University of Alberta

Romantic Relationship Patterns and Quality
Across the First Year of University

by

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ABSTRACT

This study explored and identified six romantic relationship patterns (long-term relationship, intermittent relationships, emergent relationship, breakup, primarily sexual relationships, and single) across the first year of university in 186 Canadian students assessed at four points. Associations of these relationship patterns with romantic relationship quality (intimacy, affection, and conflict) and adjustment to university (academic and social) were also investigated. Results were that students engaged in a long-term relationship in the first year of university reported higher levels of romantic intimacy, affection, and conflict than those in other relationship patterns at the end of their first year. Relationship duration demonstrated a curvilinear association with intimacy and affection. Furthermore, latent growth modeling revealed that students who engaged in romantic relationships in the first year of university showed better social adjustment at the beginning of the first year than those who were single. Implications of the findings are discussed.

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Introduction and Literature Review

The omnipresence of the theme of love and romance in today's pop culture reflects their strong appeal to young people. This phenomenon is not surprising since adolescents and young adults are in the stage of exploring and forming intimate relationships. As Erikson (1968) postulates, the achievement of intimacy is a key developmental task of the transition to adulthood. Successful formation of romantic relationships prepares young people for important role transitions associated with adult life, including marriage and parenthood. In recent decades, however, there has been a trend toward a prolonged transition to adulthood characterized by deferral of adult responsibilities (e.g., marriage, parenthood, and career establishment) well into the thirties (Arnett, 2000, 2004). This phenomenon is most prominent among university students as it takes them longer to complete formal education. Thus, questions emerge with regard to the possible implication of the prolonged transition to adulthood for the achievement of intimate relationships in university students, the focus of the current study.

Emerging Adulthood

In 2000 Arnett proposed a theoretical framework for studying the period that connects adolescence with adulthood, which he called *emerging adulthood*. Emerging adulthood spans the late teens through the twenties. Arnett (2000, 2004) argued that emerging adults have grown out of adolescence but are yet to assume adult responsibilities. According to Arnett (2004), emerging adulthood is characterized by five main features – identity exploration, instability, self-focus, feeling in-between, and openness to possibilities. There are three important

developmental tasks in this period – obtaining higher education, starting a career, and forming mature romantic relationships (Arnett, 2004).

Prior to Arnett's conceptualization of emerging adulthood as an important developmental period, much effort was devoted to the study of romantic relationships during adolescence and adulthood with little focus on the period in between (Reifman, 2011). Arnett (2011) argues that the absence of a theoretical framework for research on this transitional period is a major reason for the paucity of research on romantic relationships during this time. As more developmental researchers started to adopt this theoretical framework, the number of published studies on the romantic relationships of young adults increased. However, past research on romantic relationships in adolescence and emerging adulthood has largely focused on dating violence as well as the role of sex in a relationship, research which tended to scrutinize the negative side of partnering experiences. As a normative developmental task, positive implications of romantic relationships are likely and should be investigated.

To better understand the development and impact of romantic relationships in emerging adulthood, some researchers highlighted goals to be achieved through the study of romantic relationships in emerging adulthood. One goal is to learn more about continuity and change in romantic relationship experiences in emerging adulthood in order to bridge findings on adolescence and adulthood that tend to be distinct from each other (Kan & Cares, 2006). Another goal is to study the association of romantic relationships with psychosocial phenomena that are characteristic of emerging adulthood (e.g. instability, self-focus, feeling in

between, and openness to possibilities; Arnett, 2004) along with the duration and quality of romantic relationships (Collins & van Dulmen, 2006).

The present study aims to add new knowledge that will contribute to both goals. In particular, the present study observes romantic relationship patterns among university students during their first year of study, increasing our understanding of romantic relationship development in emerging adulthood. In addition, the association between relationship patterns and relationship quality as well as university adjustment are investigated to broaden our understanding of romantic relationship experience and its association with other important developmental tasks in emerging adulthood.

Romantic Relationships in Emerging Adulthood

Dramatic change in the nature of youthful romantic relationships occurred in the past century to meet the changing social contexts of the era (Settersten & Ray, 2010). The feminist revolution and the subsequent challenge to the conventional concept of gender roles and gender division altered the traditional view that women were wives and mothers and men were there to provide them with economic support and a social role (e.g., such as wife). Dating gradually became an accepted form of romantic relationship in the 1920s (Arnett, 2011). In the past five years the average age of first marriage has gone up to the late twenties and early thirties for both women and men in North America (Amato, 2011; Stanley, Rhoades, & Fincham, 2011). According to Statistics Canada (2011), in 2008 the average age at first marriage was 31 years for Canadian men and 29 years for Canadian women. Arnett (2004) observed that today's young adults tend to

pursue romantic relationships in variety. Instead of settling down to marriage in their early twenties, young people now are more willing to try out different partners before making serious relationship commitments. Nevertheless, romantic relationships generally become more serious and intimate during the transition to adulthood compared with adolescence (Arnett, 2000).

Previous research suggests some differences between adolescents and young adults in the nature of romantic relationships. Romantic relationships in adolescence are more likely to serve recreational and status purposes (Roscoe, Diana, & Brooks, 1987). In contrast, young adult romance is a more mature relationship of trust, support, and stability (Shulman & Kipnis, 2001). Over the course of adolescence and into early adulthood, shared interests, mutual feelings, and compatibility between partners become more important whereas looks and appearance become less important in forming a romantic relationship (Furman & Winkles, 2012; Galotti, Kozberg, & Appleman, 1990).

Nevertheless, adolescent romantic relationships are important precursors of romantic relationships during the transition to adulthood. For example, Seiffge-Krenke (2003) reported that romantic relationship quality in late adolescence was predictive of bonded love in early adulthood. Young adults who are involved in romantic relationships at the end of high school are more likely to marry or cohabit in early adulthood (Raley, Crissey, & Muller, 2007). In addition, young men tend to link a current positive romantic relationship to a positive relationship in adolescence (Shulman & Kipnis, 2001).

Young adults approach romantic relationships in various ways. Not all young people develop a deep level of physical and emotional intimacy with their romantic partners. While some make commitments to their romantic relationships, others experiment with different partners. Recent research has identified several relationship styles among emerging adults. One increasingly common relationship style is *cohabitation*, in which unmarried romantic couples in stable relationships live together. There is an upward trend in the number of young couples who choose to cohabit prior to marriage, and the majority of young adults have cohabitation experiences at some point in their lives (Manning, Cohen, & Smock, 2011). Many young couples believe that living together is a good way to test a relationship before marriage and improves their chances for a successful marriage (Stanley, Rhoades, & Fincham, 2011). Even though marital union is still a valued option, increasingly more couples have chosen to share living arrangements and to have a child before they tie the knot (Sassler, 2010).

The second relationship style is *stayover* (Jamison & Ganong, 2010). Stayover is part-time cohabitation where unmarried couples in stable dating relationships have routine arrangements for staying overnight three or more times per week while retaining separate residences (Manning & Smock, 2005; Sassler, 2004). The third relationship style is *hooking up*, the casual sexual encounters between two people with no clear mutual expectation of further interactions or a committed relationship. The prevalence of hooking up ranges between 50-80% among young adults (Owen, Fincham, & Moore, 2011). The fourth relationship style is *friends with benefits* where sexual activity occurs in the context of

friendship (Owen & Fincham, 2011). Friends with benefits relationships provide both the emotional support of friendship and the physical intimacy, without the clear commitment of romantic relationships (Glenn & Marquardt, 2001; Sprecher & Regan, 2002). Another relationship style is *on-again/off-again relationships*. This less common relationship style is characterized by multiple breakups within one relationship (Dailey, Pfiester, Jin, Beck, & Clark, 2009).

These various relationship styles can be categorized into two broad patterns. The first pattern is the *long-term relationship*, which includes cohabitation and stayover, as well as those who are in stable and exclusive intimate relationships but do not cohabit either full-time or part-time. People in a *long-term relationship* stay with the same intimate partner over a long period of time and show loyalty and commitment to their romantic relationships. The second relationship pattern is *intermittent relationships*, which includes hooking up, friends with benefits, on-again/off-again relationships, and those who change romantic partners with high frequencies. People in *intermittent relationships* do not maintain stable romantic relationships, and they make no relationship commitment. These two relationship patterns are in line with the findings from a longitudinal study by Dhariwal and colleagues (2009). These researchers reported two general romantic styles in their Italian young adult sample: the consolidated romantic style, characterized by committed dyadic relationships, and the exploratory style, stressing trials with different partners. Nevertheless, there are some young people who may choose not to engage in romantic relationships at all and remain *single*.

Following from the literature on romantic relationship styles in emerging adults, the first research question of the present study asks: Is the course of romantic relationships in a six-month period during the first year of university characterized by the following three patterns? (1) the *long-term relationship* in which both partners remain in a committed relationship; (2) *intermittent relationships* in which there are frequent movements in and out of relationships with different partners; and (3) *singles* who are not involved in romantic relationships. In addition, other potential relationship patterns such as start of a new romantic relationship and breakup will be explored.

Romantic Relationship Patterns and Relationship Quality

Among young adults who are in romantic relationships, why do some become *long-term relationships* while others involve changing romantic partners (i.e., the *intermittent relationships*)? One possible explanation is that people in *long-term relationships* are more satisfied with their relationships. Indeed, research suggests that relationship satisfaction is associated with whether a person remains with his or her partner over time during emerging adulthood (Lehnart & Neyer, 2006). Some researchers also examined the association between relationship commitment and duration. There is a positive linkage between relationship commitment and positive views of and duration of romantic relationships (Weigel, Brown, & O'Riordan, 2010). Lemieux and Hale (2002) found that commitment was positively related to relationship duration such that as a relationship progressed over time, commitment increased. Of course, it is difficult to know whether satisfaction or commitment to the relationship precede, follow from, or

simply covary with relationship longevity. In addition, research suggests that the quality of relationships with parents, peers, and romantic partners in adolescence is predictive of romantic relationship quality during the transition to adulthood (Madsen & Collins, 2011; Seiffge-Krenke, 2003).

Intimacy, affection, and conflict are three integral components of romantic relationship quality. Intimacy is defined as the sense of being open and honest in talking with a partner about personal thoughts and feelings that are not usually expressed in other relationships (Marckey, Diemer, & O'Brien, 2000). Intimacy is found to be a key element of an ideal romantic relationship (Fletcher, Simpson, Thomas, & Giles, 1999) since people often look to their romantic partner to meet their intimacy needs (Schwebel, Moss, & Fine, 1999). Not only trustworthy and reliable, an intimate romantic partner is also perceived as warm and caring (Korobov & Thorne, 2006). Research shows that young adults with higher intimacy dating goals are more satisfied with their romantic relationships (Zimmer-Gembeck & Petherick, 2006). Intimacy and commitment grow over time as relationships continue (Graham, 2010).

