Sibling Relationship Quality in Early Adulthood:

The Effects of Education, Employment, Marriage, and Parenthood

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ABSTRACT

Using data from the National Longitudinal Study of Adolescent Health (N = 1,451), this paper examines how social statuses that reflect the life transitions young adults may experience, such as education, employment, marriage or cohabiting partnership, and parenthood, are related to sibling relationships. Supporting the time demands perspective, the respondents' or the siblings' marriage or cohabitation is related to less direct (seeing each other) or indirect (calling or sending emails) contact and fewer fights between siblings. When one sibling is in college, the other sibling tends to report less direct contact. In contrast, supporting the role expansion perspective, older siblings' parental status is related to younger siblings' reports of more contact and emotional closeness with the sibling. Those who have a college degree are more likely than those without it to have more indirect contact with their siblings. These findings suggest interconnectedness of siblings' lives during the transition to adulthood.

INTRODUCTION

Transition to adulthood is a period when young people begin to experience a series of life transitions—breaking away from their family of origin, finishing school, starting working full-time, beginning to live with a partner or getting married, and becoming a parent (Conger & Little, 2010). Prior research has examined determinants of occurrence and timing of these life events or how these life events influence young adults' economic well-being, as well as physical and mental health (e.g., Setterson, 2012; Sironi & Furstenberg, 2012). Relatively less is known regarding how the social roles and statuses young adults begin to acquire during young adulthood—i.e., educational attainment, employment hours, marriage or cohabitation, and parenthood—influence relationships with members of their family of origin. In particular, although past research has examined how young people's life transitions influence intergenerational ties (e.g., Kaufman & Uhlenberg, 1998), little research has focused on sibling relationship quality. This is a critical gap in the literature, considering a majority of adults in the United States have at least one sibling, and the relationship one has with a sibling is likely one of the longest-lasting relationships an individual will experience (Milevsky & Heerwagen, 2013; Stocker, Lanthier, & Furman, 1997). And having a close relationship with siblings is related to better mental health (Milevsky, 2005; Sherman, Lansford, & Volling, 2006). It is therefore important to better understand factors that influence sibling relationship quality.

This paper examines factors that influence sibling relationships during the transition to adulthood, focusing on the period when individuals are aged 18 to 26, using unique sibling data from the National Longitudinal Study of Adolescent to Adult Health (Add Health). Drawn from the life course perspective (Elder, 1994) and role theories (Barnet & Hyde; Goode, 1960; Sieber, 1974; Sarkisian & Gerstel, 2008), we focus on how specific social statuses that young people

begin to acquire during early adulthood, such as higher education, employment, marriage or romantic partnership, and parenthood, will influence five aspects of sibling relationship quality: emotional closeness, conflict, direct contact, indirect contact, and asking for help or advice. Prior research on sibling relationship quality tends to focus on childhood, adolescence, or later life (e.g. Connidis & Campbell, 1995; Kim, McHale, Osgood, & Crouter, 2006). By focusing on the life stage prior research tended to neglect, this paper advances understanding of sibling relationship quality. Findings of the present analysis have implications for the conceptual understanding of how social statuses are related to sibling relationship quality.

LITERATURE REVIEW

Sibling Ties During the Transition to Adulthood

Like other ties within the family, sibling relationships are multidimensional, which includes associational (direct contact and indirect contact), affective (emotional closeness and conflict), and functional (asking for help and advice) aspects (Sarkisian & Gerstel, 2008). Past studies have typically considered levels of sibling contact (Milevsky, 2005; Milevsky, Smooth, Leh, & Ruppe, 2005; Stocker, Lanthier, & Furman, 1997), warmth, conflict, rivalry or power (Shortt & Gottman, 1997; Stocker, Lanthier, & Furman, 1997), closeness (Milevsky, 2005; Milevsky et al., 2005; Van Volkom, Machiz, & Reich, 2011), and giving and receiving help (Milevsky, 2005; Milevsky et al., 2005). Adult siblings can provide support, love, and friendship for one another (Van Volkom et al., 2011). In addition to emotional support and companionship through communication, siblings may also provide care for each other when they are ill (Milevsky, et al., 2005). Siblings can be a source of advice or a confidant to whom young adults discuss life challenges (Dolgin & Lindsay, 1999). We examine each aspect of sibling ties

separately, although some studies have conceptualized contact as a predictor of emotional closeness (e.g., Stocker et al., 1997).

We focus on sibling relationship quality during early adulthood. Though research concerning sibling ties has grown in recent years, much of the recent research has been concentrated in the periods of childhood, adolescence, middle adulthood, and the later years (e.g. Connidis & Campbell, 1995; Kim et al., 2006). A limited amount of research has focused on sibling ties during the period of emerging adulthood or early adulthood (Milevsky, 2005; Milevsky et al., 2005; Sherman et al., 2006; Shortt & Gottman, 1997; Van Volkom, et al., 2011; Whiteman, McHale, & Crouter, 2011). In addition, most studies used convenience samples of college students and non-college students in a local area; thus, it is less clear to what extent the findings can be generalized.

Prior research has shown that siblings are much less likely to have daily or regular contact with each other during early adulthood, compared to adolescent years (Conger & Little, 2010). Why young people may or may not experience a dip or decline in social support from siblings during early adulthood is less understood. Research has shown that having a supportive sibling during the transition into adulthood can be beneficial for individuals (Conger & Little, 2010; Milevsky, 2005; Milevsky et al., 2005; Van Volkom et al., 2011; Volling, 2003). Thus it is important to understand the factors that are linked to sibling relationships during the transition to adulthood.

