085)		Biological Father and Stepmother (N=456)		Single Mother (N=3,916)		Single Father (N=541)		Total (N=16,684)	
	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)
Family Characteristics												
Resident mother-child closeness (1–5)	4.47	(0.01)	4.42	(0.02)	4.04	(0.05)	4.40	(0.02)			4.44	(0.01)
Resident father-child closeness (1–5)	4.31	(0.01)	3.86	(0.03)	4.33	(0.05)			4.14	(0.05)	4.25	(0.01)
Nonresident parent												
% Close			30.78		49.62		30.65		54.50		33.81	
% Not close			42.62		31.97		43.95		32.64		41.87	
% Does not know or is dead			26.59		18.41		25.40		12.85%		24.32	
Family belonging (standardized mean)	0.10	(0.02)	−0.08	(0.03)	−0.13	(0.06)	−0.03	(0.03)	−0.23	(0.04)	0.03	(0.02)
Sociodemographics												
Household income (natural log)	3.78	(0.03)	3.61	(0.04)	3.69	(0.07)	2.92	(0.04)	3.37	(0.07)	3.56	(0.04)
Parent's educational attainment												
% Less than high school	9.05		7.85		6.21		14.61		11.98%		10.14	
% High school/GED	28.60		32.11		32.74		36.39		33.47%		31.01	
% Some college	21.50		22.75		27.36		21.62		20.95%		21.82	
% Bachelor's degree	26.35		27.13		21.90		19.70		24.04%		24.81	
% Graduate or professional	14.49		10.16		11.79		7.68		9.56%		12.22	
Number of siblings (0–12)	1.52	(0.04)	1.54	(0.04)	1.95	(0.10)	1.30	(0.05)	0.86	(0.06)	1.46	(0.03)
Age (11–21)	15.36	(0.12)	15.39	(0.13)	15.56	(0.16)	15.4	(0.15)	15.42	(0.13)	15.39	(0.12)
% Female	48.49		50.84		37.46		52.54		36.68%		49.02	
Race												
% White	73.73		71.46		77.50		49.95		70.67%		68.16	
% Black	8.40		13.65		7.50		33.31		12.83%		14.72	
% Hispanic	11.63		11.77		10.12		12.98		11.67%		11.91	
% Other	6.24		3.11		4.88		3.77		4.83%		5.21	
% Born in the US	94.23		95.74		95.10		95.58		94.52%		94.79	
Religiosity (1–4)	2.69	(0.03)	2.46	(0.04)	2.41	(0.06)	2.48	(0.04)	2.23	(0.06)	2.59	(0.03)

Variables	Two Biological Parents (N=9,686)		Biological Mother and Stepfather (N=2,085)		Biological Father and Stepmother (N=456)		Single Mother (N=3,916)		Single Father (N=541)		Total (N=16,684)	
	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)	Percent or Mean	(SE)
Adolescent Well-Being												
Depressive symptoms (standardized mean)	−0.08	(0.01)	0.02	(0.02)	0.04	(0.04)	0.05	(0.01)	0.16	(0.04)	−0.03	(0.01)
Delinquency (0–14)	2.49	(0.04)	2.79	(0.09)	3.12	(0.18)	2.95	(0.08)	3.56	(0.19)	2.68	(0.05)
% Failed a class	24.80		33.91		34.95		38.49		43.63		29.78	
%Alcohol use (drunk 3+ times in past year)	14.79		19.30		21.61		17.38		29.93		16.60	
% Tobacco use (used in past month)	24.63		31.41		34.41		27.37		40.46		26.85	
% Marijuana use (used in past month)	10.76		15.63		17.43		18.59		27.25		13.80	

Table 2

Correlations between Parent-Child Relationships and Family Belonging by Family Type

Family Type/Relationship	Correlation with Family Belonging
Two biological parents	
Mother	0.59 ***
Father	0.59 ***
Mother and stepfather	
Mother	0.59 ***
Stepfather	0.53 ***
Nonresident father	0.15 ***
Father and stepmother	
Father	0.57 ***
Stepmother	0.47 ***
Nonresident mother	0.05
Single mother	
Mother	0.59 ***
Nonresident father	0.18 ***
Single father	
Father	0.61 ***
Nonresident mother	0.17 ***