Affection is another important aspect of a positive romantic relationship. Affection refers to feelings of appreciation, passion, or love, and the desire for reciprocated feelings (Solomon, 1997). Research shows that self disclosure of affection is positively associated with the stability of a romantic relationship (Sprecher, 1987). On the other hand, relationship conflict indicates problems in a romantic relationship when disagreement between the couple undermines the development of intimacy (Simon, Kobielski, & Martin, 2008). Young people who

trust their partner less perceive daily relationship-based conflict as a more negative experience (Campbell, Simpson, Boldry, & Rubin, 2010). Young adults often resolve such conflict through seeking compromise or downplaying disagreements (Furman & Winkles, 2012). Together, intimacy, affection, and conflict evaluate both the positive (intimacy, affection) and negative (conflict) aspects of a romantic relationship.

Little research has investigated the difference in romantic relationship quality for different longitudinal relationship patterns. Happiness research suggests that high quality romantic relationships are positively associated with happiness whereas conflict in romantic relationships is negatively associated with happiness among young adults (Demir, 2007; Demir, 2010). People who are happy with their relationships may become more committed and put more effort into maintaining their relationships. Moreover, young adults who experience the on-again/off-again type of romantic relationship are more likely to report negative relationship experiences, such as uncertainties and communication problems with the partner, and less likely to report positive experiences, such as love and understanding (Dailey et al., 2009). On the other hand, when young people enter their first long-term romantic relationship, their neuroticism decreases (Lehnart, Neyer, & Eccles, 2010).

In light of these findings, it is plausible to speculate that there should be differences between a *long-term relationship* and *intermittent relationships* in romantic relationship quality. Specifically, the second research question for the current study asks: Is a *long-term romantic relationship* characterized by more

positive qualities (higher levels of intimacy and affection) and are *intermittent or other relationships* characterized by more negative qualities (higher level of conflict) over a six-month period in emerging adulthood?

In addition, the association between romantic relationship patterns and relationship quality is investigated specifically in terms of months of relationship duration over the course of the first year of university. Essentially, a long-term romantic relationship is characterized by its lengthy persistent duration whereas intermittent relationships are a series of relationships occurring within a short time span. As such, similar to expectations for relationship quality differences in romantic relationship patterns (i.e., longer term vs. intermittent) university students in relationships with longer duration over the course of the first year of university should experience higher levels of intimacy and affection and lower levels of conflict than those in relationships for fewer months. Thus, a third research question asks: Is length of a romantic relationship associated with positive and negative relationship qualities?

Romantic Relationship Patterns and Adjustment to University

Attending postsecondary education such as university or college is an important reason for the prolonged transition to adulthood since postsecondary institutions provide a stage for extended search for identity and intimate relationships and delay the adoption of adult roles such as marriage and parenthood (Arnett, 1998). On the other hand, adjustment to university presents unique and substantial stressors to young adults. One study showed that university-bound high school seniors expected university to be a transformative

experience that would not only affect their identity development but also cause upheavals in their daily routines and changes in familial relationships and responsibilities (Holmstrom, Karp, & Gray, 2002). Baker and Siryk (1989) suggested that adjustment to university is multidimensional including social adjustment (i.e., the ability to deal with interpersonal and social demands of university) and academic adjustment (i.e., success at coping with educational demands characteristic of university context). The ability to adjust to university is related to the quality of social relationships. For example, Johnson and colleagues (2010) reported that young people from less expressive families that tended to avoid emotions had significantly more difficulty adjusting to university than their peers from more expressive families. Buote and colleagues (2007) found that the quality of newly formed friendships in university was positively related to adjustment to university. Also, dissatisfaction with social activities, worry about exam success, and accommodation problems are related to levels of stress, depression, and anxiety among undergraduate students (Uskun, Kisioglu, & Ozturk, 2008).

At the same time, many young adults start to live away from parents and learn to gain independence during their university years. This is a major challenge for young people, which requires tremendous effort to cope successfully. Larose and Boivin (1998) found that young people who left home to attend university perceived less social support and experienced increased loneliness and social anxiety. However, positive adjustment to university was found to mediate the positive association between relations with parents and school grades for

Caucasian undergraduate students (Yazedjian, Toews, & Navarro, 2009). Therefore, it is important to enhance our understanding of young people's experiences in adjusting to their new academic and social environment.

As a core developmental task during the transition to adulthood, the formation of romantic relationships for many young people occurs in the context of the transition to university. It is reasonable to infer that factors associated with romantic relationships are influential in adjustment to university. For example, one study showed that engagement in romantic relationships was one of the eight things that university students listed that they were doing because they felt they would lose these opportunities later in life (Ravert, 2009). However, the development of empirical knowledge on the role of romantic relationships in this adjustment period has been slow in general (Seiffge-Krenke, 2007).

Numerous findings have linked romantic relationship patterns to physical and mental health in young adults. For example, young adults who are in dating relationships show reduced alcohol and substance use relative to non-dating ones (Fleming, & White, 2010). Romantically committed young adults show better mental health than those who are single (Braithwaite, Delevi, & Fincham, 2010), and demonstrate more mature personalities than those who frequently change partners (Lehnart & Neyer, 2006). A healthy romantic relationship is associated with both partners' better mental well-being whereas a troubled relationship is associated with both partners' psychological suffering (Simon & Barrett, 2010). On the other hand, physical health and psychological well-being are positively related to academic success in university. People who are less stressed and report

less anxiety achieve better grades and are less likely to drop out (Friedlander, Reid, Shupak, & Cribbie, 2007; Pritchard & Wilson, 2003; Shankland, Genolini, Franca, Guelfi, Ionescu, 2010). Heavy drinking and increased tobacco use are negatively related to academic performance and positively related to the likelihood of university dropout (Ansari & Stock, 2010; Martinez, Sher, & Wood, 2008; Pritchard & Wilson, 2003; Ruthig, Marrone, Hladkyj, & Robinson-Epp, 2011).

An integration of the findings that romantic relationship patterns are linked to physical and mental health and that physical and mental health in turn, are linked to academic success in university leads to the prediction that romantic relationship patterns are likely to be associated with academic success in university. However, little research has investigated this relationship. Giordano and colleagues (2008) found that romantic partners' grades predicted participants' grades in a high school sample. Academic success is only one aspect of adjustment to university. It is unknown how young people in different romantic relationships adjust socially to university. Moreover, adjustment to university is a process rather than an event, so it is necessary to broaden our knowledge of the association between romantic relationship patterns and the different dimensions of adjustment to university over time using a longitudinal design with multiple time points. To this end, the fourth research question asks: How are romantic relationship patterns (i.e. *long-term relationship, intermittent or other relationships, single*) associated with trajectories of change in academic and social adjustment to university in the first year of university?

The Current Study

The current study looked to extend research on romantic relationships in emerging adulthood. First, I explored emerging adults' romantic relationship patterns as they evolved in the first year of university. Specifically, the first research question was whether emerging adults would show diversity in their romantic relationship patterns across six months in the first year of university and whether the patterns could be characterized by: the *long-term romantic relationship*, the *intermittent romantic relationship*, and the *single*. In addition, I examined whether other relationship patterns would emerge.

Second, I investigated whether young adults in a *long-term romantic relationship* rated their relationship as having more positive qualities (i.e., higher levels of intimacy and affection and lower level of conflict) at the end of the first year of university whereas those in *intermittent* or *other relationships* reported more negative relationship qualities (i.e., lower levels of intimacy and affection and higher level of conflict). I predicted that they would. Third, I looked at whether a specific measure of relationship duration (months in the relationship) would be associated with positive and negative relationship qualities. I hypothesized that relationships of longer duration would show higher levels of positive qualities (i.e., high levels of intimacy and affection) and lower levels of negative qualities (i.e., conflict).

Finally, with longitudinal data I tested the association between romantic relationship patterns and trajectories of change in academic and social adjustment to university over a six-month period in the first year of university. I hypothesized

that young adults in a *long-term romantic relationship* would have better academic and social adjustment to university than those in *intermittent* or *other romantic relationships* and the *singles* over a six-month period in the first year. There was no hypothesis concerning differences in university adjustment between the *singles* and those in *intermittent* or *other romantic relationships*.

Method

Participants

Participants were 186 students (112 women, 60%) from *Making the Transition II*, a longitudinal study that tracked young people's transition through four years of university at a large, research intensive university located in western Canada. Participants were recruited based on four criteria: (1) they were in their first year of university; (2) they had not attended any postsecondary education prior to their first year; (3) they were full-time students; and (4) they were under the age of 20 at initial participation. These criteria enabled observation of participants' transition through university from its onset in fall of 2005. Of the original 198 participants, 12 were excluded from the present study due to excessive missing information. Ages of the remaining 186 participants ranged from 17.46 to 19.80 at the beginning of the study (M = 18.38, SD = .44). In terms of participants' ethnic background, 73% were Caucasian, 13% were Asian, 4% were Asian and Caucasian mixed, 3% were Indo-Canadian, and 7% were other visible minorities (e.g., Black, Latino, and Arabic). At the beginning of the study, over half of the participants lived with their parents (54%), 5% lived with other relatives, 28% lived in campus residence, and 13% lived off campus on their own or with roommates. The majority of participants lived with both parents while growing up (86%) and the majority of parents completed either two-year college or four-year university degrees (74% mothers, 76% fathers).

The demographic information for the sample in the first year of university indicates that the participants are adequately representative of the undergraduate

population at the university at the time of data collection. Female participants made up 60% of the present sample in comparison with 57% full-time female students at the university (University of Alberta, 2006). Seventy-three percent of the participants identified themselves as Caucasian compared to 81% in a survey sample of 473 students in June 2005. The figure of 54% of the participants living with parents resembles the proportion of undergraduate students at the university who were living at home (51%; Canadian Undergraduate Survey Consortium, 2005). Lastly, efforts were made to recruit participants across different faculties to enhance sample representativeness. The distribution across faculties in the sample was 42% Science, 31% Arts, 20% Engineering, 4% Agricultural, Life and Environmental Sciences, 2% Physical Education and Recreation, and 1% Native Studies. This distribution is relatively representative of the actual distribution of first-year students among faculties at the university (34% Science, 32% Arts, 12% Engineering, 6% Agricultural, Life and Environmental Sciences, 4% Physical Education and Recreation, and 1% Native Studies, and 10% other). Nevertheless, Science and Engineering students were overrepresented in the present sample while students from other faculties such as Medicine, Nursing, and Education were not sampled. This deviation may be due to ineligibility of some first-year students to participate in the study based on the recruitment criteria.

