"Can't Live With or Without Them:" Transitions and Young Adults' Perceptions of Sibling Relationships

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Extant research documents how siblings' relationships develop from childhood through adolescence; yet, we know little about how sibling relationships change in young adulthood. Rooted in life course theory, this 2-wave longitudinal study investigated changes in sibling closeness and conflict, and the roles of life transitions and sibling similarity in life stage. Participants included 273 young adults from 180 families who reported on 340 sibling relationships (Time 1 *M age* = 24.45, *SD* = 5.33; Time 2 *M age* = 30.23, *SD* = 5.33). Multilevel repeated measures analysis of covariance indicated that, on average, siblings' perceptions of conflict declined over the course of young adulthood. Additionally, patterns of change in closeness and conflict were linked to life transitions surrounding coresidence, parenthood, and similarity in employment. The discussion addresses findings in regard to life course theory and similarity in life transitions.

Keywords: sibling relations, youth/emergent adulthood, life course, life events and/or transition

Over 80% of Americans grow up in homes with one or more siblings (King et al., 2010; McHale, Updegraff, & Whiteman, 2012). Research documents that throughout childhood and adolescence, siblings serve as sources for closeness and conflict (e.g., Derkman, Engels, Kuntsche, van der Vorst, & Scholte, 2011; Kim, McHale, Osgood, & Crouter, 2006) and that sibling relational qualities play an important role in youths' development and adjustment (e.g., Kim, McHale, Crouter, & Osgood, 2007; Padilla-Walker, Harper, & Jensen, 2010). Despite their importance during adolescence, few studies have examined the ways that perceptions of sibling relationships develop during young adulthood. Young adulthood is a unique time of life when many individuals may leave their family home, seek independence, education, employment, enter into long-term romantic relationships, and potentially become parents for the first time (Arnett, 2007; Furstenberg, 2010). Yet, the implications of these transitions for young adults' sibling relationships are largely unknown. Using a longitudinal sample of young adults, the present study addressed this gap by investigating how perceptions of sibling relationship qualities changed over time and how those changes were linked with normative life transitions.

Perceptions of Sibling Relationships in Adulthood

Like other close relationships, sibling relationships evolve across the life course. For example, as adolescents mature and begin to establish their own identities both inside and outside of the family, siblings tend to report increases in closeness and decreases in conflict (Kim et al., 2006). Young adulthood, however, may provide greater opportunity for change than at younger ages. As young adults leave home and begin more independent lives, their sibling relationships become less of a byproduct of coresidence and instead become more a matter of choice. In fact, a small body of research demonstrates that sibling contact decreases in young adulthood (Lindell & Campione-Barr, 2016; Portner & Riggs, 2016; White, 2001). Decreases in contact, however, do not inherently mean poorer relationships. Indeed, the literature suggests that siblings may actually feel closer in young adulthood (Milevsky, Smoot, Leh, & Ruppe, 2005; Parker, Lüdtke, Trautwein, & Roberts, 2012; Scharf, Shulman, & Avigad-Spitz, 2005) and may perceive less conflict (Milevsky et al., 2005). The extant research, however, is either cross sectional (Milevsky et al., 2005; Scharf et al., 2005) or based on changes in relationship quality from adoles-

cence into early young adulthood (Parker et al., 2012). The current study builds upon this work by examining changes in young adults' perceptions of their sibling relationships using a two-wave longitudinal study covering five years of young adulthood.

Life Transitions

Life course theory (Elder, 1974, 1998) offers insights into how normative transitions may influence siblings' relationships. Specifically, life course theory suggests that transitions are a key time for understanding how relationship patterns change. In some cases, evidence suggests that markers of transitions are greater indicators of relational changes than the passage of time (Elder, 1998; Kokko, Pulkkinen, & Mesiäinen, 2009). For example, becoming a parent is a greater predictor of changes in marital quality than is the years of marriage (Claxton & Perry-Jenkins, 2008). This notion may also apply to how young adults perceive their sibling relationships. Recent work highlights that when older siblings go through the transition of moving away from home that they experience an increase in closeness and a decline in conflict with their younger siblings who are still at home (Lindell, Campione-Barr, & Greer, 2014; Whiteman, McHale, & Crouter, 2011), possibly because the newfound distance allows them to have a more mature and respectful relationship. At age 25 nearly half of siblings have moved away from home, by age 30 the number is roughly 70% (Bleemer, Brown, Lee, & van der Klaauw, 2014). For the 30% who still reside at home, and with a sibling, they may feel that their transition is "off time" (Elder, 1974, 1998). In this case, being "off time" may mean that patterns established in sibling relationships during adolescence may continue similar patterns as in the past, and as a result, they may report stability in closeness and conflict.

Completing education, entering the workforce, marriage, and parenthood are other important transitions in young adulthood (Arnett, 2007; White & Riedmann, 1992) that may shape sibling relationships (Conger & Little, 2010). Life course theory (Elder, 1974, 1998) posits that when life transitions occur, relationships and boundaries must be renegotiated because the lives of siblings are inherently linked across the life course. These important life transitions in young adulthood may have the tendency to pull siblings apart and limit the time they have to spend with each other. For example, a sibling who marries or becomes a parent may devote less time to their sibling relationships than they did previously as they focus more on their partner or child. Similar patterns may occur with transitioning from education or becoming employed full time. Accordingly, young adults may feel that their relationships with a sibling have become marginalized following these transitions.