Note: Closeness to nonresident parents is measured with a dichotomous variable, 1=close. Those who do not know their nonresident parent or have a deceased nonresident parent are excluded

*** $p < .001$

Table 3

a. OLS Regressions Predicting Depressive Symptoms by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident mother–child closeness	-0.17***	-0.07***	-0.18***	-0.04	-0.07	0.02	-0.23***	-0.08**		
	(0.02)	(0.02)	(0.03)	(0.03)	(0.05)	(0.04)	(0.02)	(0.02)		
Resident father–child closeness	-0.16***	-0.08***	-0.09***	-0.02	-0.23***	-0.11†			-0.20***	-0.07
	(0.01)	(0.01)	(0.02)	(0.02)	(0.06)	(0.06)			(0.04)	(0.04)
Close to nonresident parent[a]			-0.06	-0.03	-0.21*	-0.20*	-0.14***	-0.10***	0.00	0.02
			(0.04)	(0.04)	(0.09)	(0.09)	(0.03)	(0.03)	(0.07)	(0.07)
Nonresident parent unknown/dead[a]			-0.07	-0.06	-0.13	-0.12	-0.05	0.00	0.03	0.05
			(0.04)	(0.04)	(0.10)	(0.10)	(0.03)	(0.03)	(0.13)	(0.13)
Family belonging		-0.21***		-0.27***		-0.26***		-0.22***		-0.24***
		(0.02)		(0.03)		(0.07)		(0.02)		(0.05)
F	63.36***	74.15***	8.18***	13.57***	4.15***	6.34***	17.40***	28.48***	5.22***	6.72***

b. Negative Binomial Regressions Predicting Delinquency by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident mother–child closeness	-0.26***	-0.05	-0.16**	-0.01	-0.13	-0.02	-0.31***	-0.11**		
	(0.02)	(0.03)	(0.05)	(0.03)	(0.08)	(0.08)	(0.03)	(0.03)		
Resident father–child closeness	-0.20***	-0.05	-0.16***	-0.08*	-0.21**	-0.07			-0.15**	0.04
	(0.02)	(0.03)	(0.03)	(0.03)	(0.06)	(0.08)			(0.05)	(0.06)
Close to nonresident parent[a]			-0.01	0.02	-0.11	-0.10	-0.09*	-0.04	-0.12	-0.10
			(0.07)	(0.06)	(0.12)	(0.12)	(0.04)	(0.05)	(0.11)	(0.11)
Nonresident parent unknown/dead[a]			-0.07	-0.07	0.03	0.04	-0.16**	-0.10	-0.31	-0.32
			(0.06)	(0.06)	(0.15)	(0.14)	(0.06)	(0.06)	(0.21)	(0.19)

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b. Negative Binomial Regressions Predicting Delinquency by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Family belonging		-0.43 ***		-0.31 ***		-0.31 **		-0.30 ***		-0.36 ***
		(0.03)		(0.06)		(0.10)		(0.04)		(0.07)
F	50.40 ***	71.04 ***	10.97 ***	17.34 ***	4.29 ***	4.29 ***	16.39 ***	23.24 ***	4.45 ***	8.70 ***

c. Logistic Regressions Predicting Failing a Class by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident mother-child closeness	-0.23 **	-0.03	-0.07	0.12	-0.04	-0.02	-0.27 **	-0.10		
	(0.07)	(0.07)	(0.12)	(0.13)	(0.21)	(0.22)	(0.08)	(0.09)		
Resident father-child closeness	-0.33 ***	-0.17 **	-0.41 ***	-0.31 **	-0.36	-0.33			-0.06	-0.06
	(0.06)	(0.06)	(0.09)	(0.09)	(0.20)	(0.25)			(0.14)	(0.17)
Close to nonresident parent[a]			-0.33 *	-0.30 *	-0.65	-0.65	-0.22	-0.18	0.13	0.13
			(0.15)	(0.15)	(0.35)	(0.35)	(0.12)	(0.12)	(0.28)	(0.28)
Nonresident parent unknown/dead[a]			-0.15	-0.14	-0.63	-0.63	-0.13	-0.08	-0.11	-0.11
			(0.17)	(0.17)	(0.44)	(0.44)	(0.12)	(0.12)	(0.45)	(0.19)
Family belonging		-0.43 ***		-0.37 **		-0.06		-0.26 **		0.00
		(0.07)		(0.12)		(0.24)		(0.07)		(0.17)
F	20.68 ***	21.35 ***	7.05 ***	7.72 ***	2.53 **	2.41 **	7.37 ***	8.07 ***	1.34	1.26