Procedure

Full-time first year students enrolled in mandatory first year English and Engineering classes were recruited during September 2005. Interested participants attended an orientation session in either September or October, during which they

completed consent forms and the baseline questionnaires in pen-and-paper format. These participants were subsequently invited to complete six monthly, web-based questionnaires during their first year (November and December of 2005 and January, February, March, and April of 2006) as well as an annual questionnaire near the end of their second (a pen-and-paper questionnaire in March), third (a web-based questionnaire in February), and fourth (a web-based questionnaire in March) years. The current study does not use any data from the second, third, and fourth years.

Measures

With the exception of demographic information, which was collected at baseline, the present study used four waves of data collected in the first year of university: November, January, February, and April. Key predictor and outcome variables in the present study (i.e., romantic relationship status, romantic relationship quality, and adjustment to university) were measured in November and later waves but not included in the baseline questionnaire. Therefore, it was decided that November, the first time these questions were asked, was to serve as Wave 1. Time was coded as: 0 (Wave 1 or November), 2 (Wave 2 or January; with "2" indicating the number of months since Wave 1), 3 (Wave 3 or February, with "3" indicating the number of months since Wave 1), and 5 (Wave 4 or April, with "5" indicating the number of months since Wave 1). Gender was coded 0 for female and 1 for male.

Of the 186 participants in the present study, retention was 169 participants in November (91%), 164 in January (88%), 168 in February (90%), and 164 in April

(88%). Across the four waves of data collection, 29 participants had one wave of missing data (16%), 10 participants had two waves of missing data (5%), and 4 participants had three waves of missing data (2%).

Romantic Relationship Patterns

I explored participants' romantic relationship patterns in the first year of university using a set of questions asked in each wave that tapped into dating and sexual activities (see Table 1). The dating questions ask whether participants were dating at the time ("are you currently dating?"; response is *yes* or *no*), how many months they have been dating (i.e., relationship duration; "How long in months have you been dating this person?"), whether they were dating multiple persons simultaneously ("are you currently dating more than one person?"; response is *yes* or *no*), how old the partner was ("how old in years is the person you're dating?"), and whether there was a breakup in the past month (response is *yes* or *no*). The sexual activities questions asked whether participants experienced oral and/or penetrative sex in the previous month ("in the past month have you performed oral sexual activity on a partner?", "in the past month have you received oral sexual contact from a partner?", "in the past month have you had penetrative sex?"; response is *yes* or *no*) and how many sexual partners they had during that period ("in the past month how many different penetrative sexual partners have you had?").

Romantic relationship statuses by wave. By systematically examining responses to these questions participants were placed into one of five romantic relationship status categories in each wave: s*ingle*, if the participant was not

Table 1

Romantic Relationship Status Classification at Each Wave

	In a romantic relationship	Breakup	Primarily sexual relationships	Single	Missing
Currently dating?	Yes	No	No	No	-
Had a breakup?	-	Yes	No	No	-
Had sexual activities?	-	-	Yes	No	-

currently dating, did not report a breakup, and did not have any forms of sex; *in a relationship*, if the participant reported being in a dating relationship; *breakup*, if the participant reported being single but had a breakup; *primarily sexual relationships*, if the participant reported being single and had no breakup but had sex; or *missing*, if the participant was missing in the wave. Table 1 displays how participants were classified into these five statuses based on their answers to the dating and sexual relations questions.

For an interrater reliability check, a research assistant who was blind to the nature of this study was brought in to separately code 38 randomly selected participants. The research assistant was instructed on the coding rules as elaborated above, and proceeded to code relationship status at each wave. The interrater reliabilities across four waves ranged from good to excellent (*r*s = .83 – 1.00).

Romantic relationship patterns across waves. Based on the combination of romantic relationship statuses across all four waves in their first year of university, participants were classified into six different romantic relationship *patterns* (see Table 2). In addition, participants had to respond to the questions in at least three of the four waves for their romantic relationship patterns to be mapped. If there were two or more waves of data missing, participants were classified as *missing*. Participants were classified as *single* in the first year of university if they reported neither dating nor breakup in the past month, and not having had any forms of sex in the previous month in all four waves or in three of the four waves, with the remaining wave missing. Participants were classified as being in a *long-term*

Table 2

Romantic Relationship Pattern Grouping Criteria across Four Waves

	Grouping Criteria
Single	1. Neither dating nor breakup in the past month; 2. Not having had any forms of sex in the previous month in all four waves; OR 3. No dating nor breakup nor sex in three of the four waves; 4. The remaining wave contained missing data.
Long-term romantic relationship	1. Dating through Waves 1 to 4; 2. Relationship duration by Wave 4 was 6 months or longer; OR 3. Dating in three of the four waves; 4. The remaining wave was missing; 5. The relationship duration reported in the last responding wave spanned the study period,
Emerging romantic relationship	1. Starting to date in either Waves 2, 3, or 4 while being single in the earlier wave(s); 2. The relationship persisted through the remaining waves.
Breakup	1. Dating in Wave 1;

	2. This relationship broke up or the participant's relationship status became single in one of the subsequent waves; 3. The participant remained single afterwards.
Intermittent romantic relationships	1. Experiencing two or more changes in romantic relationship status through the four waves; 2. Examples: dating-breakup/single-dating; single-dating-breakup/single, or dating different partners through the four waves (as indicated by dating durations).
Primarily sexual relationships	1. Single status in all four waves; 2. Had any forms of sex during the four waves.
Missing	1. Had missing data in two or more waves.

romantic relationship if they reported dating from November to April and their relationship duration by April was 6 months or longer, or if they reported dating in three of the four waves with the remaining wave missing and the relationship duration reported in the last responding wave spanned the study period.

Participants were classified as being in an *emergent romantic relationship* if they reported starting to date in January, February, or April while being single in the earlier wave(s) and the relationship persisted through the remaining study period. Participants were classified as having a *breakup* if they reported dating in November and this relationship broke up or the participant's relationship status became single in one of the subsequent waves and the participant remained single afterwards. Participants were classified as being in *intermittent relationships* if they experienced two or more changes in romantic relationship status through the four waves of the study (e.g., dating-breakup-single-dating, single-dating-breakup-single, or dating different partners through the four waves). There is a separate category for participants who had primarily *sexual relationships* if they reported single status in all four waves while having had any forms of sex. To check interrater reliability for the longitudinal relationship patterns, the same research assistant who performed coding for relationship status at each wave also coded the relationship patterns across waves on the same 38 randomly selected participants. The interrater reliability for romantic relationship patterns in the first year of university was excellent (r = .96).

Romantic Relationship Duration

Romantic relationship duration was determined through the self report of participants who were in a dating relationship in April of the first year regarding how many months they had been in the current relationship. The reported duration ranged from 0 (i.e. the relationship started in the current month) to 36 months.

Romantic Relationship Quality

In April of the first year when participants stated that they were dating someone, the quality of their romantic relationships was measured with the perceived affection (3 items; e.g. "How much does this person like or love you?"), intimacy (3 items; e.g. "How much do you talk about everything with this person?"), and conflict (6 items; "How much do you and this person disagree and quarrel?") scales from the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1985). Responses to the scales range from 1 (*Little or none*) to 5 (*The most*). Higher mean scores on each scale indicate more affection, intimacy, and conflict with romantic partner, respectively. The internal consistencies of the three scales administered to 71 participants who reported being in a dating relationship in April were excellent, at $\alpha = .97$ (affection), $\alpha = .96$ (intimacy), and $\alpha = .92$ (conflict).

Romantic relationship quality was assessed in April because the second research question in the present study asked how relationship quality was associated with the overall relationship pattern across the first year of university (November to April). This research question could not be answered if relationship quality measures from earlier waves were used since it is likely that positive relationship quality would grow as a relationship continues. For example,

consider two participants, one identified as being in a long-term relationship from November to April and the other in intermittent relationships in the same time span; each started a relationship in October and continued in November but one broke up with their partner (the intermittent relationship) while the other continued. The relationship quality measures in November would not likely provide insight into the association between relationship quality and relationship patterns since the person in a long-term relationship would have been in the relationship for the same amount of time as the person in intermittent relationships. Therefore, the relationship quality measures as assessed in April were most appropriate for the purpose of the present study.

Academic and Social Adjustment to University

Two dimensions of adjustment to university (academic and social) were measured in November, February, and April using the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989). The 24-item *academic adjustment* scale includes four components that assess motivation (e.g. "My academic goals and purposes are well defined"), application (e.g. "I am attending classes regularly"), performance (e.g. "I am satisfied with my program of courses for this semester"), and academic environment (e.g. "I am satisfied with quality or the caliber of courses available at the university"). The 20-item *social adjustment* scale also consists of four components that assess social adjustment in general (e.g. "I feel that I fit in well as part of the university environment"), socialization with other people (e.g. "I am meeting as many people and making as many friends I would like at university"), nostalgia (e.g. "I have been feeling lonely a lot at

university lately"), and social environment (e.g. "I am satisfied with the extracurricular activities available at the university"). Responses to each item range from 1 (*Applies very closely to me*) to 9 (*Doesn't apply to me at all*). Scores were later reverse coded so that higher mean scores indicate better academic and social adjustment. Cronbach's alpha reliabilities were good for both the academic adjustment scale, αs = .88 - .90, and the social adjustment scale, αs = .90 - .93, across three waves.

To compare the trajectories of university adjustment among participants with different romantic relationship patterns, two sets of dummy codes were created for relationship patterns. In the first set, participants in a relationship were coded 1 and those who were single were coded 0. In the second set, participants who were in a long-term relationship were coded 1 and those who were in other relationships or single were coded 0.

Attrition Analysis

Attrition analysis was conducted by assessing differences in the baseline demographic information (i.e., gender, ethnicity, faculty, and living arrangement) for participants who were present and missing in November, January, February, and April. Across all four waves, only one significant difference was found. Participants who were missing at Wave 2 (January of the first year) were more likely to have lived away from their parents at baseline (68%) than participants who were present at Wave 2 (44%; χ^2 (1) = 4.72, p = .03).