Aside from transitions pulling siblings away from each other, each type of transition may create opportunities for a subset of young adults to feel "off time", which may cause added stress on relationships. For example, approximately 41% of young adults between 20 and 24 are enrolled in school, but by the ages of 25–34 the number drops to about 12% (U.S. Census Bureau, 2015). Those who are students later in young adulthood may feel "off time" compared to their peers. In regard to marriage and parenthood, about 42% of 25–29-year-olds are married, and the average age at becoming a parent for the first time is about 26 (U.S. Census Bureau, 2015). There seems to be, however, greater variation in

when young adults go through the transitions of marriage and parenthood (Vespa, 2017), thus effect of being "off time" may not be as applicable to marriage and parenthood to young adults in their late 20s (Hanushek, Schwerdt, Woessmann, & Zhang, 2017; Martin, Hamilton, Osterman, Curtin, & Matthews, 2015).

Similarity and Homophily

Beyond the possibility that transitions may promote distance between siblings, the notions of life stage similarity (Conger & Little, 2010; Shortt & Gottman, 1997) and homophily (Sechrist, Suitor, Vargas, & Pillemer, 2011; Suitor & Pillemer, 2000) offer more nuanced and alternate explanations. Specifically, these theoretical notions suggest how the combination of both the individual and their sibling's life stage may influence perceptions of their relationship. Transitions are thought to change the power and equality between siblings and make them different. When one sibling has undergone a transition that the other has not, it puts the siblings out of sync and makes them dissimilar, as a result, siblings may feel their relationship has declined (less closeness and more conflict). When siblings are in sync and more similar, however, their relationship will be more equitable and potentially of a better quality. For example, if a young adult gets married but their sibling is not married, this inequality may discourage a positive relationship, because the siblings have less in common. An individual who gets married, but their sibling is already married, may feel that they now have similar experiences and greater equality, and thus, may feel closer to their sibling. Accordingly, in the current study we investigated both how young adult siblings' life transitions related to their sibling relational qualities as well as how the combination of their transitions further shaped their relationships.

Present Study

Using data from a two-wave longitudinal (5 years apart) study of noncollege recruited young adults, the current study examined how perceptions of relationships with siblings changed over time and how those changes were associated with coresidence, and transitions and similarity in marital status, parenthood, education, and employment. Ultimately, findings have implications for how to promote healthy sibling relationships in young adulthood and theoretical implications regarding the applicability of life course theory to sibling relationships in young adulthood.

Based on previous work and theory (Conger & Little, 2010; Elder, 1974; Shortt & Gottman, 1997) we generated four hypotheses. First, we anticipated that from Time 1 to Time 2, on average, young adults would report increases in closeness and decreases in conflict with their siblings. Second, we expected that siblings who no longer resided together (i.e., lived together at Time 1, but not at Time 2) would report decreases in conflict and increases in closeness. In contrast, we expected siblings who lived together throughout young adulthood (i.e., at both time points) to report that their closeness and conflict remained stable. Third, we expected that normative life transitions would be related to increased distancing and therefore feeling less close and perceiving more conflict. Specifically, we hypothesized that participants who were married, a parent, a student, or full time employed at the second time point would report decreased closeness and conflict. Fourth, we expected siblings who moved into the same life stage based on

marital status, parenthood, student status, and employment would perceive increases in closeness and decreases in conflict. Those who were in different life stages or became out of sync between the time points would report decreases in closeness and increases in conflict.

Method

Participants

Participants were drawn from the two time points of the Family Exchanges Study (Fingerman, Miller, Birditt, & Zarit, 2009). Time 1 was collected between January and September 2008 and Time 2 between January and October 2013. The larger study recruited midlife adults from the Philadelphia Metropolitan Statistical Area (PMSA) via information purchased from the Genesys Corporation and random digit dialing within the PMSA area codes. The Philadelphia PMSA covers several urban, suburban, and rural counties in Pennsylvania and New Jersey. Eight hundred forty-five adults were identified as potential participants, 633 of those participated (75%). All adult participants had at least one child over 18, and 88% had three or fewer. The midlife adults who were originally included in the sample were similar in their ethnicities, income, sex, and marital status to those of the PMSA (U.S. Census Bureau, 2008), although participants were slightly more educated. Participating midlife adults who had children, provided contact information for up to three of their young adult offspring over the age of 18. In families with more than three children over 18, parents were asked to provide contact information for those who received the most support, those who received the least, and a random other child. Parents provided information for 63% of their offspring. Those offspring were contacted for participation. Of referred offspring, 75% participated. The young adult offspring primarily lived in Pennsylvania (73%), but the rest lived across the United States (22 different states).

Each participating young adult responded on their relationships with up to two of their siblings who were also over age 18. At Time 1 the sample consisted of 316 young adults who had at least one sibling. Young adults were included in the analysis for the current study if they provided information at both occasions of measurement (Time 1 M age = 24.45, SD = 5.33; Time 2 M age = 30.23, SD = 5.33). The final sample consisted of 273 young adults (86% retention) from 180 families who reported on 340 sibling relationships. Of the 180 families, 95 only had one participating sibling, 77 had two, and 8 families had three participating siblings. Of the 273 participating young adults, 206 reported on one sibling only (117, or 43% of the participants only had one sibling), and 67 reported on two different siblings. Young adults who did not participate in Time 2 differed from those who participated at both time points in that they: were younger, had completed less education, were more likely to be a student, and were more likely to be a firstborn. Nonparticipating siblings did not differ on any other demographic or study variable. Demographic information is presented in Table 1.

