

The Pennsylvania State University
The Graduate School
College of Health and Human Development

SIBLING EXPERIENCES AS PREDICTORS OF ROMANTIC RELATIONSHIP

EXPERIENCES IN ADOLESCENCE

A Thesis in
Human Development and Family Studies

by
Susan E. Doughty

© 2011 Susan E. Doughty

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

August 2011

The thesis of Susan E. Doughty was reviewed and approved* by the following:

Susan M. McHale
Director, Social Science Research Institute
Professor of Human Development
Thesis Advisor

Mark Feinberg
Senior Research Associate, Prevention Research Center for the Promotion of
Human Development

Douglas M. Teti
Professor of Human Development and Psychology
Graduate Professor-In-Charge, Human Development and Family Studies

*Signatures are on file in the Graduate School

ABSTRACT

This study examined the links between sibling experiences in early adolescence and romantic relationship formation and qualities in later adolescence. Using two waves of longitudinal data from a sample of 203 White middle and working class families, we focused on relationship data from firstborn adolescents ($N = 177$; mean firstborn age at Time 1 = 16.46 years $SD = .79$; firstborn age at Time 2 = 18.38 years $SD = .78$). In home interviews, adolescents reported on their sibling relationships (intimacy, conflict, and control) at Wave 1 and on their romantic relationship experiences (competence, intimacy, power, and relationship formation) at Wave 2. Sibling dyad gender constellation (same, mixed gender) and firstborns' gender were included as potential moderators of links between sibling relationship characteristics and later romantic relationship qualities. Siblings from mixed-gender sibling pairs were no more likely to have formed romantic relationships than their peers from same-gender sibling dyads, but self reports of romantic competence were significantly lower for girl-girl sibling pairs than boy-boy sibling pairs, with mixed-gender sibling pairs scoring in between and different from neither. Sibling intimacy in early adolescence predicted romantic power and intimacy in later adolescence, sibling conflict predicted romantic intimacy, and sibling control predicted both romantic power and romantic intimacy. Adolescent gender moderated the relation between sibling conflict and romantic intimacy such that the negative relationship between romantic intimacy and sibling conflict that was present for girls was not present for boys. In addition, sibling dyad gender constellation moderated the relation between sibling control and romantic power such that a significant positive relationship between sibling conflict and romantic power was observed for mixed-gender dyads but not for same-gender dyads. Implications of the findings, as well as directions for future research, are discussed.

TABLE OF CONTENTS

LIST OF FIGURES	v
LIST OF TABLES	vi
ACKNOWLEDGEMENTS	vii
Chapter 1 Introduction	1
Companionship in Sibling and Romantic Relationships	4
Intimacy in Sibling and Romantic Relationships	5
Power and Control in Sibling and Romantic Relationships	7
Conflict in Sibling and Romantic Relationships	8
Study Goals	10
Chapter 2 Method	12
Participants	12
Overall Sample	12
Sample One	13
Sample Two	14
Procedure	14
Measures	15
Sibling Experiences	15
Adolescent Romantic Experiences	16
Expressivity	17
Chapter 3 Results	18
Romantic Relationship Formation	18
Romantic Competence	18
Romantic Relationship Experiences	19
Implications of Sibling Intimacy for Romantic Intimacy	20
Implications of Sibling Intimacy for Romantic Power	20
Implications of Sibling Conflict for Romantic Intimacy	20
Implications of Sibling Conflict for Romantic Power	21
Implications of Sibling Control for Romantic Intimacy	21
Implications of Sibling Control for Romantic Power	21
Chapter 4 Discussion	22
Implications of Sibling Experiences for Romantic Relationship Qualities	22
Gender Constellation and Adolescent Gender	23

Exploration of Gender Effects	24
Conflict and Adolescent Gender	24
Control and Sibling Dyad Gender Constellation.....	25
Implications of Research.....	25
Contributions.....	25
Limitations	26
Future Work	27
Applications	27
Appendix: Tables and Figures	29
References.....	35

LIST OF FIGURES

Figure 1: Interaction between Sibling Conflict and Adolescent Gender in predicting Romantic Intimacy.....	33
Figure 2: Interaction between Sibling Control and Gender Constellation in predicting Romantic Power.....	34

LIST OF TABLES

Table 1: Coefficients (and SEs) from analyses predicting Romantic Intimacy and Power.	29
Table 2: Coefficients (and SEs) from Sibling Intimacy at age 16 predicting Romantic Intimacy and Power at age 18.....	30
Table 3: Coefficients (and SEs) from Sibling Conflict at age 16 predicting Romantic Intimacy and Power at age 18.....	31
Table 4: Coefficients (and SEs) from Sibling Power at age 16 predicting Romantic Intimacy and Power at age 18.....	32

ACKNOWLEDGEMENTS

I would like to thank my advisor, Dr. Susan McHale, for all the guidance, encouragement, and motivation she gave me throughout this process. I also extend my thanks to Dr. Mark Feinberg, whose understanding and fresh perspective was of great help. And to my family and cohort, without whose love and support this would not have been possible, thank you—from the bottom of my heart.

Chapter 1

Introduction

Most children in the United States grow up with at least one sibling (Hernandez, 1997), and a growing body of research shows that sibling relationships are both unique and uniquely related to individual development and adjustment (Updegraff et al., 2002; Stocker et al., 2002; Kim et al., 2007). Siblings are often close companions, developing a shared history through years of shared family experiences and environments (Stocker et al., 2002). The extent of siblings' involvement can produce relationships characterized by intensity—in both conflict and intimacy (Dunn, 1983; Buhrmester & Furman, 1987, 1990; Furman & Buhrmester, 1985). Living with a sibling also provides individuals with unique opportunities for intimate relationships with partners who may be different from themselves in terms of age, gender, and personality—relationships that may not have been formed without this lifelong connection. Their forced exposure may be particularly influential for mixed-gender sibling pairs, as the presence of an opposite-gender sibling can temper the gender segregation that is common in middle childhood, thereby providing natural opportunities to observe and practice interacting with an opposite-gender peer (Maccoby, 1990). Finally, siblings' non-voluntary and prolonged proximity to each other can promote the development of tight and dynamic bonds in which the siblings see each other alternately as models, rivals, peers, kin, and sources of support. The intensity and duration of sibling bonds may make this relationship an especially influential one (Dunn, 1983). Indeed, a body of research documents the influences of

sibling relationships in areas ranging from friendship, to academic engagement, to risky behavior (Stocker, 2000; Bouchey et al., 2010; Slomkowski et al., 2009).

This study expands upon the existing research on sibling influences by examining the ways in which sibling experiences and relationships are linked, over time, to romantic relationships in adolescence. Research has established that connections exist between sibling relationships and peer relationships (Kim et al., 2007; Kitzmann et al., 2002; Lockwood et al., 2001). Much less is known, however, about whether and how such links are also evident in romantic relationships. As we argue below, similarities between sibling and romantic relationships provide reason to expect that the qualities and characteristics of sibling relationships in early adolescence may set the stage for romantic relationships in later adolescence.