Results

Descriptive Statistics

Means and standard deviations for all participants' scores on the three measures of romantic relationship quality (i.e., intimacy, affection, and conflict) in April as well as academic and social adjustment across November, February, and April are presented in Table 3. On average, participants in a dating relationship reported high levels of intimacy and affection and low levels of conflict with their intimate partner at the end of the first year. Average ratings of academic and social adjustment were above the midpoint of the measure across three waves, indicating relatively positive adjustment to university for the majority of participants.

Romantic Relationship Patterns in the First Year of University

In order to answer the first research question on romantic relationship patterns across the first year of university, I began by characterizing romantic relationship *status* within each of the four waves of data collection (November, January, February, and April). This analysis was subsequently followed by an analysis that combined data across the four waves to generate relationship *patterns*. To start, both the romantic relationship status at each wave and the overall relationship pattern over the first year of university were determined qualitatively by probing a series of questions on dating and sexual behaviors. Five categories of relationship status at each wave were identified. The results are presented in Table 4. In November, 50% of the participants were *single* (n = 93), 34% were *in a romantic relationship* (n = 64), 3% had a *breakup* in the previous

Table 3

Means and standard deviations for measures of romantic relationship quality and duration in April and academic and social adjustment to university in November, February, and April

Variables	*N*	Mean	SD	Range
Romantic Relationship Quality				
Intimacy	69	3.75	1.24	1.00 – 5.00
Affection	69	4.16	1.13	1.67 – 5.00
Conflict	69	1.39	0.54	1.00 – 3.67
Romantic Relationship Duration (Months)	69	9.70	9.57	0 – 36
Academic Adjustment				
November	169	5.65	1.21	2.13 – 8.58
February	168	5.79	1.09	3.12 – 8.79
April	164	5.51	1.21	2.75 – 8.83
Social Adjustment				
November	165	6.11	1.36	2.55 – 8.55
February	166	6.04	1.38	2.75 – 8.74

April	164	6.14	1.38	1.75 – 8.65

Note. Possible range of scores for *intimacy*, *affection*, and *conflict* is from 1 to 5. Of the 69 participants in a romantic relationship in April, 70% were women (N = 48). Possible range of scores for *academic* and *social adjustment* is from 1 to 9.

Table 4

Relationship status at each wave

Relationship Status	November		January		February		April	
	N	%	*N*	%	*N*	%	*N*	%
Single	93	50.0	81	43.5	91	48.9	81	43.5
In a relationship	64	34.4	60	32.3	62	33.3	70	37.6
Breakup	5	2.7	16	8.6	11	5.9	7	3.8
Primarily sexual relationships	7	3.8	17	9.1	4	2.2	8	4.3
Missing	17	9.1	12	6.5	18	9.7	20	10.8

Note. *N* = 186.

month (*n* = 5), 4% were involved in *primarily sexual relationships* (*n* = 7), and 9% were *missing* (*n* = 17). In January, 44% of the participants were *single* (*n* = 81), 32% were *in a relationship* (*n* = 60), 9% had a *breakup* (*n* = 16), 9% were involved in *primarily sexual relationships* (*n* = 17), and 7% had *missing* information (*n* = 12). In February, 49% of the participants were *single* (*n* = 91), 33% were *in a relationship* (*n* = 62), 6% had a *breakup* (*n* = 11), 2% were in *primarily sexual relationships* (*n* = 4), and 10% were *missing* (*n* = 18). In April, 44% of the participants were *single* (*n* = 81), 38% were *in a relationship* (*n* = 70), 4% had a *breakup* (*n* = 7), 4% were in *primarily sexual relationships* (*n* = 8), and 11% were *missing* (*n* = 20).

Based on romantic relationship status at each wave, an overall relationship pattern across the first year of university was generated for each participant. Seven patterns were determined as presented in Table 5. 40% of the participants remained single in the first year of university (*single*, *n* = 74), 22% stayed with the same intimate partner through this period (*long-term relationship*, *n* = 41), 8% were single at the beginning of the year and started a new relationship during the year (*emergent relationship*, *n* = 14), 7% were in a relationship at the beginning of the year but had a breakup during the year and remained single afterwards (*breakup*, *n* = 12), 13% were involved in multiple romantic relationships in the first year (*intermittent relationships*, *n* = 25), 3% were involved in primarily sexual relationships (*primarily sexual relationships*, *n* = 6), and 8% were missing in two or more waves so that their relationship pattern in the first year of university could not be identified (*missing*, *n* = 14).

Table 5

Relationship pattern across the first year of university

Relationship Pattern	Total (*N*)	Total (%)	Men (*N*)	Men (%)	Women (*N*)	Women (%)
Single	74	39.8	31	41.9	43	58.1
Long-term relationship	41	22.0	12	29.3	29	70.7
Emergent relationship	14	7.5	3	21.4	11	78.6
Breakup	12	6.5	3	25.0	9	75.0
Intermittent relationships	25	13.4	13	52.0	12	48.0
Primarily sexual relationships	6	3.2	3	50.0	3	50.0
Missing	14	7.5	9	64.3	5	35.7

Note. $N = 186$.

Romantic Relationship Quality at the End of the First Year of University

To address the second and third research questions (association of romantic relationship quality in April with overall relationship pattern and relationship duration across the first year of university, respectively), regression analyses were conducted for participants who were in romantic relationships in April. For the association between relationship quality (i.e., *intimacy*, *affection*, and *conflict*) and overall relationship pattern, three nested models were tested for each relationship quality. In the first model, only the predictor variable (i.e., relationship pattern) was entered to examine whether overall relationship pattern predicted relationship quality at the end of the first year. In the next model, gender was added to ascertain potential gender differences in relationship quality. In the final model, a relationship pattern by gender interaction term was added to determine whether relationship pattern predicted relationship quality depending on gender.

For the association between relationship quality and duration analyses, three nested models were tested for each relationship quality. In the first model, the focal relation between relationship quality and duration (in months) was examined by including only the relationship duration variable. In the second model, a quadratic term for relationship duration (months x months) was added to investigate possible nonlinear change in relationship quality by duration. Finally, the third model tested potential gender differences in relationship quality by adding the gender variable.

Descriptive statistics show that among the 69 participants who were in a romantic relationship in April, 70% were women (N = 48). The duration of a

relationship ranged from 0 (i.e., started a relationship in the current month) to 36 months, with the mean duration 9.70 months (*SE* = 9.57). Furthermore, of the 69 participants, 38 were in a long-term relationship (mean duration 15.97 months, *SE* = 8.76), 17 were in intermittent relationships (mean duration 1.65 months, *SE* = 1.07), and 14 were in an emergent relationship (mean duration 2.46 months, *SE* = 1.68). The mean scores for intimacy and affection were significantly correlated, $r = .85$, $p < .01$. The mean scores for intimacy and conflict were not significantly correlated, $r = -.01$, $p = .94$. Nor was there a significant correlation between affection and conflict, $r = .00$, $p = .99$.

Intimacy

Table 6a presents the association between intimacy and romantic relationship patterns in April. Model 1 shows a significant association in that participants in a long-term romantic relationship were more likely to report higher levels of intimacy than those in other relationship patterns (i.e., *intermittent relationships* or *emergent relationship*), $b = 1.23$, $SE = 0.26$, $p < .01$. Romantic relationship patterns explained 24% of the variation in intimacy. Gender was tested as a predictor by adding it in Model 2. The addition of the gender variable did not significantly improve the model fit to the data, compared to the model with the relationship pattern variable only, $F(1, 66) = .30 < F_{critical}(1, 66, .05) = 3.99$. Gender was not a significant predictor of intimacy, $b = -0.16$, $SE = 0.29$, $p = .59$. The inclusion of the relationship pattern by gender interaction term in Model 3 did not significantly improve the model fit to the data relative to Model 2, $F(1, 65)$

Table 6a

Regression Models of Romantic Relationship Patterns and Intimacy in April

	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Romantic relationship pattern[a]						
Long-term	1.23	.26*	1.21	.27*	1.26	.32*
Men			-.16	.29	-.09	.41
Long-term x Men					-.14	.58
Overall *F* Value	21.86*		10.96*		7.22*	
Adjusted R^2	.24		.23		.22	

Note. Data were from 69 participants who were in romantic relationships in April.
[a] Reference group is intermittent relationships.
*$p < .05$.

= .05 < $F_{critical}$ (1, 65, .05) = 3.99. Hence, Models 2 and 3 were rejected in favor of Model 1.

Table 6b presents the association between intimacy and romantic relationship duration in April. Model 1 indicates a significant association showing that with each additional month in a relationship, intimacy with the partner increased by .06 units (*SE* = .01, $p < .01$). Romantic relationship duration explained 22% of the variation in intimacy. In Model 2, the quadratic term of the romantic relationship duration explored whether there was a nonlinear association between relationship duration and intimacy. The addition of the quadratic term for relationship duration significantly improved the fit of the model relative to the model with the linear term only (Model 1), F (1, 65) = 5.79 > $F_{critical}$ (1, 65, .05) = 3.99. The statistically significant negative quadratic term indicated a curvilinear pattern characterizing the association between relationship duration and intimacy (see Figures 1 and 2). Specifically, each additional month of relationship duration was associated with higher levels of intimacy for those whose relationship duration was between 0 and 15 months, reaching its peak at 15.45 months ($-b_{linear}/2b_{quadratic}$ = - .0973/(2*(-.0032)) = 15.45); thereafter, each additional month of relationship duration was associated with lower levels of intimacy. Romantic relationship duration and its quadratic term together explained 28% of the variation in intimacy. Model 3 tested for a gender difference in intimacy. The inclusion of the gender variable did not significantly improve the model fit, F (1, 64) = .43 < $F_{critical}$ (1, 64, .05) = 3.99. Gender was not a significant predictor of intimacy, b = -0.19, *SE*= 0.29, p = .51. Model 2 was selected as the best fitting model.

Table 6b

Regression Models of Romantic Relationship Duration and Intimacy in April

	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Romantic Duration (in months)	.06	.01*	.10	.02*	.10	.02*
Romantic Duration Squared			-.00	.00*	-.00	.00*
Men					-.19	.29
Overall *F* Value	20.44*		13.86*		9.30*	
Adjusted R^2	.23		.28		.27	

Note. Data were from 69 participants who were in romantic relationships in April.
*$p < .05$.

Figure 1. The Association between Romantic Relationship Duration and Intimacy in April.