Procedure

At both time points, young adults had the option of completing a computer assisted telephone interview or a Web based survey via the Internet. On average, surveys took about 1 hour to complete

Table 1
Demographic Characteristics of Participating Young Adults and Their Siblings

Variable	Participating young adult (n = 273) M (SD) or Proportion	Sibling 1 (n = 273) M (SD) or Proportion	Sibling 2 (n = 67) M (SD) or Proportion
Age at Time 2	30.23 (5.33)	30.26 (5.50)	28.95 (5.52)
Income[a] at Time 2	1.56 (.77)		
Number of siblings	2.98 (1.35)	2.98 (1.35)	2.98 (1.35)
Age difference with young adult	—	3.45 (2.79)	4.62 (2.81)
Female	.61	.54	.53
Sex constellation with young adult			
Brothers		.15	.13
Sisters		.32	.27
Older Brother/Younger Sister		.29	.30
Older Sister/Younger Brother		.24	.30
Birth Order			
Firstborn	.42	.40	.00
Second born	.37	.48	.19
Third born	.12	.09	.45
Fourth born+	.09	.03	.36
Ethnicity			
Non-Hispanic White	.75	.75	.75
African American	.22	.22	.22
Other	.03	.03	.03
Married at Time1/Time 2	.29/.37	.18/.22	.09/.15
Parent at Time1/Time 2	.23/.37	.27/.37	.20/.34
Student at Time1/Time 2	.47/.14	.22/.04	.23/.04
Employed at Time1/Time 2	.19/.69	.51/.65	.43/.47

[a] Household income in 2008: 1 = *less than $10,000*, 2 = *$10,001 – $25,000*, 3 = *$25,001 – $40,000*, 4 = *$40,001 – $75,000*, 5 = *$75,001 – $100,000*, 6 = *more than $100,000*.

and each section of the survey was presented in a randomized order. Following completion of their interviews participants received an honorarium of $50. Institutional Review Boards approved all procedures at both time points.

Measures

Perceptions of sibling closeness. Sibling closeness was measured using five items from Blyth and Foster-Clark (1987) relationship intimacy scale. Each participant responded to items assessing their intimacy with each sibling on a 5-point scale from 1 (*not at all*) to 5 (*a great deal*). Example items included: "How much does your sibling understand what you are really like?" and "How much do you go to your sibling for advice or support?" On average, siblings reported moderate levels of closeness (Time 1 $M = 3.72$, $SD = .82$; Time 2 $M = 3.37$, $SD = .98$; average Cronbach's alpha = .91).

Perceptions of sibling conflict. Sibling conflict was measured using three items adapted from a scale of sibling negativity (Stocker & McHale, 1992). Specifically, siblings reported how often they argued, got mad or upset with, and annoyed with each other on a 5-point scale ranging from 1 (*never*) to 5 (*always*). On average, siblings reported low levels of conflict (Time 1 $M = 2.34$, $SD = .81$; Time 2 $M = 1.58$, $SD = .90$; average Cronbach's alpha = .91).

Coresidence. Reports from all participants were used to determine if they coresided with each other and with their parents at each time point. The combination of reports was used to create a nominal variable (0 = not living together at either Time 1 or Time 2; 1 = living together at Time 1 but not Time 2; 2 = living together at both Time 1 and Time 2). Most siblings did not live together at either time point (86.73%), some lived together at Time 1 and then did not at Time 2 (10.03%) and fewer lived together at both time points (3.24%).

Life transitions/status. We coded a number of life transitions that could occur between Times 1 and 2: young adult marital status at Time 2 (0 = not married; 1 = married), young adult parental status at Time 2 (0 = not a parent; 1 = parent), young adult student status at Time 2 (0 = not a student; 1 = a student), and young adult employment status at Time 2 (0 = not employed full time; 1 = employed full time).

Similarity in life stage. Reports from young adults were used to determine similarity in life stage at each time point. The combination of reports from two siblings were used to create a nominal variable for similarity/dissimilarity in the life stages of marriage, parenthood, education, and employment (0 = same life stage at both time points; 1 = different life stages at Time 1 but in the same life stage at Time 2; 2 = different life stages at both Time 1 and Time 2; 3 = the same life stage at Time 1 but a different life stage at Time 2). Table 2 provides a description of each group for each life stage as well as percentages for each group.

Demographics. Parents and participating young adults reported demographic information, including ethnicity (0 = Caucasian; 1 = minority), sibship size (0 = two siblings; 1 = three or more), age, birth order (0 = firstborn; 1 = non-firstborn), gender (0 = female; 1 = male), sibling dyad gender composition (0 = same gender; 1 = mixed gender), age difference of siblings (based on a median split; 0 = closer than three years apart; 1 = three years apart or more), parent education level, young adult education level, parents' marital status (0 = not married; 1 = married). Although sibship size and age difference could have been used as continuous variables, we opted to dichotomize them for use in our analyses, so we could detect potentially interesting mean differences in the dependent variables.

Results

Analytic Strategy

To account for the nested nature of our data and to examine changes in perceptions of sibling relationships over time, we

Table 2

Descriptions (and Percentages) of Similarity in Life Stage Regarding Marital Status, Parenthood, Student Status, and Employment

Life stage	Same at Time 1 and Time 2		Different at Time 1; Same at Time 2		Different at Time 1 and Time 2		Same at Time 1; Different at Time 2	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Marriage	Both are married or neither are married.	Both are married or neither are married. 45.9%	One is married and the other is not.	Both are married or neither are married. 19.7%	One is married and the other is not.	One is married and the other is not. 13.8%	Both are married or neither are married.	One is married and the other is not. 20.6%
Parenthood	Both are parents or neither are parents.	Both are parents or neither are parents. 61.5%	One is a parent, the other is not.	Both are parents. 8%	One is a parent, the other is not.	One is a parent, the other is not. 16.3%	Neither are parents.	One is a parent, the other is not. 14.2%
Education	Both are in school or neither is in school.	Both are in school or neither is in school. 53.4%	One is in school the other is not.	Both are in school or neither is in school. 28.9%	One is in school the other is not.	One is in school the other is not. 8.9%	Both are in school or neither is in school.	One is in school the other is not. 8.9%
Full-Time Employment	Both are employed or neither is employed.	Both are employed or neither is employed. 25.2%	One is employed the other is not.	Both are employed or neither is employed. 23.5%	One is employed the other is not.	One is employed the other is not. 21.5%	Both are employed or neither is employed.	One is employed the other is not. 26.8%