Just as navigating sibling relationships is considered a normative aspect of early life, romantic relationships are a normative part of adolescent development in Western societies (Collins et al., 2009). Romantic relationships often begin in mid-to-late adolescence, with 36% of 13-year-olds, 53% of fifteen-year-olds, and 70% of 17-year-olds reporting involvement in a romantic relationship in the past 18 months (Collins et al., 2009). Like sibling relationships, adolescent romantic experiences are linked to aspects of individual development and adjustment. Romantic relationships have previously been linked to areas of development such as identity formation, harmonious peer relations, and sexual identity development (Collins et al., 2009). Early adolescent romantic relationships often take place after a long period of same-gender segregation, which serves to emphasize and intensify gender differences—sometimes to the detriment of cross-gender communication and social competence (Maccoby, 1990). Adolescents

must learn to navigate the intricacies of cross-gender relationships successfully; the current study examines whether this task may be easier for adolescents with exposure to an opposite-gender sibling. The prevalence of adolescent romantic relationships as well as their implications for adolescent development makes these relationships an important area of focus for researchers, as well as for practitioners and parents (Larson, 1976).

Although much of the sibling influence literature focuses on childhood, a feature of these relationships is their potential for lifetime involvement—involvement that can have effects on individual development and adjustment across the lifespan. This potential for lifelong influence, also found in romantic relationships, places added importance on exploring what sibling experiences may contribute to the formation of healthful and satisfying romantic relationships.

In sum, given the important roles that both of these relationships have been found to play, an important step for research on adolescent development is to examine the parallels between sibling and romantic relationship experiences. The goals of this study were: (1) to examine whether sibling dyad gender constellation is linked to romantic relationship formation and romantic competence in late adolescence; and (2) to determine whether sibling relationships qualities, specifically, conflict, intimacy, and control, measured in middle adolescence, predict qualities of romantic relationships, specifically intimacy and power, in late adolescence. Below, we consider some of the parallels that exist between romantic and sibling relationships that give reason to predict linkages between these two significant close relationships in adolescence.

Companionship in Sibling and Romantic Relationships

One feature shared by both sibling and romantic relationships is the centrality of each in the everyday lives of adolescents. Sibling relationships are often the first peer-like relationship children experience, and in this way siblings may be influential in establishing the capacity to form secure relationships (Collins & Sroufe, 1999; Scharf & Mayseless, 2001). Siblings and sibling relationships also play a central role in shaping early activities and experiences. Research has shown that children spend a large portion of their non-school time in the presence of their sibling—allowing for ample interaction and influence (McHale, Kim, & Whiteman, 2006). The amount of time spent with a sibling fluctuates over development, as children gain the ability and independence needed to enter into interactions beyond the family and home (Larson & Verma, 1999). However, adolescents continue to spend significant amounts of time in the presence of their sibling—a relationship that sustains its importance through the further accumulation of shared experiences and understanding. As the meaning and importance of this relationship continues to evolve, so does its potential to impact siblings' individual development and adjustment.

Romantic relationships can also consume a large portion of adolescents' time and companionate activities. Interest in opposite-gender peers begins to increase in early adolescence and is reflected in an increase in time spent within mixed-gender social groups (Richards et al, 1998). Eventually, romantic partners begin to eclipse family members as the recipients of adolescents' time and attention, with high school age students spending more of their time with romantic partners than with friends, siblings, or

parents (Laursen & Williams, 1997). These changes are partly due to the finite nature of adolescents' time—more time spent with a romantic partner means that an adolescent has less time to spend with family and friends. As adolescents spend less time with family members, parents and siblings have fewer opportunities to fulfill adolescents' social needs. Thus, these needs may be increasingly fulfilled through interactions with romantic partners, whose affections may serve to compensate for adolescents' declining intimacy with family members. This dynamic can be seen in previous work showing that sibling relationships declined overall in intimacy from middle childhood into adolescence, in contrast to peer competence, which was found to peak in early adolescence (Kim et al, 2006; Kim et al, 2007).

Intimacy in Sibling and Romantic Relationships

Another prominent and shared feature of romantic and sibling relationships is their level of intimacy and emotional intensity. Unlike friendships, sibling relationships are non-voluntary in childhood and adolescence. Siblings are often close in age, such that siblings interact with and understand each other in cohort specific ways as they mature and face developmental challenges and milestones in similar micro-environments and as members of the same age cohort in their family. Sibling intimacy can be seen in the emergence of nurturant and protective behaviors between siblings (often from the older to the younger) as the more experienced or competent sibling seeks to educate or protect a sibling they perceive as being vulnerable or less experienced (Lewis, 2005). Illustrating this dynamic, sibling relationships are thought to play an important role in the

development of social skills and abilities in childhood, serving as a low-risk opportunity to learn and practice relating to others (Lewis, 2005). Sibling relationships characterized by healthful and mutual intimacy have positive implications for subsequent relationships, which benefit from individuals' enhanced social skills and capacity for intimacy (Lockwood et al., 2001).

As adolescents' social circles expand and their interest in opposite-gender peers increases, their relationship skills are applied to romantic relationships (Lewis, 2005). Romantic relationships in adolescence are thought to fulfill a similar developmental function as sibling relationships do in childhood--by providing adolescents and young adults opportunities to further develop an understanding of and capacity for intimacy and nurturance (Seiffge-Krenke, 2010). Romantic relationship qualities in early adolescence are of theoretical importance due to their association with later romantic outcomes, such as overall positivity of relationships and relationship commitment, as well as negative romantic outcomes in early adulthood (Seiffge-Krenke & Lang, 2002; Furman & Collins, 2008).

Sibling and romantic relationships can be congruent or compensatory in nature (Updegraff et al., 2002). For example, the relationship skills learned through a positive sibling relationship may enhance capacity for relationship skills and positive peer relationships (Lockwood et al., 2001). This effect may be especially pronounced for mixed-gender sibling pairs, as the presence of an opposite-gender sibling during the typically gender-segregated phases of middle childhood may help mitigate the difficulties and awkwardness of interactions with opposite-gender peers in adolescence described by Maccoby (1990). On the other hand, forming positive peer relationships, perhaps

including with a romantic partner, may sometimes compensate for the lack of satisfying sibling relationships—or vice versa (Sherman et al., 2006). Indeed, as sibling gender composition has been shown to impact the trajectory of sibling intimacy across adolescence (Updegraff et al., 2002), it may be the case that gender composition moderates the degree to which one's sibling relationship is congruent or complimentary to romantic relationships—with mixed-gender sibling relationships having a greater degree of congruence with romantic relationships than same-gender sibling relationships, which may be more complementary in nature.

Power and Control in Sibling and Romantic Relationships

An aspect of sibling relationships that distinguishes them from relationships formed with parents or is their unique role structure. Sibling relationships have the potential to be highly egalitarian, when siblings serve as playmates and companions. But sibling relationships can also be hierarchical in nature, with one or both siblings striving to achieve dominance in their interactions. In Western society, the role structure of the sibling dyad is much less proscribed than in many traditional cultures, so each sibling pair must determine what power dynamic best meets their needs (McHale et al., 2006). This flexibility may result in an ongoing process of negotiation, as the power balance between siblings shifts over time, particularly when age differences reflect progressively smaller developmental differences during adolescence (Weisner & Gallimore, 1977).