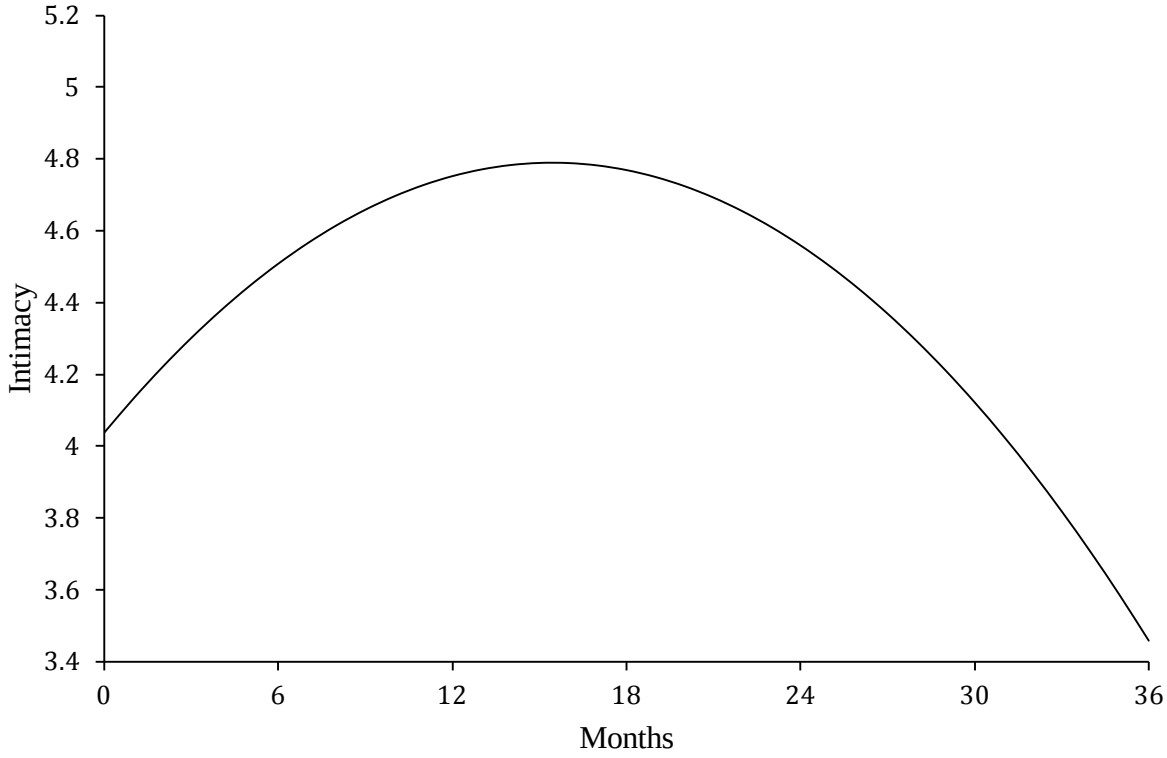
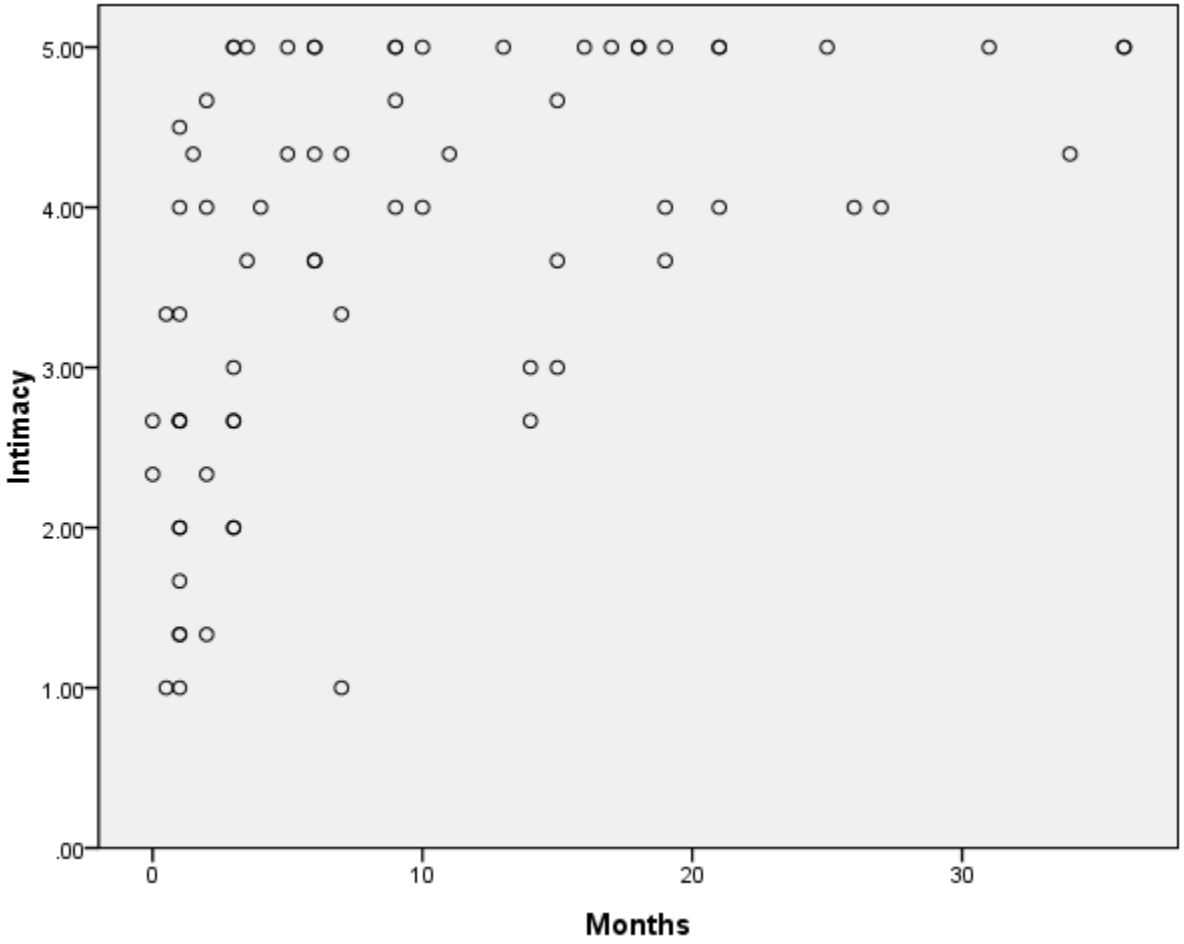


Figure 2. The Scatterplot for Intimacy by Romantic Relationship Duration in April.



Affection

Table 7a presents the association between affection and romantic relationship patterns in April. Model 1 suggests a significant association in which participants in a long-term romantic relationship were more likely to report higher levels of affection than those in other relationship patterns (i.e., *intermittent relationships* or *emergent relationship*), $b = 1.19$, $SE = 0.23$, $p < .01$. Romantic relationship patterns explained 27% of the variation in affection. Model 2 tested whether gender mattered for affection. The addition of the gender variable did not significantly improve the model fit to the data relative to Model 1, $F(1, 66) = .10 < F_{critical}(1, 66, .05) = 3.99$. Results show that gender did not predict affection, $b = -0.08$, $SE = 0.26$, $p = .76$. Model 3 tested whether relationship pattern predicted affection depending on gender. The inclusion of the interaction term did not significantly improve the fit of the model to the data compared to Model 2, $F(1, 65) = .29 < F_{critical}(1, 65, .05) = 3.99$. There was no significant gender difference in the association between affection and relationship pattern in the present sample, $b = -0.28$, $SE = 0.52$, $p = .59$. Hence, Model 1 was chosen as the best fitting model over Models 2 and 3.

The association between affection and romantic relationship duration in April is presented in Table 7b. There was a significant focal relationship between affection and relationship duration (see Model 1). Affection increased by 0.06 units when relationship duration increased by one month ($SE = 0.01$, $p < .01$). Romantic relationship duration explained 22% of the variation in affection. The quadratic term of the romantic relationship duration was added in Model 2 to

Table 7a

Regression Models of Romantic Relationship Patterns and Affection in April

	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Romantic relationship pattern[a]						
Long-term	1.19	.23*	1.18	.24*	1.27	.29*
Men			-.08	.26	.06	.37
Long-term x Men					-.28	.52
Overall *F* Value	25.72*		12.74*		8.50*	
Adjusted R^2	.27		.26		.25	

Note. Data were from 69 participants who were in romantic relationships in April.
[a] Reference group is intermittent relationships.
*$p < .05$.

Table 7b

Regression Models of Romantic Relationship Duration and Affection in April

	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Romantic Duration (in months)	.06	.01*	.09	.02*	.09	.02*
Romantic Duration Squared			-.00	.00*	-.00	.00*
Men					-.09	.26
Overall *F* Value	19.98*		14.31*		9.46*	
Adjusted R^2	.22		.28		.28	

Note. Data were from 69 participants who were in romantic relationships in April.
*$p < .05$.

explore whether there was change in the increase in affection. The inclusion of the quadratic term significantly improved the fit of the model to the data compared to the model with the linear term only (Model 1), F (1, 65) = 6.86 > $F_{critical}$ (1, 65, .05) = 3.99. The significant quadratic term of the romantic relationship duration indicates a curvilinear association between relationship duration and affection (see Figures 3 and 4). For people whose relationship duration was between 0 and 15 months ($-b_{linear}/2b_{quadratic}$ = - .0905/(2*(- .0031)) = 14.60), longer relationship duration was associated with higher levels of affection, reaching the peak at 14.60 months. From 16 to 36 months, longer relationship duration was associated with lower levels of affection. Romantic relationship duration and its quadratic term together explained 28% of the variation in affection. The addition of the gender variable in Model 3 did not significantly improve the model fit to the data relative to Model 2, F (1, 64) = .13 < $F_{critical}$ (1, 64, .05) = 3.99. Model 3 revealed that gender was not a significant predictor of affection, b = -0.09, SE = 0.26, p = .72. Based on the model fit statistics, Model 2 was chosen as the best fitting model.

Conflict

The association between relationship conflict and relationship patterns in April is shown in Table 8a. Model 1 suggests a significant association such that participants in a long-term romantic relationship were more likely to report higher levels of conflict than those in other relationship patterns, b = 0.34, SE= 0.12, p < .01. Romantic relationship patterns explained 9% of the variation in intimacy. Model 2 added gender. The addition of the gender variable did not significantly improve the model fit to the data relative to the model with the relationship

Figure 3. The Association between Romantic Relationship Duration and Affection in April.