Note. Percentages across rows are the percentage for each classification of life-stage similarity for each life stage. Percentages are beneath their accompanying descriptions.

conducted a multilevel repeated measures analysis of covariance (MLM R-ANCOVA) with SAS 9.4 Proc Mixed. The model included three levels, time nested within relationships, relationships nested within siblings, and siblings nested within families. In MLM R-ANCOVA variables can be tested as both between-subjects and within-subjects. Between-subjects effects tested cross-time mean differences (the average from both time points) between relationships, not longitudinal change. These effects are automatically included in the model. Within-subjects effects were included for independent variables, control variables linked to the sibling dyad, and the overall effect of time. Each of these within-subjects effects tested the intradyad change in closeness and conflict from Time 1 to Time 2.

Two models were tested, one for each dependent variable, sibling closeness and sibling conflict. Each model included a within-subjects effect of time that assessed the average change in closeness and conflict within sibling dyads. The models also controlled for young adults' coresidence with siblings, marital status at Time 2, parental status at Time 2, education status at Time 2, employment status at Time 2, similarity in marital status, similarity in parental status, similarity in education status, and similarity in employment status. Each of these variables were tested as a between-subjects variable and a within-subjects variable. The model controlled for ethnicity, sibship size, age, birth order, gender, sibling dyad gender composition, sibling age difference, parents' education level, young adults' education level, parents' marital status. Age, parents' education level, young adults' education level, and parents' marital status were included as between-subjects effects. All other controls were more focused on the sibling dyad and were included as both between- and within-subjects effects. For each significant between-subjects effect and within-subjects effect we conducted t tests to determine significant mean differences. We also calculated Cohen's d—using the appropriate pooled standard deviation for either between or within-subjects effects as the denominator of the mean differences—to present a measure of effect size.

Prior to analysis we considered using multiple imputation or expectation maximization to handle the missing data. Little's MCAR test suggested that the data were likely not missing at random ($\chi^2 = 85.53$, $df = 43$, $p < .001$), and thus multiple imputation or expectation maximization were possibly not appropriate. We additionally conducted sensitivity analysis (Allison, 2014; Enders, 2010; Graham, Hofer, Donaldson, MacKinnon, & Schafer, 1997) in SAS 9.4 using the MNAR ADJUST option in PROC MI by creating 25 imputed data sets nine different times and in each set scaling the imputed values by factors from .1 to .9. Some coefficients from the analytic models tested on each set of imputations varied as much as fourfold, suggesting imputation or expectation maximization were not appropriate. Because those who remained in the study differed from those who did not in terms of age, education, student status, and birth order, although less ideal than imputation, the inclusion of these covariates in the model may help reduce the bias of those who dropped out of the study.

Sibling Closeness

Analysis for changes in sibling closeness (see Table 3) revealed two significant effects. First, a within-subjects effect of coresi-

Table 3

Between- and Within-Subjects Effects for MLM R-ANCOVA Predicting Changes in Sibling Closeness

Variables	Between-Subjects effects		Within-Subjects effects	
	F	df	F	df
Time	—	—	3.09	1/295
Ethnicity	.09	1/175	3.29	1/295
Sibship size	1.41	1/170	.34	1/295
Age	.21	1/232	—	—
Birth order	.25	1/291	2.00	1/295
Gender	.02	1/291	.51	1/295
Dyadic gender composition	.05	1/267	.44	1/295
Age difference	.14	1/282	2.13	1/295
Parents' education level	.00	1/177	—	—
Education level	.00	1/164	—	—
Parents' marital status	2.53	1/281	—	—
Coresidence with sibling	.87	2/286	3.55*	2/295
Marital status at Time 2	.00	1/283	.02	1/295
Parental status at Time 2	1.19	1/281	10.26***	1/295
Education status at Time 2	.54	1/291	.34	1/295
Employment status at Time 2	.38	1/291	.03	1/295
Similarity in marital status	.47	3/291	.45	3/295
Similarity in parental status	.07	3/277	1.17	3/295
Similarity in education status	.52	3/289	.08	3/295
Similarity in employment status	.63	3/281	2.52	3/295

* $p < .05$.   *** $p < .001$.

dence emerged (see Figure 1). The change in closeness for those who did not live together at either time point compared to those who did live together at both time points was not significantly different, neither was the change of those who lived together at Time 1 but not Time 2 with those who lived together at both time points. Those who did not live together at either time point, however, perceived a greater decline in closeness than those who resided together at Time 1 but not Time 2, $t(301) = 2.56$, $p < .05$. In regards to change within each group, those who did not reside with their sibling at either time point reported a decrease in closeness from Time 1 ($M = 3.71$, $SD = .10$) to Time 2 ($M = 3.36$, $SD = .11$; $t(299) = 3.91$, $p < .001$; Cohen's $d = -.19$). Those who resided with their sibling at the initial time point but then did not live together at the second time point reported no change in closeness from Time 1 ($M = 3.53$ $SD = .19$) to Time 2 ($M = 3.61$, $SD = .21$; $t(299) = -.41$, ns; Cohen's $d = .02$). Those who lived together with their sibling at both time points also reported no change in closeness from Time 1 ($M = 3.42$, $SD = .31$) to Time 2 ($M = 2.95$, $SD = .34$; $t(299) = 1.86$, ns; Cohen's $d = -.08$).