The Link Between Social Roles and Sibling Relationship Quality

A life course perspective contends that transitions in one family member's life can influence other family members (Elder, 1994; White, 2001). Siblings likely experience a change in relationship dynamic during early adulthood (Myers & Bryant, 2008a; Van Volkom et al.,

2011). On the basis of prior research that examined the associations between social roles and social relationships (Conger & Little, 2010; Milevsky et al., 2005; Sarkisian & Gerstel, 2008), we conceptualize how educational status, employment hours, cohabitation or marriage, and parenthood are related to sibling ties. In particular, drawing from two contrasting ideas of role theories we focus on two sets of structural factors associated with of the each social statuses; (a) time demands and (b) role expansion perspectives.

The *time demands perspective* is derived from the role strain theory (Goode, 1960), which suggests that a social role demands its occupants to invest time and energy. Role strain theory argues that holding multiple roles may be difficult and cause an individual to experience role overload in response to the time demands and commitments required of various roles. Furthering one's education, employment hours, being married or cohabiting, and having a child all put constraints on an individual's time. Sibling relationships may become secondary to other interpersonal relationships that young people begin to build during early adulthood such as romantic partners and their own children (White, 2001). It is likely that time constraints and time availability are essential to understanding how these roles and statuses are affecting levels of emotional closeness, quarreling, and contact, as well as asking for aid and advice, between siblings during early adulthood (Connidis & Campbell, 1995).

In contrast, the *role expansion perspective*, or role enhancement or role accumulation perspective (Barnett & Hyde 2001; Marks, 1977; Sieber, 1974), contends that individuals are able to use their time and energy flexibly, and thus are able to do well fulfilling multiple responsibilities (Barnet & Rivers, 1996; Bianchi, 2000; Marks & MacDermid, 1996). Unlike the assumption of role strain, people can finding ways to organize multiple responsibilities and activities in a balanced, nonhierarchical fashion (Marks & MacDermid, 1996). Furthermore,

social roles bring in opportunities to individuals' lives to expand economic resources and social contacts (Marks 1977; Sieber, 1974). These ideas suggest that social statuses that are oftentimes introduced during early adulthood, such as education, employment, romantic partnerships, or parenthood, may not curtail time and energy from individuals to keep connected with their siblings.

In the following, we discuss more specifically how each perspective predicts the association between educational status, employment, marriage or cohabitation, and parenthood, and sibling relationships:

Education. One's educational status likely influences their availability and allocation of both their time and their resources, as pursuing higher education requires an individual to put forth a good deal of time and effort. The demands of higher education will likely negatively influence the amount of time and effort an individual has to put into other roles. From the time demands perspective, having a higher level of education may reflect less emotional closeness between siblings, less conflict, less contact, and asking for more help or advice. The time demands of school minimize the amount of time siblings have to put into their relationships. In contrast, the resource perspective indicates that education could create more opportunity for siblings to connect. Some studies suggest that people with higher socioeconomic status (SES) have less negative relationships with their siblings in part because they have enough resources and do not have to compete with one another (Conger, Conger, & Elder, 1994). Also, young adults may seek more advice from a sibling who has a higher level of education. Little research has examined the association between education and sibling relationship quality. Connidis and Campbell (1995) focused on individuals who were at least 55 years old and who had one or more siblings, to find that though higher levels of education were related to greater levels of reported

closeness toward their closest sibling, this same report was not true for the overall sibling network. Overall, for adults in the middle and later years of life, education tended to have an inverse relationship to sibling contact when considering the sibling network as a whole (Connidis & Campbell, 1995). Perhaps with more young adults being in college, having some college experience, and obtaining college degrees we can better understand the association between education and various sibling relationship qualities.

Employment. Employment requires individuals to commit time and energy in U.S. society (Frase & Gornick, 2013). Longer paid work hours is known as a key indicator of time crunch for individuals' family life (Nomaguchi, Milkie, & Bianchi, 2005). Although most research has focused on the influence of full-time employment on time or relationship quality with children or with spouses (e.g. Bianchi, 2000), it is possible that longer employment hours are related to young adults' relationship quality with their sibling. Thus, the time demands perspective suggests that employment would lead to less emotional closeness, more conflict, less contact, and an increased likelihood to ask for help or advice, given that work generally requires a good deal of an individual's time and energy. In contrast, according to the role expansion perspective, having employment will likely increase material resources available to an individual. Having more material resources—money, owning a car, purchasing a better communication tool such as a cell phone and having internet access at home—will likely allow greater opportunity to travel or have contact with siblings, allow for greater emotional closeness and less conflict, and decrease the likelihood of asking one's sibling for help. Little research has focused on the link between employment and sibling relationship quality during early adulthood. Milevsky and colleagues (2005) found that participants who were not working or who were not suffering from economic stress reported more positively on sibling relationships. It is important to remember

that most participants were college students and that not working and having economic stress likely manifests differently for these individuals than those not in college.

Relationship Status. Marriage could be a "greedy" institution that keeps individuals away from other social networks (Sarkisian & Gerstel, 2008). The time demands perspective would argue that the time and effort that marriage, and to the lesser extent cohabitation, require of a romantic partner would lead to less emotional closeness and more conflict, given siblings' emotional closeness to their romantic partner, less contact between siblings, and a greater likelihood to ask help or advice. Alternatively, the role expansion perspective contends that marriage or romantic relationships could bring siblings closer. Those who are involved in romantic partnerships or who are married tend to have more available resources (Simon & Barrett, 2010). Thus, the resource perspective would expect those in romantic partnerships to have greater sibling closeness, less conflict, greater contact, and to be less likely to ask their sibling for help with their problems. Empirical research that examined marital status and sibling relationship quality has inconsistent results. One study that analyzed closeness, confiding, and contact among siblings during their middle and later adult years found that marital status negatively affected personal contact between siblings (Connidis & Campbell, 1995). In line with the concept of time demands/availability, single individuals had the greatest level of involvement and contact in their sibling relationships. However, greater levels contact did not necessarily reflect greater levels of closeness (Connidis & Campbell, 1995). In contrast, White (2001) found that getting married was not related to sibling contact and receiving or giving advice.