Negotiation of power and control is also seen in romantic relationships. As with sibling relationships, romantic relationships have the potential to be egalitarian, with

power and control being shared between partners (Collins et al., 2009). As gender roles have become more egalitarian in the United States and other Western societies, adolescents are increasingly free to form romantic relationships that feature egalitarian role structures and power dynamics. Each partner's social skills may play an important role in helping a couple negotiate and maintain a balance of power that both parties find satisfactory. This process may be particularly evident in romantic relationships that occur in adolescence, as youth explore a range of relational power dynamics before establishing personal patterns of romantic behaviors and roles. Having experience successfully negotiating sibling conflict to a resolution may help adolescents develop the skills needed to resolve conflict in romantic relationships. It may also be the case that experiencing a high degree of conflict in the sibling relationship may make forming outside attachments with romantic partners more appealing to adolescents.

Conflict in Sibling and Romantic Relationships

In addition to warmth and intimacy, sibling relationships can also involve rivalry and conflict. Indeed, parents have named sibling conflict as their greatest parenting concern as well as the most frequent source of parent-child conflict in their family (McHale et al., 2006). Sibling conflict can stem from personal differences, property disputes, physical and verbal aggression, or general irritation (McGuire et al., 2000). The high rate of teasing, arguments, and physical aggression that exists between siblings is common, and often considered normative, at least in Western society (Shantz & Hobart, 1989; Dunn, 1983; Baskett & Johnson, 1982). Generally, conflict in sibling relationships

predicts negative psychological and social outcomes (Stocker et al., 2002; Rinaldi & Howe, 1998). Such findings are consistent with both social learning and attachment theory predictions, which hold that the relational patterns learned in early relationships transfer to relationships formed later in life. Negative sibling relationships also can lead to coercive patterns of behavior, when sibling relationships serve as a training ground for aggressive and deviant behavior (Patterson, 1986). Other negative influences that can arise from sibling relationships include sibling collusion, risky behaviors, substance use, and violence (Bank, Patterson, & Reid, 1996; Brook, Whiteman, Gordon, & Brook, 1990; McGue, Sharma, & Benson, 1996).

From a social learning theory perspective, highly conflictual relationships, such as those between siblings, should predict higher levels of conflict in other subsequent relationships. However, some evidence suggests that conflict between siblings serves to enhance social and communication skills, as well as negotiation, compromise, and perspective-taking abilities (Bedford et al., 2000). That is, through repeated experiences of conflict and conflict resolution, siblings may hone these important social competencies. Thus, paradoxically, sibling conflict may lead to positive romantic relationship outcomes, the social benefits of which may help compensate for the lack of a harmonious sibling bond.

Romantic relationships often also involve conflict. Adolescents who are romantically involved report experiencing higher levels of conflict in their lives than their peers who are not involved in a romantic relationship (Laursen, 1995). Although sibling conflicts can be resolved through the assertion of dominance without leading to the dissolution of the relationship, conflicts in romantic relationships require adolescents to

balance their own interests with those of their partner in order to maintain the relationship (Laursen, Finkelstein, & Betts, 2001). In relationships where conflict is not dealt with effectively, adolescents have been found to be at an increased risk for further conflict, violence, and abuse (Sadeh et al., 2011). Developing effective conflict resolution skills is therefore important for forming and sustaining healthful romantic relationships (Shulman et al., 2006).

Study Goals

The purpose of this study was to explore the ways in which sibling relationship experiences link to romantic relationships in later adolescence. Our first goal was to examine whether a structural characteristic of the sibling relationship, the gender constellation of the dyad, was linked to romantic involvement and competence in late adolescence. We tested the hypothesis that adolescents from mixed-gender sibling pairs would be more likely to be involved in romantic relationships and would report higher levels of romantic competence as compared to adolescents from same gender sibling dyads. Our second goal was to examine whether qualities of sibling relationships in middle adolescence predicted qualities of romantic relationships in later adolescence, and to test the moderating role of adolescent gender and sibling gender constellation in this association. Here, we tested the hypothesis that conflict, intimacy, and control in sibling relationships, as measured in early adolescence, would predict intimacy and perceived power in romantic relationships during late adolescence. We also examined sibling dyad gender constellation and adolescent gender as potential moderators of these relationships.

Given the lack of a consensus in theories about the nature of sibling and romantic relationships—complementary or congruent—this set of analyses was exploratory.

Chapter 2

Method

The data were drawn from a sample of firstborn adolescents in 203 families that participated in a longitudinal study of family relationships. Data collection began in 1995-1996, and follow-up data collection was conducted each year. The data for the current study were drawn from the sixth and eighth waves of the study (referred to hereafter as Time 1 and Time 2), the phases in which the measures of interest were collected.

Participants

Overall Sample

Families were initially recruited through letters sent home from schools to families of fourth and fifth graders. These letters described the study and criteria for participation; interested families returned a self-addressed postcard. Of those families that returned postcards to us and met our criteria, over 90% agreed to participate. Eligible families included always married couples whose two eldest children were no more than four years apart in age. Participating families were primarily middle-class and working-class and resided in rural areas, towns, and small cities in a northeastern state. Most (97%) were European American (3% were Asian American or Latino). Although

the sample is not representative of U.S. families, it is generally representative of the racial background of families from the region of the state where the data were collected (McHale et al., 2001).

Sample One

Nine families had dropped out of the study before phase six, leaving 194 families in the Time 1 sample for this part of the study. A series of *t*-tests revealed no differences in participation as a function of family size and income, parents' age or education, or parent–youth relationship quality at Time 1. At Time 1, older siblings ($n = 194$, 99 girls) had a mean age of 16.47 years ($SD = .80$), and younger siblings ($n = 194$, 97 girls) had a mean age of 13.89 years ($SD = 1.16$). A total of six families withdrew between Time 1 and Time 2 or did not participate at Time 2 because the older sibling aged out, leaving a sample size of 190. At Time 2, these older siblings ($n = 184$, 96 girls) had a mean age of 18.38 years ($SD = .78$), and younger siblings ($n = 184$, 94 girls) had a mean age of 15.79 years ($SD = 1.14$).

Romantic relationships are typically formed during mid-to-late adolescence, with the majority of young adolescents remaining romantically unattached. For this reason, younger siblings in this sample were not asked about romantic involvement until a later phase of the research, and thus are not the focus of our analyses here. Given research documenting family and romantic relationship differences between heterosexual youth and lesbian, gay, and bisexual youth (e.g., Patterson & D'Augelli, 1994), six adolescents were dropped from these analyses because they reported involvement in same-gender

romantic relationships. This sample of youth involved in same-gender relationships was too small to analyze separately.

Sample Two

The data used in our analyses of romantic relationship qualities was drawn from the subset of older siblings that reported involvement in romantic relationships. Of the 190 older siblings in the analytic sample at Time 2, 128 (66 females, 62 males) reported involvement in romantic relationships either currently or in the past year, and provided data about qualities of their longest lasting, most recent romantic relationships. Therefore, although analyses of romantic relationship formation (Question 1) include all participating heterosexual older siblings, analyses of links between sibling relationship qualities and romantic relationship characteristics are limited to the 128 older siblings who reported being involved in a heterosexual romantic relationship for at least a month during the previous year.

Procedure

Individual home interviews were conducted with adolescents and parents, during which parents reported on family background information and their parent-child relationships and siblings reported on their personal qualities and relationship experiences with family members and peers. At each home interview, human subjects procedures were reviewed and the families were paid an honorarium for their participation.

