The Association between the Timing of Sexual Debut and Young Adult Romantic Relationships

by

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BSc., University of Victoria, 2009

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Supervisory Committee

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Abstract

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This longitudinal study investigates whether the timing of sexual debut (early, on-time, or late, compared to one's peers) is associated with young adult romantic relationship quality (i.e., overt and relational victimization, relational aggression, dating worries, and positive dating experiences) either directly or indirectly by moderating the relationship between trajectories of individual factors (internalizing symptoms, externalizing symptoms, and alcohol use) young adult romantic relationship quality. Participants were from a large, six-wave longitudinal study (N = 662, 48% males, M age at T1 = 15.5 years, SD = 1.9 years). I use multi-step regression models to estimate how sexual debut group moderates the association between individual factors and young adult romantic relationship experiences by estimating slopes and intercepts for individual factors and creating interaction terms to test the moderating effect of timing of sexual debut on the slopes and intercepts of individual factors. Gender differences are also investigated. Results indicate that early sexual debut is associated with higher baseline levels of individual factors and directly predicts negative relationship experiences in young adulthood. Early sexual debut moderates the relationship between baseline internalizing symptoms and negative dating experiences and dating worries in young adulthood. Findings also show that early sexual debut moderates the relationship between steeper increases in externalizing symptoms and negative dating experiences and dating worries.

The results provide a better understanding of the longitudinal impacts of adolescent experiences on young adult relationship outcomes.

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Chapter 1: Introduction

In Canada, 30% of 15- to 17-year-olds and 68% of 18- to19-year-olds report having had sexual intercourse (Rotermann, 2012). Approximately, 9% of Canadians report sexual activity before age 15, which current literature defines as developmentally early and non-normative (Tolman & McClelland, 2011). Early sexual debut, or first intercourse experience, is associated with multiple negative outcomes in adolescence, such as a lower likelihood of contraceptive use, increased risk of sexually transmitted infections, unplanned pregnancy, and having multiple sexual partners (Diamond & Savin-Williams, 2009). Yet, sexual debut is considered a normative event that may contribute to the development of social and romantic relationships when it occurs later in adolescence (Wight et al., 2008). Considerable research focuses on the predictors and outcomes of normative and non-normative sexual debut in adolescents (Diamond & Savin-Williams, 2009; Tolman & McClelland, 2011); however, the longitudinal impact of timing of sexual debut on young adult romantic relationships has not received as much attention. In the past, the association between early sexual debut and negative outcomes led to researchers and policy makers to conceptualize adolescent sexual behaviour as inherently risky and to adopt a risk-centric approach to studying the impact of sexual debut (Tolman & McClelland, 2011). Risk-centric research illuminated multiple predictors and negative outcomes of sexual debut, particularly in high-risk populations. In the past, the association between early sexual debut and negative outcomes led to researchers and policy makers to conceptualize adolescent sexual behaviour as inherently risky and to adopt a risk-centric approach to studying the impact of sexual debut (Tolman &

McClelland, 2011). However, sexual debut in late adolescence (ages 15 to 18) is normative and related to the development of positive social relationships. From a developmental perspective, positive or negative outcomes related to the timing of sexual debut may also have longterm effects on the quality of young adult romantic relationships (Spriggs & Halpern, 2008). The present study examines the effects of timing of sexual debut (early, normative, or late) on the quality of romantic relationships in young adulthood.

Timing of Sexual Debut

As noted above, contemporary research that adopts a developmental perspective recognizes sexual debut in mid- to late- adolescence as developmentally normative. Salient events are 'on-time' when they occur in accordance with typical or common youth behaviours. If salient events occur earlier or later than the majority of one's peers, the event is considered 'off-time,' resulting in different interpretations of meaning of the event and can be associated with atypical developmental trajectories, long-term negative outcomes, and different psychological experiences (Albert et al., 2003; Graber, 2013). Although most research focuses on early sexual debut, 21% of individuals from a Canadian sample report 'late debut,' (occurring after age 19) (Region of Waterloo Public Health, 2016). Using this developmental framework, the timing of sexual debut (early or late) could result in greater difficulties in romantic relationships in adolescence and in adulthood. However, the little research that examines the longitudinal associations of 'off-time' sexual debut shows mixed findings regarding whether the effect extends beyond adolescence and into young adulthood.