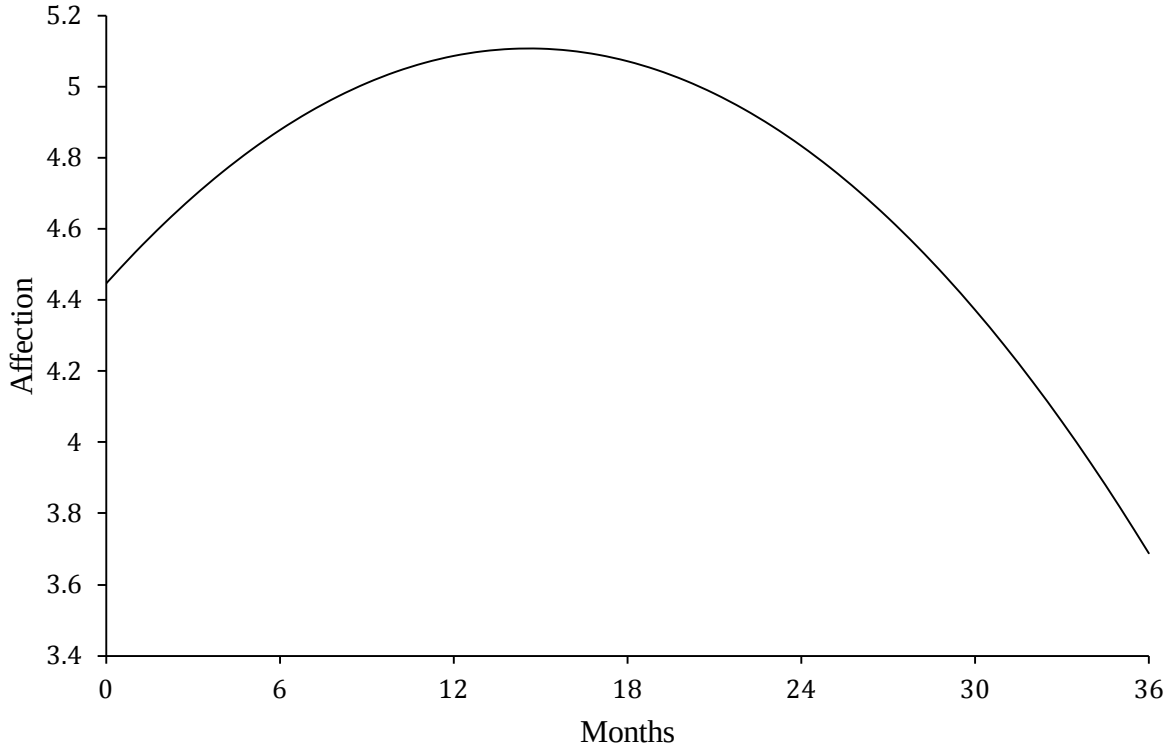


Figure 4. The Scatterplot for Affection by Romantic Relationship Duration in April.

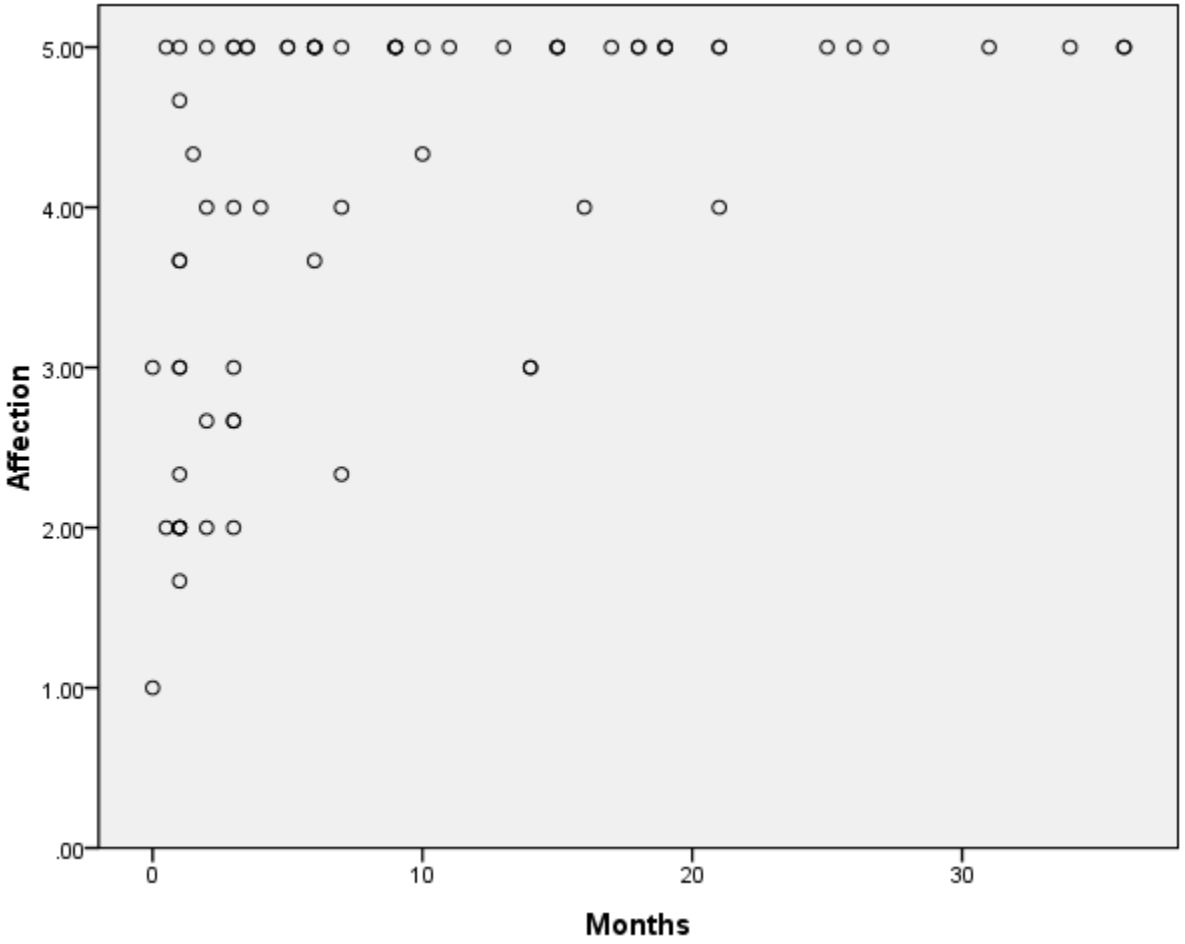


Table 8a

Regression Models of Romantic Relationship Patterns and Conflict in April

	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Romantic relationship pattern[a]						
Long-term	.34	.13*	.35	.13*	0.24	.15
Men			.10	.14	-.08	.19
Long-term x Men					.36	.27
Overall *F* Value	7.43*		3.98*		3.28*	
Adjusted R^2	.09		.08		.09	

Note. Data were from 69 participants who were in romantic relationships in April.
[a] Reference group is intermittent relationships.
*$p < .05$.

pattern variable only (Model 1), F (1, 66) = .56 < $F_{critical}$ (1, 66, .05) = 3.99. Nor did the inclusion of the relationship pattern by gender interaction term in Model 3 significantly improve the model fit to the data relative to Model 2, F (1, 65) = 1.80 < $F_{critical}$ (1, 65, .05) = 3.99. Thus, Models 2 and 3 are rejected in favor of Model 1. Results from these two models are not interpreted.

The association between relationship conflict and relationship duration in April is shown in Table 8b. The focal relationship model testing the association between conflict and relationship duration yielded a nonsignificant overall F value, F = 1.90, p =.17 (see Model 1), which indicates that knowing the duration of a relationship did not help predict the levels of conflict. Hence, results in Model 1 are not interpreted. The addition of the quadratic term of relationship duration in Model 2 did not significantly improve the model fit to the data, F (1, 65) = 3.56 < $F_{critical}$ (1, 65, .05) = 3.99. Nor did the addition of the gender variable in Model 3, F (1, 64) = .90 < $F_{critical}$ (1, 64, .05) = 3.99. Thus, Models 2 and 3 were rejected. Results in Models 2 and 3 are not subject to interpretation. Relationship duration was not a significant predictor of conflict.

Academic and Social Adjustment across the First Year of University

Multilevel modeling was performed to model participants' university adjustment trajectories for academic and social adjustment respectively over the first year of university while accounting for their romantic relationship patterns. This data analysis technique allows me to examine within person change over time (i.e., participants' adjustment to university over the first year) as well as evaluate the influence of between-persons predictors of individual trajectories (i.e.,

Table 8b

Regression Models of Romantic Relationship Duration and Conflict in April

	Model 1		Model 2		Model 3	
	b	*SE*	*b*	*SE*	*b*	*SE*
Romantic Duration (in months)	.01	.01	.02	.01*	.02	.01*
Romantic Duration Squared			-.00	.00	-.00	.00*
Men					.14	.14
Overall *F* Value	1.90		2.77		2.14	
Adjusted R^2	.01		.05		.05	

Note. Data were from 69 participants who were in romantic relationships in April.
*$p < .05$.

participants nested within romantic relationship patterns). For the present study I conducted analyses with the HLM 6.08 software program (Hierarchical Linear Modeling; Raudenbush, Bryk, & Congdon, 2004).

HLM conceptualizes multilevel models as separate regression equations for each level of analysis. Two levels were used in the present study. Level 1 analysis models adjustment to university over three time points for each participant. Level 2 includes the time-invariant predictors (i.e., romantic relationship patterns in the first year of university and gender) that were hypothesized to differentiate between participants. Adjustment to university can be modeled as follows:

$$\text{Level 1: Adjustment}_{ti} = \pi_{0i} + \pi_{1i}\,(\text{Month}) + e_{ti} \quad (1)$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + \beta_{01}\,(\text{in a relationship}) + \beta_{02}\,(\text{long-term relationship}) + r_{0i} \quad (2)$$

$$\pi_{1i} = \beta_{10} + \beta_{11}\,(\text{in a relationship}) + \beta_{12}\,(\text{long-term relationship}) + r_{1i} \quad (3)$$

Equation 1 shows that a given participant's rating of adjustment to university at a particular time point can be modeled as a function of the rating of adjustment at Time 0, π_{0i}, the individual's rate of change across months, π_{1i}, and a random error component, e_{ij}. Equation 2 shows that the level 2 equation for Time 0 – the initial status – for each participant is a function of the average rating of adjustment at Time 0 across all participants, β_{00}, being in a romantic relationship in the first year, β_{01}, being in a long-term romantic relationship, β_{02}, and error, r_{0i}. Rate of change in adjustment per month – the time slope – for each participant is modeled at level 2 as a function of the average rate of change across all participants, β_{10}, being in a romantic relationship in the first year, β_{11}, being in a long-term romantic relationship, β_{12}, and error, r_{1i} (equation 3).