To obtain information about sibling experiences, both participating siblings were asked to report on a number of different sibling relationship dimensions at Time 1. To examine whether sibling relationships predicted romantic relationship involvement at Time 2, we asked older siblings to report on their perceived romantic competence, as well as whether they were involved in a heterosexual romantic relationship that had lasted at least one month either currently or within the past year. If they were, they reported on romantic relationship qualities using romantic involvement measures.

Measures

Sibling Experiences

Sibling intimacy was assessed using an 8-item measure developed by Blyth, Hill, & Thiel (1982). Items for this measure focused on the respondent's experience of intimacy in the relationship, taking into account their own behavior (e.g. "How much do you share your inner feelings or secrets with your brother/sister?") and the behavior of their sibling (e.g. "How much does your brother/sister accept you no matter what you do?"). This measure had a response scale ranging from 1 (not at all) to 5 (very much). Cronbach's alpha for this measure was .83. Sibling hostility/conflict was assessed using an eight-item scale developed by Stocker and McHale (1992) to assess the respondents' hostility toward their sibling. Items for this measure (e.g., "How often do you try to hurt your brother/sister by pushing, punching or hitting him/her?") had a response scale ranging from 1 (not at all) to 5 (very much). Cronbach's alpha for this measure was .72.

Also measured was adolescents' perceived degree of control in the sibling relationship. Perceived control was measured using a nine-item scale developed by Stets (1993). Items for this measure (e.g., "In our relationship, I am the boss.") had a response scale ranging from 1 (never) to 5 (very often). Cronbach's alpha for this measure was .75.

Adolescent Romantic Experiences

Adolescents' perceived romantic competence was measured with a five-item subscale designed by Harter (1982). Items for this measure had adolescents read two statements and select which teenager sounded the most like them (e.g., "Some teenagers feel that they would be fun and interesting on a date BUT other teenagers wonder about how fun and interesting they would be on a date"). They were then asked to indicate whether they felt this statement was "really true" or "somewhat true" of them. Items had a response scale ranging from 1 to 4, with a score of one indicating low perceived competency and a score of 4 indicating high perceived competency. Cronbach's alpha for this measure was .81. Adolescents' romantic intimacy was measured with a seven-item subscale adapted from an intimacy measure designed by Blyth et al. (1982). One item from the original 8-item scale ("How much do you want to be like him/her?") was eliminated for lack of relevance to the romantic relationship. Items for this measure (e.g., "How much do/did you share your inner feelings or secrets with your partner?") had a response scale ranging from 1 (Not at all) to 5 (Very much). Cronbach's alpha for this measure was .85. Perceived romantic power was measured with a six-item subscale derived from Rusbult et al.'s (1998) Investment Model Scale, and scales of power

developed by Felmlee (1994) and Sprecher (1985). Subscale items (e.g., “In general, which of you has/had more power in your relationship?”) had a response scale ranging from 1 (me) to 9 (my partner), with the midpoint (5) representing an egalitarian relationship. Items asked about relative investment, commitment, and relational power. Cronbach’s alpha for this measure was .79.

Expressivity

A self-reported measure of adolescents’ expressivity was included as a way to control for variation in adolescents’ general personality differences and variations in overall interpersonal demeanor, as well as self-report and social desirability bias.

Expressivity was measured with a six-item subscale from the Antill Trait Questionnaire (Antill et al., 1993). Subscale items (e.g., Courteous: This is the sort of person who has good manners and is polite to other people. Are you like that?) described a personality trait and asked adolescents how well each statement describes them on a scale ranging from 1 (Almost never) to 5 (Almost always). Cronbach’s alpha for this measure was .75.

Chapter 3

Results

The results are organized around the two study goals: (1) to examine whether sibling experiences were linked to romantic relationship formation or perceived romantic competence and (2) to examine the links between sibling experiences and romantic relationship quality.

Romantic Relationship Formation

To address our first goal, we investigated whether adolescents from same-gender sibling pairs were less likely to form romantic relationships in late adolescence using a chi-squared analysis. We found that the percentage of adolescents in romantic relationships did not differ according to whether the adolescent in question was from a mixed- or same-gender sibling pair, $X^2(1, N=179) = 0.69$. Additional *t*-tests showed that adolescents in heterosexual romantic relationships at Time 2 did not differ from adolescents who were not in heterosexual romantic relationships on the basis of gender, $X^2(1, N=179) = 0.94$, age, $t(177) = -1.47$, or parents' reported income, $t(150) = -0.45$.

Romantic Competence

A two-way Analysis of Variance (ANOVA), performed to assess whether sibling dyad gender constellation and adolescent gender predicted adolescents' romantic competence, yielded no significant main effects for either sibling dyad gender

constellation, $F(1, 180) = 1.47$, NS, or adolescents' gender, $F(1, 180) = 3.07$, $p = .08$, though boys ($M = 2.75$, $SD = .58$) tended to report higher levels of perceived romantic competence than girls ($M = 2.60$, $SD = .63$). However, the interaction effect was significant, $F(1, 180) = 4.85$, $p = .03$. A Tukey follow up indicated that girls in sister-sister pairs ($M = 2.44$, $SD = .58$) were significantly lower in their perceptions of their romantic competence than were boys in brother-brother pairs ($M = 2.80$, $SD = .62$), with adolescents from mixed gender (girl-boy and boy-girl) dyads falling in between and differing from neither.

Romantic Relationship Experiences

To address our second goal, analyses were conducted with the data from those participants who reported involvement in a heterosexual romantic relationship for at least a month during the past year. To assess the impact of sibling experiences (conflict, intimacy, and control) at Time 1 on romantic relationship qualities (intimacy and power) at Time 2, a series of regression analyses were carried out. Each of the six regression models included both sibling dyad gender constellation and adolescent gender as predictors. In addition to these variables, adolescent expressivity was included as a control to capture personality variation and positive self-report bias. All potential two- and three-way interactions were examined, and those that did not reach significance were dropped from the models to avoid inflation of the error term (Aiken & West, 1991).

Preliminary descriptive analyses (Table 1) revealed that adolescents described their romantic relationships as being egalitarian in nature and high in intimacy, and that reports of romantic power and romantic intimacy were uncorrelated ($r = .05$)

Implications of Sibling Intimacy for Romantic Intimacy

As shown in Table 2, the overall sibling intimacy model was significant and sibling dyad gender constellation and adolescent gender were significant predictors within the model. In addition, adolescents' expressivity was a trend-level predictor in the model. The effect for sibling intimacy, however, was non-significant, and there were no significant interactions.

Implications of Sibling Intimacy for Romantic Power

As shown in Table 2, in the case of romantic power, the sibling intimacy model was significant, with sibling intimacy serving as a significant predictor. Adolescents' expressivity was again a trend-level predictor in the model, and no significant interactions emerged.

Implications of Sibling Conflict for Romantic Intimacy

As seen in Table 3, the sibling conflict model was significant in the case of romantic intimacy, with dyad gender constellation and adolescents' gender serving as significant predictors of later romantic intimacy. Sibling conflict was also a significant

predictor of romantic intimacy, and a significant interaction emerged in the model between gender and conflict. As Figure 1 shows, the negative relation between sibling conflict and romantic intimacy was significant for adolescent girls, but non-significant for adolescent boys.

Implications of Sibling Conflict for Romantic Power

As seen in Table 3, the sibling conflict model was not significant, and expressivity was the only significant predictor within the model.