The Development of Romantic Relationships

In adolescence (typically defined as ages 12 to 18), sexual behaviour often occurs in the context of short-term romantic relationships (Crockett et al., 2003). In a review of adolescent romantic relationships, Collins, Welsh, and Furman (2009) concluded that romantic relationships are developmentally salient for emotional and social functioning and that they have age-associated characteristics, such as relationship length, and both emotional and physical intimacy. Relationships in early adolescences are typically shorter in duration with less emotional and physical intimacy than in romantic relationships in later adolescence. A prevalent framework used to conceptualize the developmental changes in romantic relationships explains the extension of attachment figures from parents to peers and then to romantic partner (Collins, Welsh, & Furman, 2009). In early adolescence, peers take on a salient role, often first in the context of close same-sex friendships. As adolescents begin to find more support in same- and opposite-sex peer relationships, more intense romantic relationships develop. In mid- to late adolescence, participating in social activities with mixed sex groups is common and provides the opportunity to explore and engage in romantic relationships. Early romantic relationships often lack the emotional intensity and support that characterizes peer relationships, but by late adolescence, the romantic partner often becomes a central attachment and support figure (Shulman & Collins, 1997).

Although adolescent romantic relationships tend to be short-lived, the quality of these early romantic relationships has implications for adolescent and young adult well-being (Collins, Welsh, & Furman, 2009; Welsh, et al., 2003). Relationship quality is broadly defined as the degree in which relationships develop intimacy (both physical and

emotional), affection, and nurturance (Collins, Welsh, & Furman, 2009). In a review of adolescent romantic relationships, Collins, Welsh, and Furman (2009) found consistent associations between positive romantic relationship experiences and individual emotional development (eg, distress tolerance and coping), identity formation, and harmonious relationships with others. Positive adolescent romantic relationships are also associated with self-esteem, self-confidence, and social competence (Zimmer-Gembeck, Siebenbruner & Collins, 2004). For some, adolescent romantic relationships are also associated with negative outcomes (Welsh, et al., 2003). Adolescents with more insecure attachments can experience anxiety in romantic relationships, fearing the loss of the relationships or self-silencing to maintain the relationship (Harper, Dickson & Welsh, 2006). Anxiety and self-silencing in relationships is also associated with poorer communication and higher levels of depression (Harper et al., 2006). The short-lived nature of many adolescent romantic relationships is also associated with increased depression for some youth. Both initiation and dissolution of romantic relationships adds stress to the adolescent and can increase depressive symptoms and substance use (Cui et al., 2012; Grello, Welsh, & Harper, 2006). However, as relationship duration increases from adolescence to young adulthood, reports of relationship quality and relationship satisfaction also increases (Furman & Winkles, 2012).

In young adulthood (typically defined as ages 19 to 29), social demands and life goals (e.g. occupational and educational attainment, exposure to expanded social circles) contribute to romantic relationships that are developmentally different from those occurring in adolescence. Emerging adulthood (Arnett, 2015, 2016) is a theoretical developmental stage that recognizes changes in social and life demands across the

transition from adolescent roles to adult roles (Arnett, 2015, 2016). This also influences romantic relationship goals and sexual behaviour. Shulman and Connolly (2013) view the shift to prioritizing life goals over romantic goals as a key step during the transition from adolescence to adulthood. Successful attainment of career and economic stability often marks the entrance to adulthood and the opportunity to shift focus back to relationship goals. In young adulthood, the pursuit of life goals over relationship goals may lead some individuals to engage in casual or short-term romantic encounters, until the individual feels established enough to 'settle down' into longer-term relationships. Others try to balance life and relationship goals simultaneously, and long-term relationships become increasingly common in this age group.