d. Logistic Regressions Predicting Alcohol Use by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident mother-child closeness	-0.35 ***	-0.08	-0.06	0.26	0.07	0.25	-0.51 ***	-0.21		
	(0.08)	(0.09)	(0.12)	(0.14)	(0.23)	(0.26)	(0.09)	(0.11)		

d. Logistic Regressions Predicting Alcohol Use by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident father-child closeness	-0.28 *** (0.07)	-0.08 (0.07)	-0.30 *** (0.10)	-0.15 (0.11)	-0.22 (0.20)	0.05 (0.23)			0.00 (0.15)	0.41 (0.21)
Close to nonresident parent[a]			0.13 (0.18)	0.19 (0.18)	0.85 * (0.42)	0.89 * (0.41)	0.01 (0.15)	0.09 (0.14)	-0.03 (0.28)	0.04 (0.29)
Nonresident parent unknown/dead[a]			-0.49 * (0.22)	-0.50 * (0.21)	0.22 (0.53)	0.27 (0.52)	-0.01 (0.16)	0.07 (0.16)	-0.14 (0.49)	-0.09 (0.47)
Family belonging		-0.53 *** (0.08)		-0.64 *** (0.16)		-0.54 † (0.28)		-0.46 *** (0.09)		-0.73 ** (0.25)
F	27.55 ***	29.48 ***	8.87 ***	9.08 ***	2.89 ***	2.72 ***	9.23 ***	12.60 ***	3.43 ***	4.83 ***

e. Logistic Regressions Predicting Tobacco Use by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident mother-child closeness	-0.36 *** (0.08)	-0.05 (0.08)	-0.11 (0.10)	0.16 (0.13)	0.50 * (0.21)	0.67 * (0.27)	-0.41 *** (0.08)	-0.07 (0.10)		
Resident father-child closeness	-0.31 *** (0.06)	-0.08 (0.06)	-0.14 (0.08)	-0.01 (0.09)	-0.75 *** (0.21)	-0.60 * (0.23)			-0.17 (0.18)	0.03 (0.22)
Close to nonresident parent[a]			-0.21 (0.16)	-0.16 (0.16)	0.28 * (0.32)	0.29 (0.33)	-0.25 (0.14)	-0.17 (0.15)	-0.17 (0.30)	-0.14 (0.31)
Nonresident parent unknown/dead[a]			-0.52 ** (0.17)	-0.53 ** (0.17)	-0.31 (0.46)	-0.31 (0.47)	-0.22 (0.13)	-0.13 (0.13)	-0.33 (0.44)	-0.31 (0.44)
Family belonging		-0.62 *** (0.07)		-0.52 *** (0.13)		-0.40 (0.26)		-0.51 *** (0.08)		-0.37 (0.20)
F	26.38 ***	26.40 ***	6.66 ***	7.33 ***	2.45 **	2.48 **	17.68 ***	17.84 ***	2.51 **	2.64 **

f. Logistic Regressions Predicting Marijuana Use by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident mother-child closeness	-0.49 ***	-0.24 *	0.01	-0.29	0.43	0.41	-0.52 ***	-0.19		