Implications of Sibling Control for Romantic Intimacy

As shown in Table 4, the sibling control model was significant, with dyad gender constellation and adolescents' gender serving as significant predictors of later romantic intimacy. However, sibling control was not a significant predictor in this model.

Implications of Sibling Control for Romantic Power

As shown in Table 4, the sibling control model was significant, with the adolescents' reports of sibling control serving as a significant predictor of their later romantic power. A sibling dyad gender constellation x sibling control interaction also emerged for romantic power. As Figure 2 shows, the positive relation between sibling control and romantic power was significant for adolescents from mixed-gender sibling pairs, but non-significant for adolescents from same-gender sibling pairs.

Chapter 4

Discussion

Implications of Sibling Experiences for Romantic Relationship Qualities

This research moved beyond the existing literature on sibling influences by examining the ways in which sibling relationship experiences predicted later romantic relationship experiences. Our goals were to: (1) examine the links implications of sibling dyad gender constellation for romantic relationship formation and perceived romantic competence, and (2) to test whether sibling relationship characteristics (gender constellation as well as intimacy, conflict, and control) were linked to romantic relationship qualities in later adolescence and explore with gender moderated these associations. Using a longitudinal dataset, we found evidence that the experiences and skills gained from sibling relationships can have a variety of implications for future romantic relationships.

That positive sibling experiences may enhance later relationship skills was supported by our finding that adolescents who reported higher levels of sibling intimacy were more likely to report higher levels of romantic power. This finding suggests that positive sibling relationships may result in enhanced social skills and confidence that place adolescents in an advantageous position in later romantic relationships. This connection lends support to an understanding of sibling and romantic relationships as

congruent, rather than complementary, as assets in one relationship predict assets in the other. Attachment theory is also reflected in our results, by demonstrating how attachments formed early in life continue to have ramifications well beyond early childhood and the immediate family.

Gender Constellation and Adolescent Gender.

Contrary to our hypothesis, adolescents from mixed-gender sibling pairs were no more likely to have formed romantic relationships at Time 2 than were adolescents from same-gender sibling pairs. Nor could differences be detected for a number of other factors, including adolescent age, adolescent gender, or family income. We speculate that given the normative tendency to form romantic relationships in late adolescence to accomplish the developmental task of intimacy, romantic relationship involvement overrides potential influences of sibling relationship experiences—as well as other family characteristics.

Supporting our prediction that siblings from mixed-gender sibling dyads would benefit from social exposure to an opposite-gender peer, however, we found that adolescents from mixed-gender sibling pairs reported higher levels of romantic intimacy. This finding is in line with social learning theory, as well as previous work on the negative impact of gender segregation on mixed-gender interactions in adolescence (Maccoby, 1990). This finding also supports the perception of sibling and romantic relationships as congruent, rather than complementary, in nature (Updegraff, 2002). Also supporting this perception is our finding that sister-sister pairs are at a disadvantage

compared to other sibling dyad gender constellations when it comes to self-perceptions of romantic competence.

We also examined adolescents' perceived romantic competence, predicting that adolescents from same-gender sibling pairs would score lower than adolescents from mixed-gender sibling pairs. This was supported by our finding that adolescent girls with a sister had the lowest romantic competence scores. However, the analyses also showed that boy-boy sibling pairs had the highest scores—a finding that contradicts typical patterns of gender differences in relational skills (Giordano et al., 2006), but is in line with boys' tendency to score highly on measures of self-esteem and self-efficacy (Gecas & Longmore, 2003). Further research in this area is needed to confirm this finding, and the use of romantic competence measures that do not rely on self-perception would be especially valuable—particularly as gender is increasingly being thought of as a moderator of self-disclosure reliability (Langer, 2010).

Exploration of Gender Effects.

Conflict and Adolescent Gender.

Adolescent gender was found to moderate the link between sibling conflict and romantic intimacy. In the case of girls, there was a negative correlation between sibling conflict and romantic intimacy, but this relation was not significant for boys. One explanation for this finding is that high-conflict sibling relationships hinder the development of the social and relational skills needed to form intimate romantic

attachments later in life. That the effect is only significant for girls may mean that their tendency to be more attuned to social relationships makes them especially vulnerable to the effects of conflict.

Control and Sibling Dyad Gender Constellation.

The significant interaction between sibling control and sibling gender constellation in predicting romantic power illustrates the importance of gender constellation in sibling research. We found that for adolescents from mixed-gender sibling pairs, there was a significant positive relation between the amount of sibling control they reported and their reported degree of power in their romantic relationship. For adolescents from same sex sibling pairs, however, this effect was non-significant. These findings suggest that the skills and behaviors that help adolescents successfully maintain control in a sibling relationship may also be at work in heterosexual romantic contexts. Those adolescents who are familiar using these techniques in a mixed-gender relationship may find themselves in an advantageous position in romantic relationships, compared to their peers from same-gender sibling pairs.

Implications of Research.

Contributions.

This study took a step forward in linking two literatures—sibling influences and romantic relationships. Given the number of parallels between these two often-

researched relationships, it seems likely that research will continue to uncover connections and areas of overlap between these two literatures. Much of the existing work on sibling influence is limited by the use of cross-sectional data, which do not allow for causal or directional inferences. This research addressed this limitation by using data from a longitudinal research study, allowing the participants' sibling and romantic relationships to be assessed at distinct time points, rather than relying on cross-sectional or participant-recall techniques.

Limitations.

Although this research demonstrates that links exist between sibling experiences and romantic experiences in later adolescence, it remains limited in a number of ways. Future research in this area should seek to obtain information from a number of different reporters, to minimize the use of correlated self-reports. Input from the romantic partners would be particularly useful, as they may perceive the relationship in a different light. This would allow for a more complete understanding of romantic relationship dynamics. It is also important to note that this study examined firstborn siblings' reports of a late-adolescent romantic relationship only. The processes we have examined could conceivably operate differently for younger siblings, or at different developmental time points throughout the lifespan.

Future Work.

Further research in this area is needed in order to more fully grasp the extent and implications of the connections that exist between sibling experiences and individual social development. Future research should also seek to examine more direct parallels between sibling and romantic relationships—comparing identical or directly complementary constructs across context, allowing us to directly compare the same relationship quality in both sibling and romantic relationships. It would also be beneficial to examine these parallels across a longer timeframe, as the importance and relevance of sibling relationship experiences may shift over time. It is also likely that romantic relationships formed later in life have different meaning and implications than those formed in adolescence. Including a larger sample size would allow for more statistical power, as could the inclusion of a more diverse sample--both younger and older siblings, a wider range of ages, geographic locations, multiple ethnic groups, and a range of family income levels.

Applications.

The implications of these findings extend into family systems and social learning theories, illustrating previously overlooked links between familial and extra-familial relationships. Better understanding these links would benefit work in prevention and intervention, as family and sibling intervention programs could be seeking to influence outcomes in romantic relationships, as well as familial ones. Family, personal, and relational therapy would also be impacted by future research in this area, as a fuller

understanding of the ways in which sibling relationships impact social development and relationship skills could help address difficulties in these areas later in life.

In sum, the results of this study demonstrate the potential of sibling experiences to predict romantic relationship dynamics and the development of social processes across contexts and through the lifespan.