The differences in priorities, experiences, and skills at different developmental stages results in romantic relationships with age-specific qualities and characteristics. Typically, positive romantic relationship experiences in adolescence are associated with positive romantic relationships in young adulthood, whereas negative adolescent experiences are associated with negative young adult outcomes (Collins, Welsh, & Furman, 2009). Madsen and Collins (2011) examined the longitudinal associations between adolescent dating experiences and young adult romantic relationship quality. Participants were recruited from Minneapolis public health clinics as part of a longitudinal mother-child survey of young mothers. Participants in the dating study were considered 'at-risk' if they were born to mothers in poverty. The sample consisted of 73 adults (ages 20 to 21, 51%% female) who also participated in the study as adolescents (ages 15 to 17.5). Two indicators of adolescent relationships; involvement and quality, were not significantly correlated, but each predicted positive qualities in young adult

romantic relationships. Results showed that participants with fewer romantic relationships in adolescence, reported less negative affect in young adult romantic relationships and healthier relationship processes (negotiating, conflict resolution, timely caregiving/care seeking behaviours). In addition, participants who reported positive adolescent dating experiences reported less negative affect in young adult romantic relationships and healthier young adult relationship processes.

Sustaining romantic relationships is a developmental milestone in adolescence that can be particularly stressful (Zimmer-Gembeck & Helfand, 2008). Theories of adolescent relationships posit that adolescents who enter romantic or sexual relationships too early may not be socially and emotionally mature enough to handle the demands of new relationships or may be at risk of having negative dating experiences, such as high levels of dating anxiety and increased risk of experiencing intimate partner aggression. (Longmore et al., 2016; Mortimer & Staff, 2004). A large body of literature links early sexual debut with negative outcomes in adolescence and young adulthood, such as increased substance use, internalizing symptoms, and externalizing symptoms; however, the association between sexual debut and romantic relationship outcomes is not as thoroughly studied (Tolman & McClelland, 2011).

Sexual Activity in Adolescence and Young Adulthood in Canada.

Large-scale surveys conducted in the United States, have found that, although the median age of sexual debut is increasing, a stable proportion of young adolescents' report having sexual intercourse, (7% of adolescents in 2001 and in 2004) at or before 13 years of age (Grunbaum et al., 2001, 2004; Halpern et al., 2000). Investigations of early debut used age 13 as the cut-off for early debut (Diamond & Savin-Williams, 2009). This is

based on large-scale, US-based research which showed ethnic disparities; 19% of African American adolescents reporting sexual intercourse before age 13, compared to only 4% of Caucasian youth. In contrast, a study with a Canadian sample found very little difference between ethnic groups and sexual debut. In fact, overall Caucasian adolescents reported initiating sexual activity earlier than adolescents of other ethnic backgrounds, indicating that findings from US samples may not be generalizable to a Canadian sample (Williams, Connolly, & Cribbie, 2008).

Using Statistics Canada data from the Canadian Community Health Survey, Rotterman (2012) defined early sexual debut as occurring before age 15. Rotterman found that 9% of those sampled in 2009-2010, had sexual intercourse before age 15. This proportion was not significantly different than the sample from 2003, suggesting a stable trend over time for Canadian adolescents. Furthermore, the survey showed sex differences within the early debut group; 10% of males compared to 8% of females reported sexual intercourse before age 15. More recent research using US-based samples also define early sexual debut as occurring before age 15 (Spriggs & Tucker Halpern, 2008; Vasilenko, Kugler, Butera, & Lanza, 2014). The current study provides further knowledge regarding rates of timing of sexual debut in a Canadian community-based, representative sample, using age 15 or younger as the cut-off for early sexual debut.

What Predicts Early Sexual Debut?