Parental Status. Children require adults to commit a great deal of time (Nomaguchi & Milkie, 2003). Some research has shown that parenthood is related to decline in social activities (Munch, McPherson, & Smith-Lovin, 1997). The time demands perspective would predict that

being a parent would cause less sibling closeness, more conflict, less sibling contact, and asking for more help from siblings, than individuals who do not have children. In contrast, the role expansion perspective suggests that children create an opportunity to connect with others, especially their kin. A few studies have found that the transition to parenthood was related to an increase in contact with families and friends (Gallagher & Gerstel, 2001; Ishii-Kuntz & Secombe, 1989; Nomaguchi & Milkie, 2003). It could be that having children may be related to more contacts, closeness, and aid among siblings during early adulthood because of the excitement of becoming a new aunt or uncle. Empirical studies on parenthood and sibling relationship quality have produced inconsistent findings. White (2001) found that the sibling networks where all individuals are childless have less confidence amongst themselves than when sibling networks include both childless individuals and parents (Connidis & Campbell, 1995). In the middle and later adult years it was found that individuals without children reported confiding in their siblings more than individuals who are parents (Connidis & Campbell, 1995). This may be due to the shared interest of children in the family, especially when childless siblings do not have children of their own to serve as a time constraint. All in all there were little difference in parenthood and sibling contact, receiving or giving help.

Possible Confounding Factors

All analyses controlled for characteristics related to social statues discussed above (i.e., education, employment, marriage or cohabitation, and parenthood) and the quality of sibling ties. These include: sibling type, (i.e. full biological, half-siblings, and step-siblings) (Milevsky & Heerwagen, 2013; Ryan, Schelar, & Manlove,, 2009), gender composition of the sibling dyad (Dolgin & Lindsay, 1999; Milevsky et al., 2005), age and age-gap between siblings (Milevsky et al., 2005), geographic distance between siblings (Milevsky et al., 2005; Milevsky & Heerwagen,

2013), and race/ethnicity (Anderson & Payne, 2016; Ryan & Bauman, 2016). In addition, prior research has shown that perceived relationship quality varies by birth order (Dolgin and Lindsay, 1999; McHale, Bissell, & Kim, 2009; Milevsky et al., 2005), while in general younger siblings are more likely than older ones to have siblings who are already married or have children. In order to eliminate possible effects of characteristics in the earlier life stage, we also controlled for sibling relationship quality in adolescence.

THE PRESENT STUDY

Despite the importance of sibling relationship quality in influencing young adults' mental health, limited research has examined factors that are related to ties in sibling relationships in this life stage. In particular, little research has focused on how education, employment, marriage or cohabitation, and parenthood, are related to sibling relationship quality. On the basis of the time demands perspective, we expect that higher levels of education, longer paid work hours, having a spouse or cohabiting partner, and having children are related to less emotional closeness, more conflict, less contact, and more advice seeking among siblings. In contrast, on the basis of the role expansion perspective, we expect that higher levels of education, longer paid work hours, having a spouse or cohabiting partner, and being a parent are related to more emotional closeness, less conflict, more contact, and less advice seeking among siblings.

METHOD

Data

The National Longitudinal Study of Adolescent to Adult Health (Add Health) was used for this study. Add Health is nationally representative sample of students in grades 7-12. (Harris & Udry, 2008). The sampling frame is comprised of stratified, random sample of all high schools in the United States. Eligible schools had an 11th grade and at least 30 enrolled students,

or were a feeder school that had a 7th grade that sent on to high school. The second stage involved in-home interviews with a sample of 27,000 students. These students were drawn from the core sample from each community, as well as the special oversamples that were selected (Harris & Udry, 2008). We used information mostly from the Wave III. Wave III respondents were Wave I respondents that could be located and re-interviewed, six years after the initial interviews that took place in 2001 and 2002. Wave III respondents fell in the 18-26 year old age range, with the exception of twenty-four respondents who were 27 or 28 when they were re-interviewed. Wave III included 15,197 in-home interviews (Harris, & Udry, 2008).

The present analyses utilizes the genetic oversample of sibling respondents captured in the third wave (n = 4,368). One respondent was removed because they were not a part of the genetic oversample (n = 4,367). An additional 13 cases were removed, because the respondent ID and sibling ID were identical (n = 4,354). As relationship history is important for predicting later life relationship statuses (Elder, 1994), the current analyses matches Wave III sibling respondents with their sibship characteristics reported in Wave II. Compared to Wave II where only one sibling was identified, Wave III identified up to four siblings. As such, the one sibling in Wave II was not necessarily the same first sibling of up to four being reported on in Wave III. Of the respondents with matching valid sibling identifiers for Waves II and III, 1,900 respondents were identified as a different sibling being reported on in Wave II and Wave III, further reducing the sample to 2,486 matched siblings. Because the focus of the present analyses did not include twins, the sample was further reduced from 2,468 to 1,492, when twins (n = 702) and respondents with missing data for birth order or sibling type (n = 274) were excluded. Apart from sibling adolescent relationship quality variables measured in Wave II, the sample was

further reduced (N = 1,451) after excluding respondents and siblings with missing dependent and independent variables.

All analyses were conducted for the younger and older siblings separately (McHale, et al., 2009). The younger sample where respondents are younger than their matched sibling was n = 752 and the older sample where respondents are older than the matched sibling was n = 699. Although these samples were not representative of young adults and siblings in the U.S. general population, there has not been comparable large-scale, longitudinal, U.S. sibling pair designs like the one Add Health presents (Harris, Halpern, Haberstick, & Smolen, 2013).