Appendix
Tables and Figures

Table 1

Means (SDs) and Correlations between Study Variables

Variables	<i>M (SD)</i>	1	2	3	4	5
1. Sibling Conflict	2.59 (.60)	–				
2. Sibling Intimacy	2.90 (.63)	-0.26**	–			
3. Sibling Control	2.28 (.60)	.20*	.11	–		
4. Romantic Intimacy	4.16 (.62)	-0.14	.11	.04	–	
5. Romantic Power	5.10 (1.09)	-0.12	.24**	.11	.05	–

Note. $N = 125$ for variables 1, 2, and 3. $N = 127$ for variable 4 and 128 for variable 5.

Table 2

Coefficients (and SEs) from Sibling Intimacy at age 16 predicting Romantic Intimacy and Power at age 18 (N = 123,124)

Variable	Romantic Intimacy		Romantic Power	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Gender Constellation ¹	-0.31**	0.10	0.07	0.19
Adolescent Gender ²	-0.28**	0.11	0.28	0.21
Expressivity	0.03†	0.02	0.05†	0.03
Sibling Intimacy ³	0.02	0.08	-0.39*	0.16
<i>R</i> ²		.18		.09
<i>F</i>		6.63***		2.89*

†*p* < .1. **p* < .05. ***p* ≤ .01. ****p* ≤ .001.

Note. Models predicting romantic intimacy have *n*=123, and those predicting romantic power have *n*=124.

1. Gender constellation describes the interaction between sibling gender and birth order, such that 1=girl/girl, 2=girl/boy, 3=boy/girl, and 4=boy/boy.
2. Adolescent gender describes the gender of the focal (firstborn) sibling.
3. As reported by the focal (firstborn) sibling.

Table 3

Coefficients (and SEs) from Sibling Conflict at age 16 predicting Romantic Intimacy and Power at age 18 (N = 123,124)

Variable	Romantic Intimacy		Romantic Power	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Gender Constellation ¹	-0.32**	0.10	0.10	0.20
Adolescent Gender ²	-0.29**	0.10	0.19	0.21
Expressivity	0.02	0.02	0.06*	0.03
Sibling Conflict ³	-0.79**	0.29	-0.13	0.55
Conflict*Adolescent Gender	0.47**	0.17	-0.001	0.34
<i>R</i> ²		.23		.05
<i>F</i>		7.13***		1.17

*†p < .1. *p < .05. **p ≤ .01. ***p ≤ .001.*

Note. Models predicting romantic intimacy have n=123, and those predicting romantic power have n=124.

1. *Gender constellation describes the interaction between sibling gender and birth order, such that 1=girl/girl, 2=girl/boy, 3=boy/girl, and 4=boy/boy.*
2. *Adolescent gender describes the gender of the focal (firstborn) sibling.*
3. *As reported by the focal (firstborn) sibling.*

Table 4

Coefficients (and SEs) from Sibling Control at age 16 predicting Romantic Intimacy and Power at age 18 (N = 123,124)

Variable	Romantic Intimacy		Romantic Power	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Gender Constellation ¹	-0.32**	0.10	0.17	0.19
Adolescent Gender ²	-0.27*	0.11	0.14	0.21
Expressivity	0.03*	0.02	0.05†	0.02
Sibling Control ³	-0.13	0.13	0.63**	0.24
Control*Gender Constellation	0.15	0.18	-0.80**	0.33
<i>R</i> ²		.19		.10
<i>F</i>		5.05***		2.61*

† $p < .1$. * $p < .05$. ** $p \leq .01$. *** $p \leq .001$.

Note. Models predicting romantic intimacy have $n=123$, and those predicting romantic power have $n=124$.

1. *Gender constellation describes the interaction between sibling gender and birth order, such that 1=girl/girl, 2=girl/boy, 3=boy/girl, and 4=boy/boy.*
2. *Adolescent gender describes the gender of the focal (firstborn) sibling.*
3. *As reported by the focal (firstborn) sibling.*

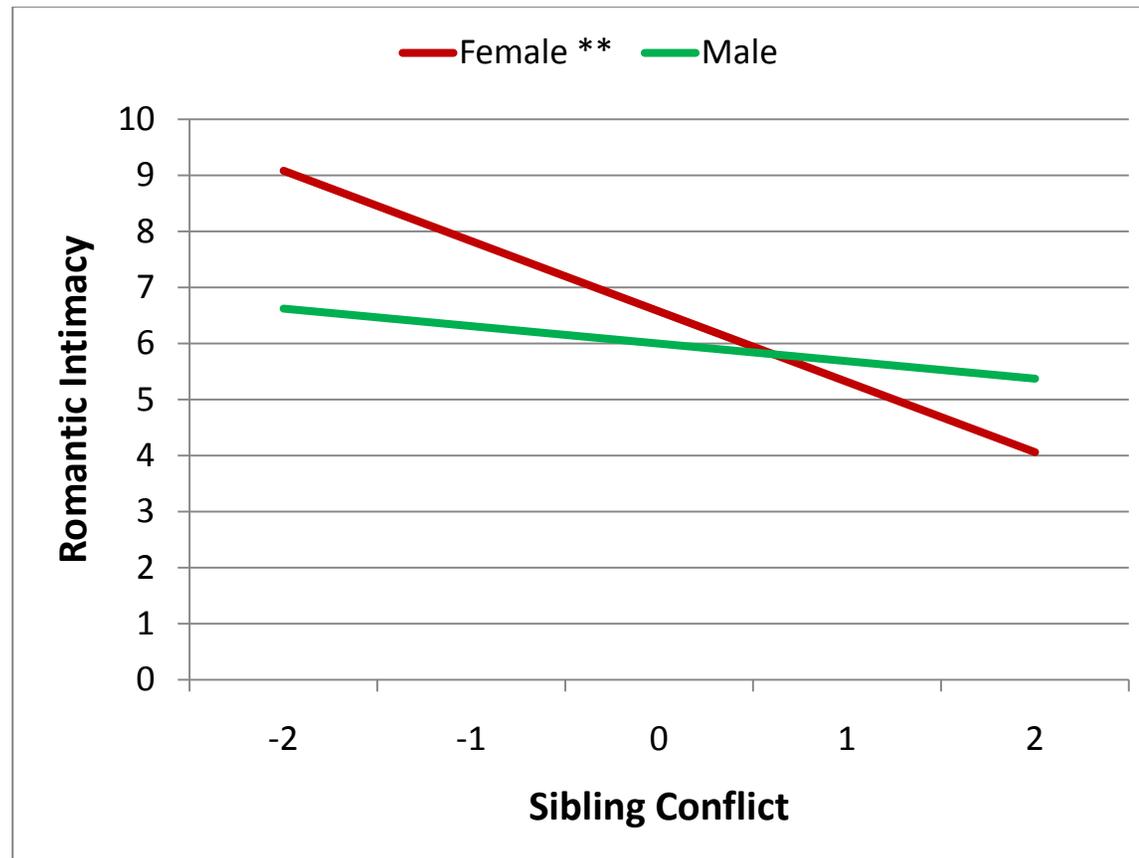


Figure 1. Interaction between Sibling Conflict and Adolescent Gender in predicting Romantic Intimacy