Academic adjustment

Table 9 presents a series of models tested to identify the best fitting model for academic adjustment. First, the unconditional means model containing no covariates (Equations 4 and 5),

$$\text{Level 1: Academic adjustment}_{ti} = \pi_{0i} + e_{ti} \quad (4)$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + r_{0i} \quad (5)$$

was constructed to determine the proportions of within-person and between-persons variance (Model 1). Next, the linear function was tested by adding time to the unconditional means model (Model 2; Equations 6, 7, and 8) to form the unconditional growth model,

$$\text{Level 1: Academic adjustment}_{ti} = \pi_{0i} + \pi_{1i}\,(\text{Month}) + e_{ti} \quad (6)$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + r_{0i} \quad (7)$$

$$\pi_{1i} = \beta_{10} + r_{1i} \quad (8)$$

Lastly, the predictors for romantic relationship pattern were added to the intercept and linear slope equations in level 2 (Equations 9, 10, 11),

$$\text{Level 1: Academic Adjustment}_{ti} = \pi_{0i} + \pi_{1i}\,(\text{Month}) + e_{ti} \quad (9)$$

$$\text{Level 2: } \pi_{0i} = \beta_{00} + \beta_{01}\,(\text{in a relationship}) + \beta_{02}\,(\text{long-term relationship}) + r_{0i} \quad (10)$$

$$\pi_{1i} = \beta_{10} + \beta_{11}\,(\text{in a relationship}) + \beta_{12}\,(\text{long-term relationship}) + r_{1i} \quad (11)$$

to examine the difference in academic adjustment trajectories among participants of different relationship patterns (Model 3). By comparing the model fit to the data, the unconditional growth model (Model 2) was retained for academic adjustment as the best fitting model, $\chi^2(2) = 17.80$, $p < .01$.

Table 9

Results of Multilevel Models Predicting Trajectories of Academic Adjustment

		Parameter	Model 1 Unconditional Means Model	Model 2 Unconditional Growth Model	Model 3 Growth Model with Relationship Pattern
Fixed Effects			Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Initial status, π_{0i}	Intercept	γ_{00}	5.65*	5.73*	5.71*
			(.08)	(.09)	(.15)
	In Relationships	γ_{01}			-.13
					(.21)
	In a Long-term	γ_{02}			.36
	Relationship				(.24)
Linear rate of change,	Intercept	γ_{10}		-.03	-.05*
π_{1i}				(.02)	(.03)
	In Relationships	γ_{11}			.03
					(.04)

	In a Long-term Relationship	γ_{12}			.02 (.04)
Correlation between intercept and slope			n/a	-.32	-.33
Variance Components			Estimate (SE)	Estimate (SE)	Estimate (SE)
Level 1	Within-person	σ_ε^2	.64 (.41)	.53 (.28)	.53 (.28)
Level 2	In initial status	σ_0^2	1.00 (1.00)	1.08* (1.16)	1.07* (1.14)
	In linear rate of change	σ_1^2		.15* (.02)	.14* (.02)
Deviance			1297.48 (3)	1279.68 (6)	1273.93 (10)
χ^2 (*df*)			n/a	17.80 (3)*	5.75 (4)
Comparison model			n/a	Model 1	Model 2

Note. Data were from 172 participants with adequate information on academic adjustment.
*$p < .05$.

The predictors of being in a romantic relationship, b = -.13, SE = .21, p = .56, and being in a long-term relationship, b = .36, SE = .24, p = .13, at the initial status (Equation 10) were dropped in Equation 7 due to nonsignificant results and failure to improve the fit of the model to the data (see Model 3). For the same reason, the predictors of being in a romantic relationship, b = .03, SE = .04, p = .42, and being in a long-term relationship, b = .02, SE = .04, p = .65, in the slope of change (Equation 11) were dropped in Equation 8 (see Model 3). These findings suggest that romantic relationship patterns were not predictive of the initial status of or the time slope for participants' academic adjustment. That is, there was no significant difference in academic adjustment either at the beginning of or during the first year of university among participants with different relationship patterns.

The retained Model 2 results indicate that the initial level of academic adjustment was 5.73, SE = .09, p < .01. Academic adjustment did not change significantly in the first year of university, b = -.03, SE = .02, p = .08. The significant error terms in initial status, r_{0i} = 1.08, SE = 1.16, p < .01, and slope of change, r_{1i} = .15, SE = .02, p < .01, suggest that there were significant between-persons variances in both the initial status and slope of change that were unexplained by the model.

Social Adjustment

A series of models were tested to identify the best fitting model for social adjustment, presented in Table 10. Similar to academic adjustment, the unconditional means model was tested (Model 1; Equations 12 and 13),

Table 10

Results of Multilevel Models Predicting Trajectories of Social Adjustment

		Parameter	Model 1 Unconditional Means Model	Model 2 Unconditional Growth Model	Model3 Growth Model with Relationship Patterns	Model 4 Final Growth Model with Relationship Patterns
Fixed Effects			Coeff. (SE)	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
Initial status, π_{0i}	Intercept	γ_{00}	6.11*	6.11*	5.76*	5.76*
			(.10)	(.10)	(.16)	(.16)
	In Relationships	γ_{01}			.50*	.62*
					(.24)	(.21)
	In a Long-term Relationship	γ_{02}			.27	
					(.25)	
Linear rate of change, π_{1i}	Intercept	γ_{10}		-.00	-.02	-.02
				(.02)	(.02)	(.02)
	In Relationships	γ_{11}			.03	.03
					(.04)	(.03)

	In a Long-term Relationship	γ_{12}			.01 (.04)	
Correlation between intercept and slope			n/a	.06	n/a	n/a
Variance Components			Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
Level 1	Within-person	σ_ε^2	.64 (.41)	.62 (.38)	.64 (.40)	.64 (.40)
Level 2	In initial status	σ_0^2	1.21* (1.46)	1.19* (1.42)	1.15* (1.33)	1.16* (1.34)
	In linear rate of change	σ_1^2		.06 (.00)		
Deviance			1335.29 (3)	1334.31 (6)	1319.25(8)	1320.90(6)
χ^2 (*df*)			n/a	.98 (3)	16.04(5)*	14.40 (3)*
Comparison model			n/a	Model 1	Model 2	Model 1

Note. Data were from 172 participants with adequate information on social adjustment.
*$p < .05$.

Level 1: Social adjustment$_{ti}$ = π_{0i} + e_{ti} (12)

Level 2: π_{0i} = β_{00} + r_{0i} (13)

followed by the unconditional growth model (model 2; Equations 14, 15, and 16).

Level 1: Social adjustment$_{ti}$ = π_{0i} + π_{1i} (Month) + e_{ti} (14)

Level 2: π_{0i} = β_{00} + r_{0i} (15)

π_{1i} = β_{10} + r_{1i} (16)

Since there was insufficient random variance in the time slope, r_{1i} = .06, *SE* = .00, *p* = .08 (see Model 2), time was treated as a fixed effect in the subsequent analysis (i.e., r_{1i} was omitted in Equations 19 and 22). Lastly, the predictors for romantic relationship patterns were added to the intercept and linear slope equations in level 2 (Equations 17, 18, and 19),

Level 1: Social Adjustment$_{ti}$ = π_{0i} + π_{1i} (Month) + e_{ti} (17)

Level 2: π_{0i} = β_{00} + β_{01} (in a relationship) + β_{02} (long-term relationship) + r_{0i} (18)

π_{1i} = β_{10} + β_{11} (in a relationship) + β_{12} (long-term relationship) (19)

to examine the difference in social adjustment trajectories among participants of different relationship patterns (Model 3). Because the predictor variables for the difference in social adjustment between participants in a long-term relationship and in other relationship patterns were not significant for either the intercept, *b* = .27, *SE* = .25, *p* = .28, or the slope, *b* = .01, *SE* = .04, *p* = .72, they were removed from the final model. The growth model with the relationship pattern variables predicting single or in a relationship (Model 4) was chosen as the best fitting model to the data, $\chi^2(3) = 14.40$, $p < .01$. Social adjustment to university was modeled as follows:

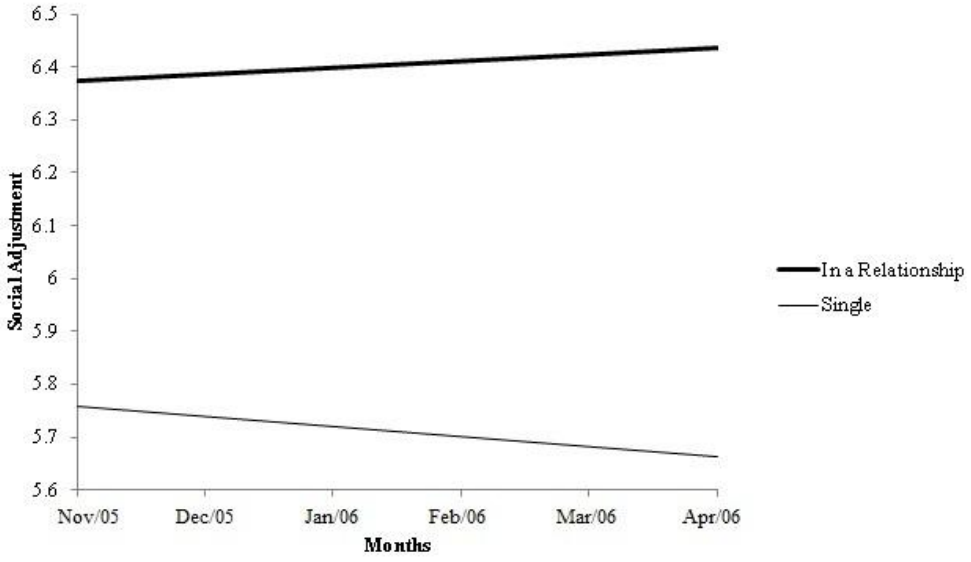
Level 1: Social adjustment$_{ti}$ = π_{0i} + π_{1i} (Month) + e_{ti} (20)

Level 2: π_{0i} = β_{00} + β_{01} (in a relationship) + r_{0i} (21)

π_{1i} = β_{10} + β_{11} (in a relationship) (22)

Model 4 results indicate that the initial level of social adjustment was 5.76, *SE* = .16, $p < .01$. Social adjustment did not change significantly in the first year of university, $b = -.02$, *SE* = .02, $p = .43$. However, participants who were in a romantic relationship in the first year had significantly higher levels of social adjustment to university at the initial status than those who were single, $b = .62$, *SD* = .21, $p < .01$ (see Figure 5). There was no significant difference in social adjustment in the slope of change between participants who were in a relationship in the first year and those who were single, $b = .03$, *SD* = .03, $p = .32$. The significant error term in initial status, $r_{0i} = 1.16$, *SE* = 1.34, $p < .01$, suggests that significant between-persons variance in initial status was not explained by the predictors in the model.