Dependent Measures

The dependent variables were five aspects of sibling ties, including closeness to, conflict with, direct contact with, indirect contact with, and aid from siblings. *Sibling closeness* was measured by the question: "How close do you feel toward him/her?" (0 = not at all close, 1 = not very close, 2 = somewhat, 3 = quite close, 4 = very close). *Sibling conflict* will be measured by the question: "How often do you and {he/she} quarrel or fight?" (0 = never, 1 = seldom, 2 = sometimes, 3 = often, 4 = very often). *Sibling direct contact* will be measured by the following question: "How often do you and he/she see each other?" (0 = never, 1 = a few times a year, 2 = once or twice a month, 3 = once or twice a week, 4 = almost every day). *Sibling indirect contact* will be measured using the following questions, "How often do you and he/she talk on the phone?" "How often do you send letters or e-mail or receive them from him/her?" (0 = never, 1 = a few times a year, 2 = once or twice a month, 3 = once or twice a week, 4 = almost every day). *Sibling aid* will be measured by the following question, "How often do you turn to him/her for help when you have personal problems, or problems at school or work?" (0 = never, 1 = seldom, 2 = sometimes, 3 = often, 4 = very often).

Independent Measures

The independent measures are operationalized as follows. Both the respondents' and their siblings' *education status* is comprised of five dummy variables: less than high school, high school diploma/GED (reference) some college, in college, and B.A. and beyond. Both the respondents' and their siblings' *employment status* are measured based on work hours, measured by the question, "How many hours a week do you usually work at this job?" Responses ranged from 0 to 90, and then responses were top coded into the 95th percentile. Both the respondents' and their siblings' *relationship status* is measured using three dummy variables: single (reference), cohabiting, and married. *Parental status* is measured using a dummy variable where those with any children in the home are coded as 1.

Control Variables

Sibling relationship type is comprised of comprised of three dummy variables indicating whether the respondent's sibling is full-biological (reference), half, or step. *Gender composition* is comprised of four dummy variables indicating whether there is a sister/sister (reference), brother/brother, brother/sister, or sister/brother sibling pair. *Age-gap* between siblings is measured as the older sibling's age subtracted by the younger sibling's age. *Geographic Distance* is measured by the question, "How far in travel time do you and he/she live from one another?" Responses include the following ranges (0 = live together, 1 = within 5 minutes of each other, 2 = between 5 and 30 minutes apart, 3 = between 30 minutes and an hour apart, 4 = between an hour and a half-day apart, 5 = between a half-day and a day apart, 6 = more than a day apart.). *The respondents' age* is measured in years. The respondents' *race/ethnicity* is comprised of four dummy variables indicating whether the respondent identifies as White (reference), Black, Hispanic, or other races.

Three aspects of *sibling relationship quality in adolescence* were included. Adolescent measures come from Wave II questions. Love for one's sibling in adolescence is measured by the question, "How often do you feel love for {NAME}?" Likert Scale responses were reverse-coded (1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = very often) and divided into low love (1, 2, 3), high love (4, 5; reference) and missing. Conflict for one's sibling in adolescence is measured by the question, "How often do you and {NAME} quarrel or fight?" Responses were based on a Likert Scale (1 = very often, 2 = often, 3 = sometimes, 4 = seldom, 5 = never) and divided into low quarrel (3, 4, 5; reference), high quarrel (1, 2), and missing. Time spent with one's sibling in adolescence is measured by the question, "How much time do you and {NAME} spend together? Likert Scale responses were reverse-coded (1 = none, 2 = a little, 3 = some, 4 = a lot) and divided into the low time (1, 2, 3; reference), high time (4) and missing.

Analytic Strategy

Following prior research (McHale et al., 2009), we used ordinary-least-squared (OLS) regression models to examine the association between social statuses—education, employment, relationship status, and parenthood—and the five aspects of sibling relationship quality for older and younger siblings separately, because as discussed earlier, older and younger siblings have different perceptions of the relationship with their siblings. We also examined the same models using ordered logistic regression techniques (data not shown). The patterns of findings were very similar to those found with OLS.

RESULTS

We present the results from the OLS regressions examining the association between social statues and five aspects of sibling relationships for the younger sibling sample (Table 2) then the results for the older sibling sample (Table3).

The Younger Sibling Sample

The first aspect of sibling relationship quality was closeness. As shown in the first column in Table 2, there were no significant differences by education, employment, or relationship status. When the study siblings, but not the respondents, was a parent, respondents reported significantly higher levels of sibling closeness ($b = 0.24$, $p < .05$). In sum, only one life event status—siblings' parental status—was associated with levels of sibling closeness.

The second aspect of relationship quality was conflict with sibling. Education, work hours, and parental status were not related to conflict with sibling. The only significant association was found for the respondents' relationship status. Compared to single respondents, respondents who were cohabiting reported significantly lower levels of quarreling ($b = -0.22$, $p < .05$).

For direct contact, siblings' education, respondents' relationship status, and siblings' parental status were related to levels of direct contact. More specifically, respondents whose siblings were in college reported significantly lower levels of direct contact ($b = -0.22$, $p < .05$) than respondents whose siblings had a high school diploma/GED. Compared to single respondents, respondents who were cohabiting ($b = -0.35$, $p < .001$) and respondents who were married ($b = -0.34$, $p < .001$) reported significantly lower levels of direct contact with their siblings. Compared to those whose siblings did not have children, respondents whose siblings had children reported significantly higher levels ($b = 0.25$, $p < .01$) of direct contact. To summarize, siblings' being in college, respondents' cohabiting and marital statuses, siblings' marital status, and siblings' parental status were associated with levels of direct contact between siblings.