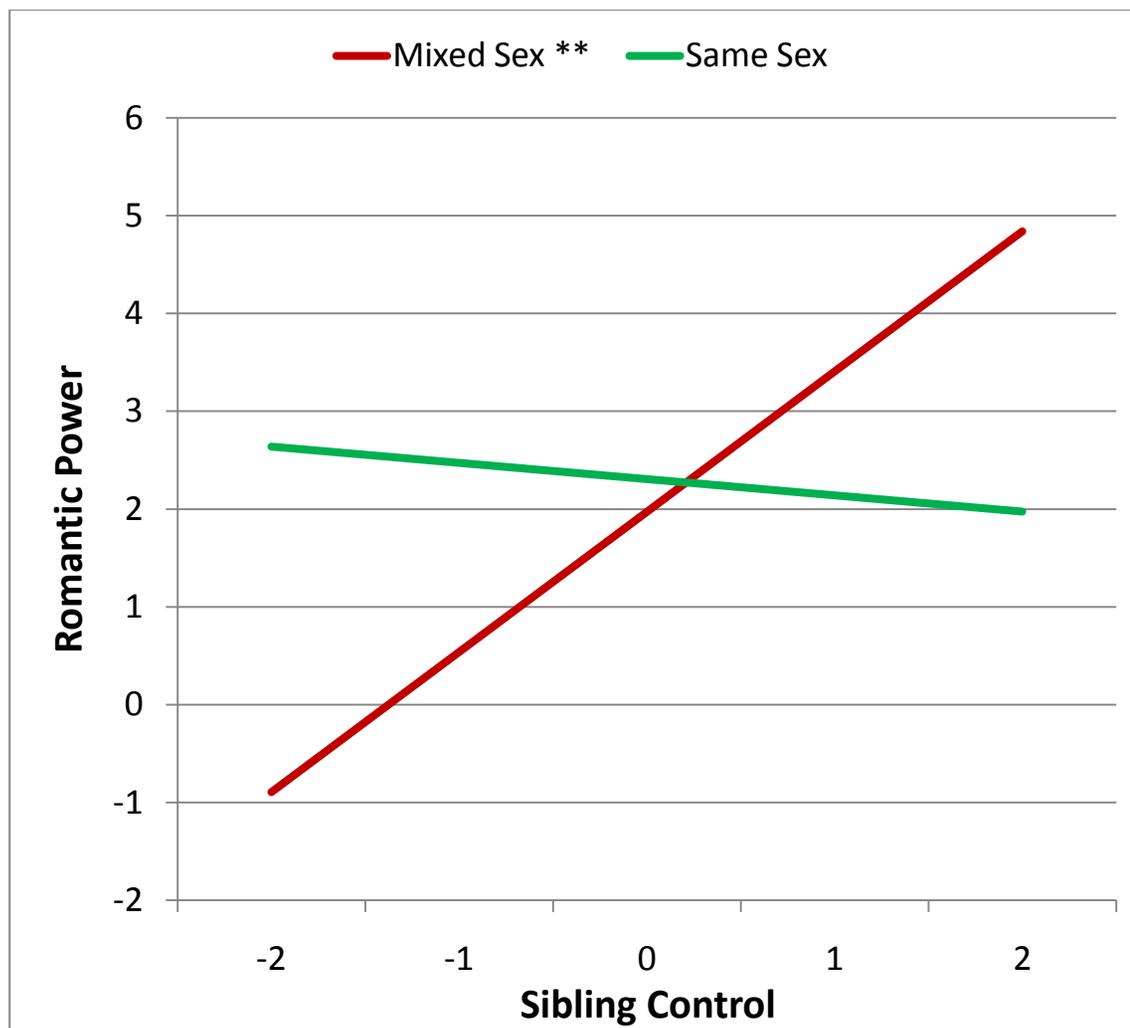


Figure 2. Interaction between Sibling Control and Gender Constellation in predicting Romantic Power

References

- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression - testing and interpreting interactions* Sage.
- Antill, J. K., Russell, G., Goodnow, J. J., & Cotton, S. (1993). Measures of children's sex typing in middle childhood. *Australian Journal of Psychology, 45*(1), 25-33.
- Bank, L., Patterson, G. R., & Reid, J. B. (1996). In Brody G. H. (Ed.), *Negative sibling interaction patterns as predictors of later adjustment problems in adolescent and young adult males*. Westport, CT, US: Ablex Publishing.
- Baskett, L. M., & Johnson, S. M. (1982). The young child's interactions with parents versus siblings: A behavioral analysis. *Child Development, 53*(3), 643-650.
- Bedford, V. H., Volling, B. L., & Avioli, P. S. (2000). Positive consequences of sibling conflict in childhood and adulthood. *The International Journal of Aging & Human Development, 51*(1), 53-69.
- Blyth, D. A., Hill, J. P., & Thiel, K. S. (1982). Early adolescents' significant others: Grade and gender differences in perceived relationships with familial and nonfamilial adults and young people. *Journal of Youth and Adolescence, 11*(6), 425-450.
- Bouchey, H. A., Shoulberg, E. K., Jodl, K. M., & Eccles, J. S. (2010). Longitudinal links between older sibling features and younger siblings' academic adjustment during early adolescence. *Journal of Educational Psychology, 102*(1), 197-211.
- Brook, J. S., Whiteman, M., Gordon, A. S., & Brook, D. W. (1990). The role of older brothers in younger brothers' drug use viewed in the context of parent and peer

- influences. *The Journal of Genetic Psychology: Research and Theory on Human Development*, 151(1), 59-75.
- Buhrmester, D., & Furman, W. (1987). The development of companionship and intimacy. *Child Development*, 58(4), 1101-1113.
- Collins, W. A., & Sroufe, L. A. (1999). *Capacity for intimate relationships: A developmental construction*. New York, NY, US: Cambridge University Press.
- Collins, W. A., Welsh, D. P., & Furman, W. (2009). Adolescent romantic relationships. *Annual Review of Psychology*, 60, 631-652.
- Dunn, J. (1983). Sibling relationships in early childhood. *Child Development*, 54(4), 787-811.
- Felmlee, D. H. (1994). Who's on top? power in romantic relationships. *Sex Roles*, 31(5-6), 275-295.
- Furman, W., & Buhrmester, D. (1985). Children's perceptions of the qualities of sibling relationships. *Child Development*, 56(2), 448-461.
- Furman, W., & Collins, W. A. (2008). Adolescent romantic relationships and experiences. In *Handbook of Peer Interactions, Relationships, and Groups*, ed. KH Rubin, W Bukowski, B Laursen. New York: Guilford.
- Gecas, V., & Longmore, M. A. (2003). Self-esteem. In J. J. Ponzetti Jr. (Ed.), *international encyclopedia of marriage and family relationships, second edition* (pp. 1419-1424). New York, NY: Macmillan Reference, USA.
- Giordano, P. C., Longmore, M. A., & Manning, W. D. (2006). Gender and the meanings of adolescent romantic relationships: A focus on boys. *American Sociological Review*, 71, 260-287.