f. Logistic Regressions Predicting Marijuana Use by Family Structure

	Two Biological Parents (n=9,686)		Married Mother and Stepfather (n=2,085)		Married Father and Stepmother (n=456)		Single Mother (n=3,916)		Single Father (n=541)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Resident father-child closeness	-0.33 *** (0.08)	-0.15 * (0.09)	-0.22 (0.18)	-0.08 (0.19)	-0.85 ** (0.28)	-0.88 ** (0.33)	(0.08)	(0.10)	-0.35 * (0.17)	0.00 (0.20)
Close to nonresident parent[a]			-0.13 (0.20)	-0.08 (0.20)	0.29 (0.42)	0.29 (0.43)	-0.33 * (0.15)	-0.24 (0.15)	-0.07 (0.30)	0.01 (0.31)
Nonresident parent unknown/dead[a]			-0.91 ** (0.28)	-0.93 ** (0.27)	-1.13 (0.66)	-1.13 (0.66)	-0.26 (0.16)	-0.17 (0.15)	0.42 (0.50)	0.48 (0.50)
Family belonging		-0.21 *** (0.09)		-0.59 ** (0.18)		-0.06 (0.29)		-0.49 *** (0.09)		-0.67 ** (0.05)
F	21.75 ***	22.79 ***	8.71 ***	8.32 ***	2.57 **	2.53 **	12.15 ***	15.09 ***	2.57 **	2.71 ***

Note: b coefficients are presented. Standard errors are in parentheses. All models include controls for household income, parent's educational attainment, number of siblings, and adolescent age, gender, race/ethnicity, whether born in the U.S., and religiosity.

[a] "Not close to nonresident parent" is omitted.

† p = .05

* p < .05

** p < .01

*** p<.001

Table 4

Regressions Predicting Outcomes with Family Belonging and Family Structure Interactions (N = 16,684)

	Depressive Symptoms	Delinquency	Failed a Class	Alcohol Use	Tobacco Use	Marijuana Use
	b (SE)	**b** (SE)	**b** (SE)	**b** (SE)	**b** (SE)	**b** (SE)
Average resident parent-child closeness	−0.03 **	−0.03 *	−0.06	−0.02	−0.01	−0.08
	(0.01)	(0.01)	(0.04)	(0.05)	(0.04)	(0.04)
Family belonging	−0.27 ***	−0.47 ***	−0.49 ***	−0.61 ***	−0.70 ***	−0.69 ***
	(0.01)	(0.02)	(0.06)	(0.06)	(0.06)	(0.07)
Married mother and stepfather[a]	0.04 *	0.04	0.30 ***	0.22 **	0.25 **	0.29 **
	(0.02)	(0.03)	(0.07)	(0.09)	(0.07)	(0.11)
Married father and stepmother[a]	0.06	0.11	0.34 *	0.31	0.34 *	0.49 **
	(0.04)	(0.06)	(0.14)	(0.17)	(0.15)	(0.19)
Single mother[a]	0.05 **	0.12 ***	0.33 ***	0.35 ***	0.24 **	0.68 ***
	(0.02)	(0.03)	(0.07)	(0.09)	(0.08)	(0.09)
Single father[a]	0.14 ***	0.20 ***	0.62 ***	0.65 ***	0.52 ***	0.87 ***
	(0.03)	(0.05)	(0.13)	(0.13)	(0.12)	(0.13)
Family belonging × Married mother and stepfather[b]	−0.03	0.12 **	0.02	0.03	0.25 *	0.12
	(0.03)	(0.04)	(0.10)	(0.13)	(0.11)	(0.14)
Family belonging × Married father and stepmother[b]	−0.01	0.15 *	0.42 *	0.29	0.42 *	0.58 **
	(0.07)	(0.07)	(0.17)	(0.21)	(0.19)	(0.21)
Family belonging × Single mother[b]	0.01	0.12 ***	0.19 *	0.07	0.16 †	0.15
	(0.02)	(0.03)	(0.07)	(0.10)	(0.08)	(0.09)
Family belonging × Single father[b]	−0.01	0.12 *	0.45 **	0.20	0.33	0.15
	(0.04)	(0.05)	(0.14)	(0.19)	(0.18)	(0.19)
F	76.72 ***	80.81 ***	25.65 ***	39.91 ***	38.09 ***	36.87 ***

Note: "Depressive Symptoms" was estimated with OLS regression. "Delinquency" was estimated with negative binomial regression. "Failed a Class," "Alcohol Use," "Tobacco Use," and "Marijuana Use" were estimated with logistic regression. All models include controls for household income, parent's educational attainment, number of siblings, and adolescent age, gender, race/ethnicity, whether born in the U.S., and religiosity.

[a]"Two biological parents" is omitted.

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[b]"Family belonging × Two biological parents" is omitted.

[†]p = .05

[*]p < .05

[**]p < .005

[***]p<.001