We also examined indirect contact—by phone, by mail, or via email. Education and work hours were not related to levels of indirect contact. Both respondents' and siblings' relationship statuses were related to levels of indirect contact. Specifically, compared to single respondents, respondents who were cohabiting ($b = -1.02$, $p < .001$) and respondents who were married ($b = -1.10$, $p < .001$) reported significantly lower levels of indirect contact with their siblings. Respondents also reported significantly lower levels of indirect contact when their siblings were cohabiting ($b = -0.79$, $p < .001$) or married ($b = -0.91$, $p < .001$) rather than single. Those whose siblings did have children reported significantly greater levels of indirect contact ($b = 0.52$, $p < .05$) compared to those whose siblings had no children. In sum, respondents' cohabitation and marital statuses, siblings' cohabitation and marital statuses, and siblings' parental status were associated with reports of indirect contact with one's sibling.

Finally, the fifth aspect of sibling relationship we examined was seeking for aid (help/advice) from sibling. None of the social statuses were related to the frequency of seeking for aid from the study sibling.

In sum, for the younger sibling sample, we found that the respondents' and their siblings' partnerships (cohabitation or marriage) were related to less contact and fewer fights; their siblings' parental status was associated with more contact and a greater sense of closeness. Education and employment were not associated with sibling relationship quality, except that respondents whose siblings are in college reported less direct contact.

The Older Sibling Sample

Turning to the older sibling sample, findings are similar to those for the younger sibling sample with a few notable differences. For closeness, there were no significant differences by the respondents' or their siblings' educational status, work hours, relationship statuses, or parental

statuses. For conflict with sibling, the siblings', but not the respondents', work hours were related to higher levels of quarreling (b = 0.00. p <.05). Compared to single respondents, respondents who are married report significantly lower levels of quarreling (b =-0.24, p <.05). Siblings' cohabitation status was also negatively related to frequency of quarreling (b = -0.23, p < .05). Neither the respondents' nor the siblings' educational or parental status significantly influence reports of quarreling. In sum, siblings' work hours, respondents' marital status, and siblings' cohabitation status were associated with levels of quarreling with siblings.

For direct contact, when siblings have less than a high school diploma, compared to having a high school diploma or GED, respondents reported significantly lower levels of direct contact (b = -0.25, p <.05). Respondents were also more likely to report less direct contact when siblings were in college (b = -0.15, p < .05), compared to having siblings who had a high school diploma. Compared to respondents with single siblings, respondents whose siblings were cohabiting (b = -0.22, p <.05), but not married, reported significantly lower levels of direct contact with their siblings. Neither the respondents' nor their siblings' parental status significantly influenced reports of closeness. To summarize, siblings' less than high school educational status, respondents' marital status, and siblings' cohabiting status were associated with reports of direct contact.

For indirect contact (phone calls, letters, emails) with sibling, compared to respondents with a high school diploma or GED, respondents who have a B.A. or beyond (b = 0.82, p <.001) report significantly higher levels of indirect contact with their sibling. Similarly, when one's sibling has a B.A. or beyond, compared to a high school diploma or GED, respondents reported significantly greater levels of indirect contact (b = 1.28, p <.05) with their sibling. Neither the respondents' nor their siblings' work hours influenced reports of indirect contact. Compared to

single respondents, respondents who were cohabiting (b = -0.92, p <.001) and respondents who were married (b = -0.89, p <.001) reported significantly lower levels of indirect contact with their siblings. Respondents also reported significantly lower levels of indirect contact when their siblings were cohabiting (b = -1.31, p <.001) or married (b = -0.79, p <.05), rather than single. Parental status was not related to reports of indirect contact with one's sibling.

For seeking aid (help/advice) from sibling, those whose siblings had less than a high school diploma (compared to having a high school diploma or GED) reported asking for significantly less aid (b =-0.57, p <.001) from their sibling. None of the other social statuses—work hours, relationship statuses, and parental statuses—were related to reports of receiving sibling aid.

In sum, for the older sibling sample, similar for the younger sibling sample, respondents' and siblings' partnerships (cohabitation or marriage) were negatively related to frequency of contact with siblings and conflict with siblings. Contrary to findings for the younger sibling sample, their siblings' education and employment were also related to quality of sibling relationships. Parental status was not related.

DISCUSSION

This paper examined the association between major social statuses that reflect life events during the transition to adulthood—i.e., education, employment, partnerships, and parental status—and five aspects of sibling relationship quality. We had two different sets of predictions. The role strain theory (Goode, 1960) led us to expect that education, employment, marriage and romantic partnership, and parenthood would be related to less closeness, more conflict, less direct and indirect contacts, and more help seeking in sibling relationships. In contrast, the role expansion theory (Barnett & Hyde, 2001; Sieber, 1974) predicted that education, employment,

marriage and romantic partnership, and parenthood would be related more closeness, less conflict, more direct and indirect contacts, and less help seeking in sibling relationships.

Table 4 summarizes the findings. The most notable finding is that respondents' or siblings' marriage and romantic partnerships are related to less contact and conflict between siblings. These findings are consistent with the time demands perspective and the findings by Sarkisian and Gerstel (2008) that adult children's marriage was related to less close parent-child relationships. The finding that marriage or cohabitation was related to less conflict was inconsistent with our expectation when considering the time demands perspective, but perhaps siblings do not have an opportunity to fight when they do not contact with each other. Sarkisian and Gerstel (2008) argued that marriage is a "greedy" institution that demands individuals' full-commitment, and could undermine individuals' other social relationships including relationships with their family members. The present analysis supports their argument in terms of sibling relationships. Marriage and partnerships are considered a primary, or ideal, source of intimacy, companionship, and personal growth in U.S. society (Cherlin, 2004). It may be that siblings may become a less important source of social support when young people have a spouse or a romantic partner.