Second, a within-subjects effect of parental status at Time 2 emerged. Young adults who were not a parent at Time 2 reported no change in their sibling closeness from Time 1 ($M = 3.52$, $SD = .18$) to Time 2 ($M = 3.49$, $SD = .19$; $t(295) = .18$, ns; Cohen's $d = -.01$); whereas those who were a parent at Time 2 reported a decrease in closeness from Time 1 ($M = 3.59$, $SD = .16$) to Time 2 ($M = 3.12$, $SD = .17$; $t(295) = 3.15$, $p < .01$; Cohen's $d = -.15$).

Sibling Conflict

Findings for sibling conflict (see Table 4) revealed significant between-subjects and within-subjects effects. First, a within-
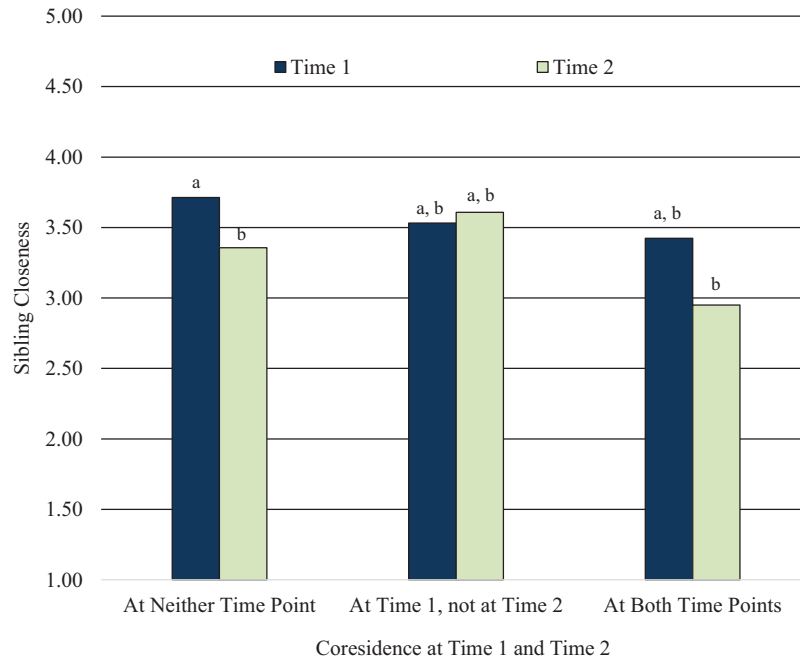
Figure 1. Sibling closeness at Time 1 and Time 2 as a function of coresidence. Bars that do not share the same subscript differ significantly between and within groups at $p < .05$. See the online article for the color version of this figure.

subjects effect of time showed that, on average, siblings reported decreased conflict from Time 1 ($M = 2.32$, $SD = .14$) to Time 2 ($M = 1.82$, $SD = .14$; $t(295) = 3.27$, $p < .01$; Cohen's $d = -.20$). Second, a significant between-subjects effect emerged for coresi-

Table 4
Between- and Within-Subjects Effects for MLM R-ANCOVA Predicting Changes in Sibling Conflict

Variables	Between- Subjects effects		Within- Subjects effects	
	F	*df*	*F*	*df*
Time	—	—	10.69***	1/295
Ethnicity	1.41	1/173	2.21	1/295
Sibship size	3.70	1/174	.99	1/295
Age	5.38*	1/232	—	—
Birth order	.78	1/289	40.12***	1/295
Gender	3.18	1/291	2.60	1/295
Dyadic gender composition	.88	1/260	2.82	1/295
Age difference	.00	1/277	8.58***	1/295
Parents' education level	.57	1/181	—	—
Education level	1.05	1/170	—	—
Parents' marital status	10.97***	1/279	—	—
Coresidence with sibling	5.07**	2/279	3.58*	2/295
Marital status at Time 2	.02	1/277	.75	1/295
Parental status at Time 2	.37	1/272	4.35*	1/295
Education status at Time 2	2.57	1/290	.02	1/295
Employment status at Time 2	3.60	1/290	2.37	1/295
Similarity in marital status	.24	3/290	1.34	3/295
Similarity in parental status	2.41	3/270	.43	3/295
Similarity in education status	.91	3/287	.43	3/295
Similarity in employment status	1.75	3/285	2.58*	3/295

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

dence. Cross-time averages showed that siblings who did not live together at either time point ($M = 1.82$, $SD = .07$) reported less conflict on average than those who lived together at Time 1 but not Time 2 ($M = 2.21$, $SD = .14$; $t(286) = -2.99$, $p < .01$; Cohen's $d = -.44$), but similar levels to those that lived together at both time points ($M = 2.19$, $SD = .23$; $t(258) = -1.70$, *ns*; Cohen's $d = -.16$. There was also a significant within-subjects effect for coresidence (see Figure 2). The change in conflict for those who did not live together at either time point, $t(301) = 2.48$, $p < .05$ and those who resided together at Time 1 but not Time 2, $t(304) = 2.68$, $p < .01$ both differed significantly from those who lived together at both time points. The decrease in conflict among those who did not live together at either time point did not differ significantly from the decline perceived by those who lived together at Time 1 but not Time 2. In regards to change within each group, siblings who did not reside together at either time point decreased in conflict from Time 1 ($M = 2.17$, $SD = .09$) to Time 2 ($M = 1.46$, $SD = .08$; $t(295) = 7.23$, $p < .001$; Cohen's $d = -.45$). Similarly, those who lived together at Time 1, but then one sibling moved away reported a decrease in conflict from Time 1 ($M = 2.62$, $SD = .17$) to Time 2 ($M = 1.79$, $SD = .17$; $t(295) = 4.13$, $p < .001$; Cohen's $d = -.26$). For those that lived with each other at each time point, however, there was no change in their levels of conflict from Time 1 ($M = 2.17$, $SD = .28$) to Time 2 ($M = 2.21$, $SD = .27$; $t(295) = -.11$, *ns*; Cohen's $d = .01$).