- Harter, S. (1982). The perceived competence scale for children. *Child Development*, 53(1), 87-97.
- Hernandez, D. J. (1997). Child development and the social demography of childhood. *Child Development*, 68(1), 149-169.
- Langer, S. L. (2010). Gender differences in experimental disclosure: Evidence, theoretical explanations, and avenues for future research. *Sex Roles*, 63(3-4), 178-183.
- Larson, D. L., Spreitzer, E. A., & Snyder, E. E. (1976). Social factors in the frequency of romantic involvement among adolescents. *Adolescence*, 11(41), 7-12.
- Larson, R. W., & Verma, S. (1999). How children and adolescents spend time across the world: Work, play, and developmental opportunities. *Psychological Bulletin*, 125(6), 701-736.
- Laursen, B. (1995). Conflict and social interaction in adolescent relationships. *Journal of Research on Adolescence*, 5(1), 55-70.
- Laursen, B., Finkelstein, B. D., & Townsend Betts, N. (2001). A developmental meta-analysis of peer conflict resolution. *Developmental Review*, 21(4), 423-449.
- Laursen, B., & Williams, V. A. (1997). *Perceptions of interdependence and closeness in family and peer relationships among adolescents with and without romantic partners*. San Francisco, CA, US: Jossey-Bass.
- Kim, J., McHale, S. M., Crouter, A. C., & Osgood, D. W. (2007). Longitudinal linkages between sibling relationships and adjustment from middle childhood through adolescence. *Developmental Psychology*, 43(4), 960-973.

- Kim, J., McHale, S. M., Osgood, D. W., & Crouter, A. C. (2006). Longitudinal course and family correlates of sibling relationships from childhood through adolescence. *Child Development, 77*(6), 1746-1761.
- Kitzmann, K. M., Cohen, R., & Lockwood, R. L. (2002). Are only children missing out? comparison of the peer-related social competence of only children and siblings. *Journal of Social and Personal Relationships, 19*(3), 299-316.
- Lewis, M. (2005). The child and its family: The social network model. *Human Development, 48*(1-2), 8-27.
- Lockwood, R. L., Kitzmann, K. M., & Cohen, R. (2001). The impact of sibling warmth and conflict on children's social competence with peers. *Child Study Journal, 31*(1), 47-69.
- Maccoby, E. E. (1990). Gender and relationships: A developmental account. *American Psychologist, 45*(4), 513-520.
- McGue, M., Sharma, A., & Benson, P. (1996). The effect of common rearing on adolescent adjustment: Evidence from a U.S. adoption cohort. *Developmental Psychology, 32*(4), 604-613.
- McGuire, S., Manke, B., Eftekhari, A., & Dunn, J. (2000). Children's perceptions of sibling conflict during middle childhood: Issues and sibling (dis)similarity. *Social Development, 9*(2), 173-190.
- McHale, S. M., & Crouter, A. C. (1996). The family contexts of children's sibling relationships. *Advances in Applied Developmental Psychology, 10*, 173-195.
- McHale, S. M., Kim, J., & Whiteman, S. D. (2006). *Sibling relationships in childhood and adolescence*. Hove, England: Psychology Press/Taylor & Francis (UK).

- McHale, S. M., Updegraff, K. A., Helms-Erikson, H., & Crouter, A. C. (2001). Sibling influences on gender development in middle childhood and early adolescence: A longitudinal study. *Developmental Psychology, 37*(1), 115-125.
- Patterson, G. R. (1986). Performance models for antisocial boys. *American Psychologist, 41*(4), 432-444.
- Patterson, C. J., & D'Augelli, A. R. (Eds.). (1998). Lesbian, gay, and bisexual identities in families. New York: Oxford University Press.
- Perlman, M., & Ross, H. S. (1997). Who's the boss? parents' failed attempts to influence the outcomes of conflicts between their children. *Journal of Social and Personal Relationships, 14*(4), 463-463-480.
- Richards, M. H., Crowe, P. A., Larson, R., & Swarr, A. (1998). Developmental patterns and gender differences in the experience of peer companionship during adolescence. *Child Development, 69*(1), 154-163.
- Rinaldi, C., & Howe, N. (1998). Siblings' reports of conflict and the quality of their relationships. *Merrill-Palmer Quarterly: Journal of Developmental Psychology, 44*(3), 404-422.
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships, 5*(4), 357-391.
- Sadeh, N., Javdani, S., Finy, M. S., & Verona, E. (2011). Gender differences in emotional risk for self- and other-directed violence among externalizing adults. *Journal of Consulting and Clinical Psychology, 79*(1), 106-117.

- Scharf, M., & Mayseless, O. (2001). The capacity for romantic intimacy: Exploring the contribution of best friend and marital and parental relationships. *Journal of Adolescence, 24*(3), 379-399.
- Seiffge-Krenke, I., & Connolly, J. (2010). Adolescent romantic relationships across the globe: Involvement, conflict management, and linkages to parents and peer relationships. *International Journal of Behavioral Development, 34*(2), 97-97.
- Seiffge-Krenke, I., & Lang, J. (2002, April). Forming and maintaining romantic relations from early adolescence to young adulthood: Evidence of a developmental sequence. In S. Shulman & I. Seiffge-Krenke (co-chairs), *Antecedents of the quality and stability of adolescent romantic relationships*. Symposium at the conference of the Society for Research on Adolescence, New Orleans, LA.
- Sherman, A., Lansford, J., & Volling, B. (2006). Sibling relationships and best friendships in young adulthood: Warmth, conflict, and well-being. *Personal Relationships, 13*(2), 151-151-165.
- Shantz, C. U., & Hobart, C. J. (1989). In Berndt T. J., Ladd G. W.(Eds.), *Social conflict and development: Peers and siblings*. Oxford, England: John Wiley & Sons.
- Shulman, S., Tuval-Mashiach, R., Levrant, E., & Anbar, S. (2006). Conflict resolution patterns and longevity of adolescent romantic couples: A 2-year follow-up study. *Journal of Adolescence, 29*(4), 575-588.
- Slomkowski, C., Conger, K. J., Rende, R., Heylen, E., Little, W. M., Shebloski, B. (2009). Sibling contagion for drinking in adolescence: A micro process framework. *European Journal of Developmental Science, 3*(2), 161-174.

- Snyder, J., Bank, L., & Burraston, B. (2005). The consequences of antisocial behavior in older male siblings for younger brothers and sisters. *Journal of Family Psychology, 19*(4), 643-653.
- Sprecher, S. (1985). Sex differences in bases of power in dating relationships. *Sex Roles, 12*(3-4), 449-462.
- Stets, J. E. (1993). Control in dating relationships. *Journal of Marriage & the Family, 55*(3), 673-685.
- Stocker, C. M. (2000). Sibling relationships. In A. E. Kazdin (Ed.), *Encyclopedia of psychology: Vol. 7* (pp. 274-279). Washington, DC: Oxford University Press.
- Stocker, C. M., Burwell, R. A., & Briggs, M. L. (2002). Sibling conflict in middle childhood predicts children's adjustment in early adolescence. *Journal of Family Psychology, 16*(1), 50-57.
- Stocker, C. M., & McHale, S. M. (1992). The nature and family correlates of preadolescents' perceptions of their sibling relationships. *Journal of Social and Personal Relationships, 9*(2), 179-195.
- Updegraff, K. A., McHale, S. M., & Crouter, A. C. (2002). Adolescents' sibling relationship and friendship experiences: Developmental patterns and relationship linkages. *Social Development, 11*(2), 182-204.
- Weisner, T. S., & Gallimore, R. (1977). My brother's keeper: Child and sibling caretaking. *Current Anthropology, 18*(2), 169-190.