Contrary to marriage and cohabitation, findings for parenthood show patterns that support the role expansion hypothesis, although it was found only when the respondents are younger siblings and their older siblings have children. Older siblings' parental status was positively related to younger siblings' report of sense of closeness and more frequent contact with each other. Prior research has shown that becoming a parent is related to more contact with family members (Nomaguchi & Milkie, 2003). Findings of the present analysis suggest that one way through which such expansion of contact happens among family members is through younger

siblings contacting their older siblings who became parents. Using a sample of adults aged 18 to 85, White (2001) found that having children was related to less contact and exchange among siblings. Our findings suggest that the influences of having children on sibling relationship quality may demand on contexts, such as life stage (early versus mid adulthood) and birth order (e.g., first baby in the family).

For education, for both the younger and older sibling samples, respondents reported less direct contacts when their siblings are in college. These findings appear to support the role strain hypothesis. When they are in college, siblings are less available to meet with each other. Note that the models controlled for geographical distance. Thus, living away from home may be part of the reason, but does not explain the whole story. Attending college provides a wide range of intellectual, social, and political opportunities that young people might not have experienced before (Pascarella, 2006). Exploring new encounters and building new social contacts may keep young people away from seeing people from their existing social networks, including siblings. For other education variables, which reflect educational attainment, we found a few significant findings for the older sibling sample only. Compared to having one with a high school degree, having a younger sibling without a high school diploma was related to older siblings' report of less direct contact and less frequent seeking of advice from their younger siblings. During early adulthood, major issues that young people may seek advice for may be issues related to occupational success or romantic relationships. Older siblings may not ask their younger siblings who are either still in high school or dropped out of high school for advice on those issues. Finally, when either respondents or their siblings have a college degree, they are more likely than when they have a high school diploma to contact with each other via email or phone, although they are no more likely to meet with each other in person. This is somewhat consistent with prior

finding that people with higher SES are more likely than those with lower SES to report more positive sibling relationships (Conger et al., 1994).

Finally, employment, measured by hours of paid work, did not make much difference in sibling relationship quality. One exception is that their younger siblings' long work hours was positively related to older siblings' reports of frequency of quarreling with their sibling. It could be that older siblings may get upset with their younger siblings who spend too much time working and do not make time to take care of other things. We need more information to interpret this finding.

All in all, our findings suggest support for both the role strain and the role expansion perspectives, depending on kinds of social statuses and sibling birth order. To make a general conclusion, however, we need future research that will examine more nuanced differences in social statuses and roles. For example, we only focused on marriage and cohabiting partnerships, but some young adults may have already married and gotten divorced. Prior research has shown that getting divorced is related to an increase in sibling contact and exchange (White, 2001). Although we examined respondents' and siblings' social roles as main effects, combinations of respondents' and siblings' social roles may influence sibling relationship quality. For instance, does the association between parenthood and sibling relationship quality differ depending on whether both of them have children or only one of them does? Is the association between marriage or cohabitation and sibling relationship quality different when both of them have partners compared with when only one of them has a partner?

The present analyses have other limitations. Even though there is not a comparable large-scale, longitudinal, U.S. sibling pair designs like the one that the Add Health presents, the sample is not generalizable. We only focused on the first, different-aged sibling listed for each

respondent, so it does not include additional siblings, or twins. This sample restriction moved the analytical sample further away from a representative one. Future research that uses a more representative sample of sibling dyads would help better understand the associations between social statuses and sibling relationships.

Sibling relationships are, like parent-child relationships, close relationships that most people maintain throughout their entire life. The present analysis examined various aspects of sibling relationship quality—emotional closeness, conflict, direct and indirect contact, and aid seeking—during early adulthood, a period when siblings start living apart and acquire social statuses such as education, paid work, cohabitation and marriage, and parenthood. Of these social statuses, cohabitation and marriage shows robust patterns of weakening sibling ties during early adulthood. Future research is warranted to further advance knowledge on the role of sibling relationships relative to other social relationships during early adulthood.

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Table 1. Means (Std.) for Variables in the Analysis.

	Younger Sample (N = 752)		Older Sample (N = 699)	
Relationship Quality with the Focal Sibling				
Closeness	2.86	(1.14)	2.95	(1.05)
Quarrel	1.11	(1.10)	1.11	(1.06)
Direct contact (seeing each other)	2.64	(1.52)	2.90	(1.47)
Indirect contact (phone/letters/emails)	4.15	(3.27)	4.46	(3.30)
Seeking help	1.75	(1.31)	1.58	(1.31)
Social statuses				
Education				
R Less than high school diploma	0.15		0.11	
R High school diploma or GED	0.35		0.37	
R Some College	0.10		0.18	
R In College	0.38		0.20	
R Bachelor's Degree & beyond	0.02		0.14	
S Less than high school diploma	0.12		0.13	
S High school diploma or GED	0.33		0.35	
S Some College	0.26		0.39	
S In College	0.17		0.09	
S Bachelor's Degree & beyond	0.13		0.03	
Employment				
R Work hours	24.35	(19.31)	28.95	(19.41)
S Work hours	29.78	(19.39)	23.79	(19.20)
Relationship Status				
R Single	0.71		0.60	
R Cohab	0.16		0.18	
R Married	0.13		0.22	
S Single	0.57		0.75	
S Cohab	0.18		0.15	
S Married	0.25		0.10	
Parental Status				
R Parents	0.37		0.41	
S Parents	0.40		0.34	
Controls				
Sibling type				
Biological-sibling	0.59		0.63	
Half-sibling	0.19		0.19	
Step-sibling	0.22		0.18	
Sibling gender composition				
Brother/brother	0.26		0.26	
Brother/sister	0.19		0.22	
Sister/brother	0.24		0.24	