A within-subjects effect of parental status at Time 2 also emerged. Those who were not a parent at Time 2 reported a greater decrease in conflict from Time 1 ($M = 2.43$, $SD = .16$) to Time 2 ($M = 1.77$, $SD = .16$; $t(295) = 3.66$, $p < .001$; Cohen's $d = -.23$) than did those who were a parent at Time
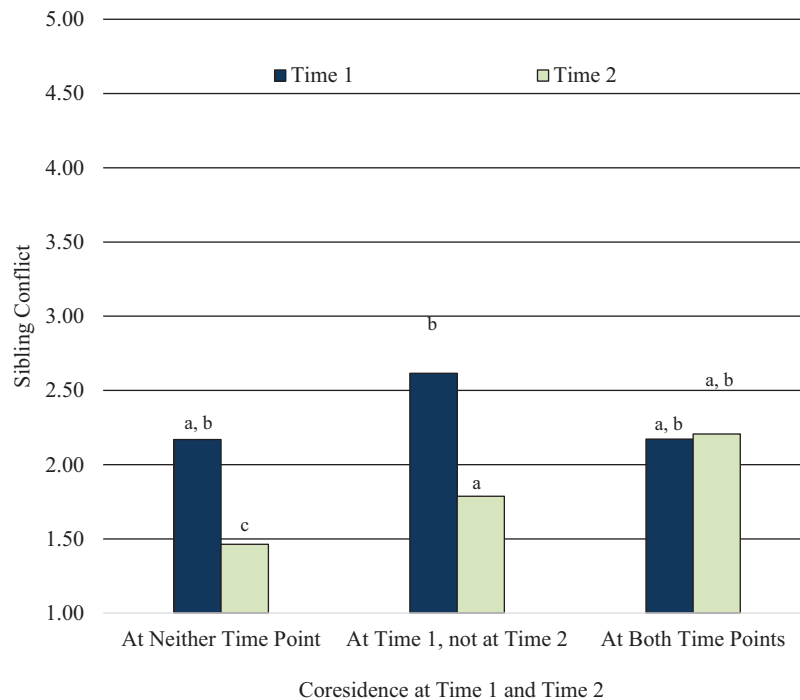
Figure 2. Sibling conflict at Time 1 and Time 2 as a function of coresidence. Bars that do not share the same subscript differ significantly between and within groups at $p < .05$. See the online article for the color version of this figure.

2 (Time 1: $M = 2.21$, $SD = .14$; Time 2: $M = 1.86$, $SD = .14$; $t(295) = 2.15$, $p < .05$; Cohen's $d = -.13$).

Results also showed a within-subjects effect of similarity in employment (see Figure 3). Those who were similar in employment at Time 1 but different at Time 2 did not differ their changes in conflict compared to any other group. Those who were in different life stages at Time 1 and Time 2 also decreased in conflict at a similar rate compared to every other group. Those who were in a different life stage at Time 1 but then the same life stage at Time 2 perceived greater decreases in conflict than those who were in the same life stage at both time points, $t(301) = 2.63$, $p < .01$. In regards to change within each group, siblings who were in the same life stage in terms of full time employment at both time points, reported no change in conflict from Time 1 ($M = 2.20$, $SD = .16$) to Time 2 ($M = 1.88$, $SD = .16$; $t(295) = 1.70$, *ns*; Cohen's $d = -.11$). Siblings who were in different life stages at Time 1, but then the same stage at Time 2, reported a decrease in conflict from Time 1 ($M = 2.52$, $SD = .15$) to Time 2 ($M = 1.81$, $SD = .15$; $t(295) = 4.24$, $p < .001$; Cohen's $d = -.26$). Those who were in different life stages at both time points also reported decreases in conflict from Time 1 ($M = 2.21$, $SD = .16$) to Time 2 ($M = 1.68$, $SD = .16$; $t(295) = 2.91$, $p < .01$; Cohen's $d = -.19$), as did those who were in the same life stage at Time 1, but different stages at Time 2 (Time 1: $M = 2.34$, $SD = .16$; Time 2: $M = 1.91$, $SD = .16$; $t(295) = 2.39$, $p < .05$; Cohen's $d = -.15$).

Several effects emerged for control variables. A within-subjects effect of birth order suggested that firstborns reported declines in conflict from Time 1 ($M = 2.47$, $SD = .15$) to Time 2 ($M = 1.59$, $SD = .15$; $t(295) = 5.08$, $p < .001$; Cohen's $d = -.32$) and

non-firstborn siblings reported no change (Time 1: $M = 2.17$, $SD = .14$; Time 2: $M = 2.05$, $SD = .14$; $t(295) = .81$, *ns*; Cohen's $d = -.05$). A within-subjects effect of age difference revealed that conflict declined in a greater amount for siblings closer in age (Time 1: $M = 2.40$, $SD = .14$; Time 2: $M = 1.74$, $SD = .14$; $t(295) = 4.13$, $p < .001$; Cohen's $d = -.26$) than for those farther apart in age (Time 1: $M = 2.23$, $SD = .15$; Time 2: $M = 1.90$, $SD = .14$; $t(295) = 2.01$, $p < .05$; Cohen's $d = -.12$). Finally, a between-subjects effect of parents' marital status suggested that those whose parents were married ($M = 2.21$, $SD = .11$) reported higher levels of conflict on average across time than those whose parents were not married ($M = 1.92$, $SD = .12$; $t(279) = 3.31$, $p < .01$; Cohen's $d = .17$).