Figure 5. The Association between Social Adjustment and Romantic Relationship Patterns. From Table 10, Model 4.



Discussion

The present study explored romantic relationship patterns and quality as well as the association between relationship patterns and adjustment to university in the first year of university using longitudinal data. First, the pattern of romantic relationships of emerging adult university students across the first year of university life was explored. Second, it was hypothesized that for people who were dating at the end of the first year, those in a long-term relationship would experience higher levels of intimacy and affection and lower levels of conflict than those in either intermittent relationships or in an emergent relationship. Moreover, people who stayed in a relationship longer would experience higher levels of intimacy and affection and lower levels of conflict. Finally, it was hypothesized that people who were in a long-term relationship would show better academic and social adjustment to university across their first year than those who were single or in other types of relationships. Qualitative methods were employed to explore romantic relationship patterns while regression analyses and multilevel modeling techniques were used to investigate romantic relationship quality and the association between relationship patterns and university adjustment, respectively.

Romantic Relationship Patterns in the First Year of University

Six distinct romantic relationship patterns were identified among the first year university students in the present study. 40% of the students were single, 22% were in a long-term relationship, 13% were involved in intermittent relationships, 8% were in an emergent relationship, 7% had a breakup, and 3% had primarily

sexual relationships. These relationship patterns show diversity in young adults' romantic relationship experience.

Arnett (2000) argued that pursuit of higher education and establishment of romantic relationships are two of the chief developmental tasks in emerging adulthood. The large proportion of students who remained single in the first year of university in the present study suggests that there may be a tradeoff between obtaining higher education and forming romantic relationships. That is, some young adults may choose to focus their attention on achieving academic success during the university years and postpone the exploration of romantic relationships. This may be one of the reasons that the age at first marriage has risen for both men and women in North America in the past two decades. An alternative explanation for the 40% single students found in the present study may be that these young people were in the process of adjusting to university life. Starting university is a tumultuous experience that requires adjustment to both the new environment and existing relationships with other people. Some people may need time to become familiar and comfortable with their new environment before they explore possibilities in their romantic lives.

For university students who were involved in romantic relationships in the first year, their relationship patterns show diversity in ways that young people explore romantic relationships. The most common pattern found in the present study is the long-term relationship. Emerging adulthood is the period when young adults make serious commitments to their relationships and stay in a relationship for a longer period of time than in adolescence. Thus, it is expected that among

people who were in relationships, the majority of them were in a long-term relationship that lasted at least six months. The second most common pattern is intermittent relationships. People who belonged to this group engaged in at least two separate relationships within six months. These people may be actively searching for a satisfactory relationship to which they can make serious commitment. In addition to the two most common patterns, there was a small group of people who ended an existing relationship sometime in the first year of university and stayed single for the rest of the year (i.e., breakup). The majority of these people had an ongoing relationship before entering university. Their breakup may be in part due to them attending university so that the existing relationship no longer fit their new environment. These people stayed single after the break possibly because they either needed time to recover from the emotional trauma of the breakup or did not have the chance to engage in a new relationship. Another small group of students fall into the emerging relationship pattern. They started a new relationship during the first year. The relationship pattern with the smallest percentage of people is the primarily sexual relationship. The primarily sexual relationships pattern resembles the hookup relationship that is defined as casual sexual encounters ranging from kissing to sexual intercourse that occur outside a dating relationship (Sassler, 2010). In line with findings on hookup relationships, only a small proportion of young adults engaged in sexual intercourse with a casual partner.

Romantic Relationship Quality

The association between three dimensions of romantic relationship quality and the romantic relationship patterns and duration among emerging adults who were dating at the end of the first year were investigated. As expected, romantic relationship pattern is a strong predictor for levels of intimacy and affection. People who were in a long-term relationship experienced more intimacy and affection in their relationship compared to those who were in intermittent relationships or in emergent relationships. This finding is consistent with prior research findings that show that relationship satisfaction is associated with the length of the relationship (Lehnart & Neyer, 2006). People who stay in a long-term relationship are more likely to be committed to the relationship and are more willing to put effort into building intimacy and affection towards the partner.

Investigation of the association between relationship duration and quality demonstrated an unexpected deceleration of increase in intimacy and affection as relationship duration increased. Specifically, levels of intimacy increased for people in relationships for which the duration was between 0 to 15 months. However, intimacy started to decrease after being in a relationship for more than 15 months. A similar pattern was observed for affection. These are novel, unexpected, and interesting findings. Perhaps the decreases in perceived intimacy and affection are simply a sign that the first blush of love has paled and become more realistic than idealistic. However, it needs to be cautioned that these interesting curvilinear relationships may be attributable to the fact that only 25% of the participants who were dating at the end of the first year of university had been in the relationship for more than 15 months in the present sample. The small

number of people who were in a relationship for longer than 15 months might have skewed the results. Furthermore, there may be other factors not considered in the present study that would potentially alter the observed curvilinear associations. Future studies are needed to better understand these intriguing new findings.

Contrary to the second hypothesis, being in a long-term relationship was positively associated with relationship conflict. Emerging adults who were in a long-term relationship reported higher levels of relationship conflict. This may be because people have more opportunities to be involved in an argument or a fight with their partner as they spend more time in a relationship. Nonetheless, increased level of relationship conflict did not prevent people from experiencing high levels of intimacy and affection as they strive to resolve conflict and improve relationship quality. Simon and colleagues (2008) identified two dimensions of conflict beliefs. They found that constructive conflict beliefs were associated with relationship-oriented conflict goals and negotiation strategies and destructive conflict beliefs were associated with revenge, individual needs, and destructive conflict behaviors, such as aggression and compliance. Despite high levels of relationship conflict, people who stayed in a long-term relationship may be more likely to use constructive conflict negotiation strategies to resolve their differences with the partner. Hence, high levels of relationship conflict did not reduce the quality of their romantic relationship. On the other hand, results from the present study show that relationship duration is not a good predictor of relationship conflict, suggesting that knowing the amount of time spent in a

relationship contributed little to explaining relationship conflict experienced. This finding suggests that knowing whether a person is in a long-term romantic relationship may be a more potent predictor for conflict than knowing relationship duration as measured in months.

Finally, the present study examined but failed to find significant effects of gender on the association between relationship pattern and relationship quality. Sacher and Fine (1996) found gender differences in the association between relationship satisfaction and long term relationship outcomes such that relationship satisfaction positively predicted whether a relationship lasted and how committed the person became to the relationship six months later for women but not for men. The authors speculated that women might be more invested in romantic relationships than men. In contrast, the present study investigated the effect of gender through using relationship pattern to predict relationship qualities (i.e., intimacy, affection, and conflict). The nonsignificant results in the present study suggest that being in a long-term relationship was associated with higher levels of intimacy, affection, and conflict irrespective of the gender of the person. It is important to note that the relatively small sample size in the present study might have limited the power to detect potential gender differences.

Academic and Social Adjustment to University in the First Year

The covariation between romantic relationship patterns and academic and social adjustment to university over a six-month period in the first year was examined. For academic adjustment, there was no significant change over time in the first year. Contrary to the third hypothesis, people belonging to different

relationship patterns were indistinguishable in their academic adjustment development in the first year of university. Young adults in a long-term romantic relationship did not differ from those who were single or those who were in other romantic relationships in terms of their academic adjustment trajectories over time.

For social adjustment, again there was no significant change over time in the first year. However, there was significant difference between young adults who were single and those who were in relationships in the first year in terms of their social adjustment at the beginning of the year. Young adults in any relationships showed better social adjustment than those who were single when they first started university. Neither group showed significant change in social adjustment through the first year. This finding suggests that young adults who engage in romantic relationships may possess better social skills that help them make positive adjustment to the social environment of university in comparison to those who are single.

In general, the present study did not find evidence to support the hypothesis that emerging adults in a long-term relationship make better adjustment to university than others. Whether young people are in a romantic relationship or not may not have significant influence on their adjustment to university. It appears that the emotional comfort and support of being in a stable romantic relationship does not help facilitate the adaptation to university's new academic environment. It is worth noting, however, that I speculated that being in a romantic relationship would enhance adjustment to university for young adults potentially due to better physical and mental well-being. Since well-being was not examined in the present

study, it is possible that the lack of findings may be due to participants having similar levels of physical and mental well-being. That is, if participants in the present sample had comparable levels of physical and mental well-being regardless of whether they were in a relationship or what kind of relationships they were in, then relationship patterns might not be a potent predictor of university adjustment. Nevertheless, young people in a relationship may have better social skills in the first place that help them make new friends and build new social networks when they start university.

Limitations

There were several limitations in the present study. First, the relatively small sample size reduced the power to detect potential differences among the different relationship patterns. Despite the fact that six different relationship patterns were identified in the first year of university, due to the small number of participants in each of the emergent relationship, breakup, intermittent relationships, and primarily sexual relationships categories, these categories had to be combined in order to perform meaningful analyses involving university adjustment. With a large enough sample size, differences in university adjustment may be detected among the various relationship patterns.

Second, the small number of ethnic minority participants in the present study prevented the examination of ethnic differences in romantic relationship quality and their associations with romantic relationship patterns and university adjustment. Past research shows that Asian, Black, and Hispanic youth develop their romantic relationships differently from White youth in adolescence (Sassler,

2010). There may be ethnic differences in romantic relationship characteristics and development in emerging adulthood as well. The inability to examine ethnic differences in the present study limits the generalizability of the findings.

Third, the present study focused exclusively on the romantic relationships of emerging adults who attended university. Emerging adults who attended university may place higher value on academic achievement and in turn downgrade the importance of establishing romantic relationships during university years. Therefore, the present findings may not be appropriately generalized to emerging adults who do not go to university.

Conclusion

The present study explored emerging adults' romantic relationship patterns in the first year of university. In addition, the findings suggest that young adults who are in a long-term relationship have more positive relationship qualities than those in relationships of shorter duration. It appears that young adults engaged in relationships may adjust better to their new social surroundings at the start of university than their single peers. Future research is needed to further our understanding of the role romantic relationship plays in the university setting.

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