Sister/sister	0.31		0.27	
Respondent- Age	20.60	(1.49)	22.99	(1.38)
Sibling pair age gap	2.47	(1.26)	2.39	(1.28)
Geographical Distance from Sibling	2.48	(1.85)	2.33	(1.85)
Respondent- Race/ethnicity				
White	0.52		0.51	
Black	0.23		0.24	
Hispanic	0.15		0.14	
Other race	0.10		0.11	
Sibling Relationship Quality in Adolescence				
Love				
Missing	0.14	(0.35)	0.17	(0.38)
Low	0.28	(0.45)	0.22	(0.41)
High	0.58	(0.49)	0.61	(0.49)
Quarrelling				
Missing	0.14	(0.35)	0.17	(0.38)
Low	0.62	(0.49)	0.60	(0.49)
High	0.24	(0.43)	0.23	(0.42)
Time together				
Missing	0.14	(0.35)	0.17	(0.38)
Low	0.58	(0.49)	0.51	(0.50)
High	0.28	(0.45)	0.32	(0.47)

"R" stands for "Respondent"; "S" stands for "Sibling".

Table 2: Coefficients from Ordinary-Least-Squared Regression Models Predicting the Association Between Life Event Statuses and Closeness to Sibling: Younger Sibling (N = 752)

	Closeness			Conflict			Direct Contact			Indirect Contact			Seeking Advice		
	b	*SE*		*b*	*SE*		*b*	*SE*		*b*	*SE*		*b*	*SE*	
Education															
R Less than High School	0.09	0.13		0.15	0.13		-0.16	0.10		-0.52	0.32		-0.10	0.15	
R Some College	0.12	0.14		-0.08	0.14		0.02	0.11		0.07	0.35		-0.07	0.16	
R In College	0.19	0.10		0.05	0.10		0.02	0.08		0.41	0.25		-0.10	0.12	
R B.A. & beyond	-0.02	0.30		0.08	0.29		-0.12	0.22		0.11	0.72		-0.14	0.34	
S Less than High School	-0.27	0.14		-0.08	0.14		-0.03	0.11		-0.64	0.35		-0.15	0.16	
S Some College	0.04	0.12		0.16	0.12		-0.09	0.09		-0.12	0.29		0.01	0.14	
S In College	-0.19	0.11		0.06	0.11		-0.22	0.08	*	-0.04	0.27		-0.07	0.13	
S B.A. & beyond	-0.06	0.15		0.12	0.15		-0.21	0.11		0.54	0.37		0.26	0.17	
Employment															
R Work hours	0.00	0.00		0.00	0.00		0.00	0.00		-0.01	0.01		0.00	0.00	
S Work hours	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.01		0.00	0.00	
Relationship Status															
R Cohabiting	0.01	0.11		-0.22	0.11	*	-0.35	0.08	***	-1.02	0.28	***	-0.14	0.13	
R Married	-0.16	0.13		-0.12	0.13		-0.34	0.10	***	-1.10	0.33	***	-0.31	0.15	
S Cohabiting	-0.01	0.11		0.09	0.11		-0.15	0.08		-0.79	0.28	**	0.02	0.13	
S Married	-0.11	0.10		-0.06	0.10		-0.24	0.08	**	-0.91	0.25	***	-0.09	0.12	
Parental Status															
R Parent	-0.12	0.10		-0.10	0.10		-0.09	0.07		-0.02	0.23		-0.25	0.11	
S Parent	0.24	0.10	*	-0.02	0.09		0.25	0.07	***	0.52	0.23	*	0.17	0.11	
Control Variables															
Sibling type															
Half-siblings	-0.15	0.11		0.03	0.11		-0.09	0.08		-0.28	0.27		-0.23	0.13	
Step-siblings	-0.70	0.10	***	-0.51	0.10	***	-0.78	0.08	***	-1.82	0.25	***	-0.87	0.12	***
Gender Composition															
Brother/brother	0.09	0.11		-0.28	0.11	*	0.06	0.08		0.26	0.27		-0.49	0.13	***
Brother/sister	0.08	0.12		-0.36	0.12	**	-0.09	0.09		-0.65	0.28	*	-0.49	0.13	***

Sister/brother	-0.24	0.11	*	-0.01	0.11		-0.16	0.08		-0.21	0.27		-0.43	0.13	***
Age-gap between sibs	-0.01	0.04		-0.04	0.04		0.00	0.03		-0.01	0.09		0.01	0.04	
Distance from sibling	-0.03	0.02		-0.03	0.02		-0.64	0.02	***	-0.81	0.05	***	-0.06	0.03	*
Sibling Relationship Quality in Adolescence															
Missing	-0.20	0.13		-0.02	0.13		-0.14	0.09		-0.08	0.31		0.02	0.14	
Low love	-0.34	0.10	***	0.08	0.10		-0.14	0.07		-0.51	0.23	*	-0.20	0.11	
High quarreling	-0.11	0.10		0.31	0.10	**	0.11	0.07		0.36	0.24		-0.07	0.11	
High time together	0.34	0.09	***	-0.09	0.09		0.02	0.07		0.05	0.23		0.42	0.11	***
R Demographics															
Age	0.01	0.03		-0.04	0.03		-0.01	0.02		-0.03	0.08		-0.04	0.04	
Race/Ethnicity															
Black	0.12	0.11		-0.03	0.11		-0.05	0.08		-0.39	0.27		-0.21	0.13	
Hispanic	0.00	0.12		0.18	0.12		-0.15	0.09		-0.11	0.30		0.02	0.14	
Other races	-0.22	0.14		0.12	0.14		-0.13	0.10		-0.13	0.34		-0.03	0.16	
Intercept	2.99	0.74	***	2.31	0.74	**	4.96	0.55		8.23	1.80	***	3.53	0.84	***
R^2	0.18	***		0.12	***		0.74	***		0.41	***		0.20	***	

* $p < .05$; ** $p < .01$; *** $p < .001$.
R: Respondent, S: Sibling

Note: Omitted reference groups are: High school diploma, single, single*parent, biological siblings, sister/sister, high love for sibling in adolescence, low quarreling with sibling in adolescence, low time spent with sibling in adolescence, white.