Discussion

Sibling relationships play a critical role across the life course (Gilligan, Suitor, & Nam, 2015; Kim et al., 2007; Padilla-Walker et al., 2010), yet, little is known about how patterns of closeness and conflict change over the young adult years, or how those patterns may vary based on life transitions. Overall, our findings were consistent with the notion that young adults' perceptions of sibling relationships change in terms decreased conflict, and in several cases those changes are linked with life transitions, particularly in terms of coresidence, parenthood, and employment.

Average Change in Closeness and Conflict

Based on previous cross-sectional studies (Milevsky et al., 2005; Scharf et al., 2005) and research on the transition from
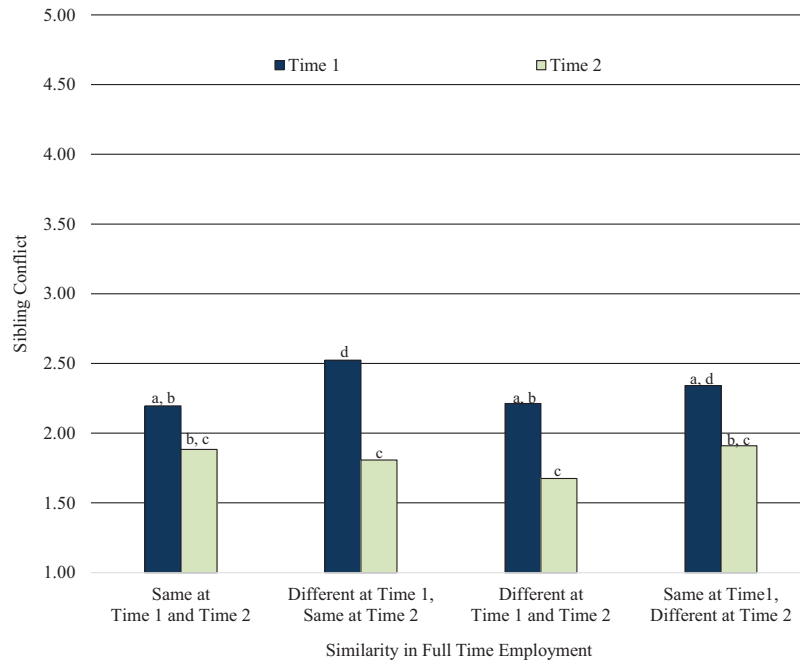
Figure 3. Sibling conflict at Time 1 and Time 2 as a function of similarity in full-time employment. Bars that do not share the same subscript differ significantly between and within groups at $p < .05$. See the online article for the color version of this figure.

adolescence to young adulthood (Lindell et al., 2014; Parker et al., 2012; Whiteman et al., 2011) we hypothesized that, on average, siblings would report increased closeness and decreased conflict over time. Consistent with this expectation, on average, sibling conflict decreased over the five year span of time. This pattern likely reflects changes associated with young adulthood, including emotional maturation as well as decreased time spent with each other, which may reduce opportunities for conflict. Unexpectedly, we found that, on average, siblings' perceptions of closeness remained stable. Previous studies have noted increased closeness with younger samples; participants in this study, however, were about 29 years old at Time 2. Perhaps sibling closeness rises following the departure from the family home as conflicts over mundane issues dissipate, but then remains stable throughout the rest of young adulthood.

Sibling Coresidence

Our hypotheses regarding coresidence were only partially confirmed. As expected, those participants who did not live with their sibling at either time point reported declines in conflict, but unexpectedly, they also reported declines in closeness. Past work has shown that with adolescents, an older sibling leaving home is linked with increased closeness (Lindell et al., 2014; Whiteman et al., 2011); possibly because the physical separation of siblings allows for the opportunity to renegotiate their relationship and shed potentially negative patterns from when they were younger. In this sample, however, dyads included only young adults. It could be that continual nonresidence promotes distance, and during a period in which both siblings may be busy establishing their own independence, they may simply have less time for each other

(White, 2001), which could lead to perceived decreased closeness. Consistent with hypotheses, siblings who experienced a transition in residence (i.e., siblings who lived together at Time 1, but not Time 2) reported decreases in conflict, but their perceived closeness remained unchanged. These dyads were different than those that did not coreside at either time point in that their moving away from each other was more recent. It is possible that a more recent separation is associated with an increase in feeling close, but those gains may wear off over time. Or in the younger adult years, instead of gains their closeness may simply hold steady.

We also anticipated stability in perceptions of closeness and conflict for individuals who resided with their sibling at both time points. Our findings were consistent with this hypothesis. Residing together and with their parents during young adulthood may perpetuate patterns and roles from adolescence and childhood that may be linked to similar levels of closeness and conflict. Those who move away from home likely renegotiate their sibling relationships because of the transition. Dyads who resided together at both time points, despite the stability in their perception of their sibling relationships, reported significantly more conflict than dyads who no longer lived together at Time 2. Many of these siblings were in their late twenties and early thirties at the second time point. By this age, most of their peers have likely moved away from their parents' home and have established independent lives (Arnett, 2007; White & Riedmann, 1992), yet these youth, are still residing with their parents and their sibling. It is possible that they are feeling some strain of being "off time" in terms of this transition (Elder, 1974, 1998), which may deter them from developing a more mature view of their sibling relationship.

Life Transitions and Life Stage Similarity

Beyond coresidence, our analysis showed some support for hypotheses regarding life transitions, in particular parental status and employment. Those who were not a parent at Time 2 perceived high, but stable closeness across time. They also reported dramatic declines in their conflict. In contrast, individuals who were parents at Time 2 reported modest declines in closeness and smaller decreases in conflict. In general, it could be that the responsibilities and strains associated with parenthood leave parents with less time to invest in their sibling relationships. If so, it was surprising that those who were a parent at Time 2 saw smaller declines in conflict. It is possible that although they may have less time to engage with a sibling because of their role as a parent, the added pressures of parenthood may contribute to some strain in relationships with siblings.

Patterns regarding similarity in employment also partially supported our hypotheses. Those who were in a different life stage at Time 1, but then were in the same life stage at Time 2, reported declines in conflict. The same pattern was observed for those who were in different life stages at both time points, or were in the same life stage at Time 1, but a different life stage at Time 2. In dyads who were similar at Time 2, the similarity was due to employment, and those who were different at Time 2 it was because one sibling was employed full time. Although the pattern observed among those who were in different stages at Time 1 and the same at Time 2 could be interpreted as support for the notions of life stage similarity (Conger & Little, 2010) and homophily (Sechrist et al., 2011; Suitor & Pillemer, 2000), the fact that similar patterns were observed among those who were different or became different from their sibling suggests something else. Rather, being employed full time may create a busier life for the young adult so that they have less time to interact with their sibling and as a result they may perceive less conflict with one another. Because this pattern held for three of the four groups, it is possible that both sibling need not be employed, one sibling going through this transition is enough to enact the change.

Beyond parenthood and employment, our analysis revealed no links between transitions regarding marriage or education and changes in young adults' perceptions of closeness and conflict. During the ages of 25–30 (approximately the mean ages in our sample) many adults have completed education, but many others are still in school. Many other adults get married, but many do not. Perhaps transitions in these areas at earlier or later ages would be linked to changes in perceptions of sibling relationships because it may put young adults more "off time" (Elder, 1974, 1998) compared to peers. Future work with larger samples should consider how age or the timing of a particular transition influences the salience of those transitions.

Findings From Control Variables

Two last findings merit discussion. First, age difference between siblings was associated with changes in conflict: Those closer in age perceived a greater decrease in conflict as opposed to those further apart in age. We did not make any formal hypotheses regarding this control variable, but the finding is surprising given recent work on siblings' social comparison (Jensen, Pond, & Padilla-Walker, 2015). Specifically, siblings closer in age are more apt to compare themselves to each other. Theoretically, those close

in age may be more likely to keep in touch as a means of continuing comparison with one another. Based on these findings, however, maybe those closer in age decrease in contact and as a result, report less conflict, as a means of avoiding comparison. Additionally, decreases in the perception of conflict for some siblings could be the result of differing levels of conflict at earlier ages. For example, if those closer in age had more conflict at younger ages, they may have more room for change in their relationship than those farther apart in age. Yet, in our sample, there were no differences in conflict at Time 1 between siblings closer in age and those further apart in age. Perhaps this pattern would be observed if comparing changes in conflict from late adolescence into young adulthood.

The second finding is regarding birth order. We found that firstborns perceived declines in conflict and non-firstborns did not. Recent work (Jensen et al., 2015; Lee, Padilla, & McHale, 2016) suggests that younger siblings are more focused on modeling and comparing themselves to their older sibling than vice versa. Perhaps older siblings may be less focused on their identity in relation to their younger siblings, so they may perceive less conflict. Younger siblings, however, may be more concerned about modeling or differentiation from their older sibling, which may provide greater opportunities to feel frustrated about their relationship, thus, report stability in conflict over time.

Limitations and Suggestions for Future Research

This study was not without limitations. Our approach was novel in examining how changes in life events/stages were linked with changes in sibling relationships, but the five years between data collection points may have made it difficult to detect certain effects. For example, some participants may have become a parent or gotten married shortly after Time 1, whereas others may have done so just prior to Time 2. In both of those scenarios those participants would have been coded in the same group. Future studies should include more frequent measurements to assess change closer to the time when life events are occurring. Future work should also explore if these patterns vary by gender, gender composition, age spacing, and birth order. For example, Buist, Deković, Meeus, and van Aken (2002) found that adolescents' attachments to siblings is strongest with sisters, but that boys report lower attachments with those sisters than do girls. In the current study we were unable to examine this because of our smaller sample and our inability to impute data for those who did not participate at Time 2; if life transitions were interacted with these other variables, then many group sizes would have fallen below than size recommended size for normality assumptions to take hold. The sample size also limited the size of some groups, especially for those who coresided at both time points. Our study was also limited by only including participants (and siblings) who were young adults. As noted by others (Whiteman et al., 2011), sibling relationships undergo unique transitions when one sibling is an adolescent and the other a young adult who is leaving home. Including a slightly large range of ages could provide interesting insights. Perhaps becoming a parent has a different effect when your sibling is a teenager compared to when your sibling is at the normative age of parenting themselves. We also only included measures of closeness and conflict as perceived by one sibling. Sibling relationships, however, include many other dimensions,

including contact, desire for contact, comparison, rivalry, and jealousy, and siblings may not agree upon the nature of their relationships. Future studies should also examine these other constructs from the perspective of both siblings to provide a fuller picture of how relationships are changing.

This study was also limited in by the relatively small proportion of ethnic minority participants (25%). As such, there was limited opportunity for cultural comparisons. This point is important given that the normative timing of life transitions varies across cultures (both nationally and internationally; Cherlin, Scabini, & Rossi, 1997; Seiffe-Krenke, 2006). Thus, the timing and associations between transitions and sibling relationships may differ across cultural contexts. Nationally representative studies including sibling relationships offer one potential avenue to test how cultural processes may shape these connections.

Despite these limitations, this study provides insight into the development of sibling relationships in young adulthood. Healthy sibling relationships are important in young adulthood because siblings can support one another through the transitions of life. Indeed, when young adult siblings support one another they report better well-being (Milevsky, 2005). Our findings suggests that to promote closer and less conflicted sibling relationships, siblings should move out of the same household and establish independent lives, but recognize the similarities in their life circumstances. When it comes down to it, siblings may not always be able to live with each other, but they also cannot live without each other.

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