Table 3: Coefficients from Ordinary-Least-Squared Regression Models Predicting the Association Between Life Event Statuses and Closeness to Sibling: Older Sibling (N = 698)

	Closeness			Conflict			Direct Contact			Indirect Contact			Seeking Advice		
	b	*SE*		*b*	*SE*		*b*	*SE*		*b*	*SE*		*b*	*SE*	
Education															
R Less than High School	0.03	0.14		-0.25	0.14		0.00	0.11		-0.68	0.36		-0.08	0.17	
R Some College	0.10	0.11		-0.16	0.11		0.13	0.09		0.18	0.29		0.05	0.13	
R In College	-0.03	0.12		0.00	0.11		0.01	0.09		0.34	0.30		-0.13	0.14	
R B.A. & beyond	0.15	0.14		0.01	0.14		0.01	0.11		0.82	0.36	*	0.21	0.17	
S Less than High School	-0.21	0.13		0.20	0.12		-0.25	0.10	*	-0.16	0.33		-0.57	0.15	***
S Some College	0.02	0.15		0.04	0.14		0.04	0.11		0.32	0.38		0.01	0.18	
S In College	-0.01	0.10		-0.02	0.10		-0.15	0.08	*	-0.08	0.25		-0.02	0.12	
S B.A. & beyond	-0.01	0.24		0.44	0.24		-0.04	0.19		1.28	0.62	*	0.10	0.29	
Employment															
R Work hours	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.01		0.00	0.00	
S Work hours	0.00	0.00		0.00	0.00	*	0.00	0.00		0.01	0.01		0.00	0.00	
Relationship Status															
R Cohabiting	0.02	0.11		-0.12	0.11		-0.07	0.08		-0.92	0.28	**	0.07	0.13	
R Married	-0.03	0.11		-0.24	0.10	*	-0.16	0.08		-0.89	0.28	**	0.03	0.13	
S Cohabiting	-0.07	0.11		-0.23	0.11	*	-0.22	0.09	*	-1.31	0.29	***	-0.16	0.14	
S Married	-0.04	0.14		0.00	0.14		-0.14	0.11		-0.79	0.36	*	-0.01	0.17	
Parental Status															
R Parent	-0.01	0.09		-0.07	0.09		-0.01	0.07		-0.23	0.24		-0.10	0.11	
S Parent	-0.10	0.09		0.10	0.09		-0.06	0.07		0.12	0.24		0.04	0.11	
Control Variables															
Sibling Type															
Half-siblings	-0.07	0.11		-0.17	0.11		-0.22	0.08	*	-0.65	0.28	*	-0.31	0.13	*
Step-siblings	-0.76	0.11	***	-0.49	0.11	***	-0.54	0.08	***	-1.40	0.28	***	-0.76	0.13	***
Gender Composition															
Brother/brother	-0.15	0.11		-0.25	0.11	*	-0.06	0.09		-0.21	0.30		-0.69	0.14	***
Brother/sister	-0.24	0.12	*	-0.37	0.12	**	-0.12	0.09		-0.05	0.31		-0.61	0.14	***

Sister/brother	-0.26	0.11	*	-0.28	0.11	*	-0.14	0.09		-0.52	0.29		-0.56	0.14	***
Age-gap between sibs	-0.06	0.04		0.08	0.04	*	0.00	0.03		0.03	0.09		-0.03	0.04	
Distance from sibling	-0.02	0.02		-0.08	0.02	***	-0.64	0.02	***	-0.93	0.06	***	-0.08	0.03	**
Sibling Relationship Quality in Adolescence															
Missing	-0.07	0.12		0.00	0.12		0.00	0.09		-0.29	0.30		0.21	0.14	
Low love	-0.34	0.10	***	0.01	0.10		-0.07	0.08		0.19	0.26		-0.17	0.12	
High quarreling	-0.10	0.10		0.65	0.09	***	0.07	0.08		0.05	0.25		-0.03	0.12	
High time together	0.24	0.09	*	-0.01	0.09		0.06	0.07		0.38	0.24		0.40	0.11	***
R Demographics															
Age	-0.01	0.03		-0.03	0.03		-0.05	0.03		-0.10	0.09		-0.04	0.04	
Race/Ethnicity															
Black	0.37	0.10	***	-0.33	0.10	**	0.19	0.08	*	0.04	0.27		-0.12	0.13	
Hispanic	0.20	0.12		0.06	0.12		0.13	0.09		-0.11	0.31		0.31	0.15	*
Other races	0.26	0.13	*	0.00	0.13		0.26	0.10	*	0.75	0.33	*	0.35	0.16	*
Intercept	3.60	0.75		2.13	0.74	**	5.86	0.59	***	9.64	1.96	***	3.55	0.91	***
R^2	0.16	***		0.21	***		0.74	***		0.43	***		0.213	***	

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

Note: Omitted reference groups are: High school diploma, single, single*parent, biological siblings, sister/sister, high love for sibling in adolescence, low quarreling with sibling in adolescence, low time spent with sibling in adolescence, white.

Table 4. Summary of Results

	Education		Employment		Partnership		Parent	
	R	S	R	S	R	S	R	S
Younger Sibling Sample								
Closeness								+
Quarreling					-			
Direct Contact		-			-	-		+
Indirect Contact					-	-		+
Aid								
Older Sibling Sample								
Closeness								
Quarreling				+	-	-		
Direct Contact		-				-		
Indirect Contact	+	+			-	-		
Aid		-						

Notes. R stands for respondents; S stands for siblings. "+" refers to a positive association; "-" refers to a negative association.