Research has identified biological, psychological, social, and parental factors that influence the timing of sexual debut. However, confounding factors (i.e., gender, ethnicity, socioeconomic status) have made it difficult to understand the specific

association between risk and predictive factors and timing of sexual debut (Zimmer-Gembeck & Helfand, 2008).

Biologically, pubertal timing predicts sexual debut. Individuals who undergo puberty earlier than their peers are more likely to engage in sexual activity at an earlier age (Halpern, Kaestal, & Hallfors, 2007). The association between pubertal timing and sexual debut is more consistently found in female than in male samples; however, these differences may be due to inconsistencies in definitions and measurement of male pubertal timing versus the consistent measure of female puberty as onset of menstruation (Kirby, 2002; Zimmer-Gembeck & Helfand, 2008). The developing brain of adolescents and the increased pubertal hormones can lead to risky decision making in early developing adolescent. Blackmore and Robbins (2012) found that in the adolescent brain, the impulse control and response inhibition develops slower than the non-linear development of the reward pathways. This dissociated development of behavioural regulating pathways leaves adolescents vulnerable to making risky decisions.

Parental factors and family structure also influence the timing of sexual debut (Diamond & Savin-Williams, 2009).Regardless of gender or ethinicity, adolescents from single-parent or blended family households are more likely to have an early sexual debut compared to adolescents with an intact family structure of two-biological parents (Longmore et al., 2004; Upchurch et al., 1999). The influence of single-parent or blended family households may be explained by parental factors and family processes such as, parental monitoring, parental support, and parental control (Diamond & Savin-Williams, 2009). The factor most consistently associated with delaying sexual debut is parents' expressed disapproval of adolescent sexual activity (Buhi & Goodson, 2007).

Single-parent households typically have lower household income resulting in a lower socio-economic status (SES). In a study of 2,135 (51% female) Canadian youth, ages 15 to 19, 13% of females and 11% of males reported having sexual intercourse before age 15 (classified as early debut). Early debut was significantly associated with multiple measures of parental SES, including lower likelihood of living with both parents, lower maternal education, and lower father education (Langhill, Hughes, Murphey, & Rigby, 2005).

Studies examining the influence of peers show that associating with peers engaged in deviant behaviour (e.g., substance use, cigarette use, sexual activity, and school delinquency) is consistently associated with early sexual debut. Historically, early sexual debut was classified as problem behaviour, related to school delinquency, association with deviant peers, fighting and aggression, and cigarette and alcohol use (Jessor & Jessor, 1977). However, some research shows alcohol use has a more consistent association with sexual debut than other problem behaviours (Madkour et al., 2010; Zimmer-Gembeck & Helfand, 2008). For example, in a cross-cultural study of five developed nations, Madkour and colleagues (2010) used a problem behaviour framework to examine the psychosocial correlates of early sexual debut. Participants were 15-year-old adolescents from Finland, Scotland, France, Poland, and the United States (N = 5,164, 56.20 % female). Results showed a significant positive association between early sexual debut and alcohol use for both genders across all five nations. The association persisted in multivariate analysis that controlled for other psychosocial factors such as household composition, SES, parental communication, and school attachment.

Mental health symptoms, typically anxiety and depression, are also associated with timing of sexual debut but this association may be gender- and age- specific. Using data from the National Longitudinal Study of Adolescent Health (ADD Health), Longmore et al. (2004) examined the influence of self-esteem and depressive symptoms on the timing of sexual debut (N = 7,965, 61.52% female) found that depressive symptoms had a greater influence on sexual debut timing than self-esteem for both boys and girls. Spriggs and Halpern (2008) found that pre-debut depressive symptoms were associated with early sexual debut (occurring between ages 10-15 years old) for females, but not for males. However, Golden, Furman, and Collibee (2016) examined trajectories of internalizing and externalizing symptoms, using linear growth curve models with age of sexual debut as a time invariant predictor. Results showed that later debut was associated with lower levels of internalizing and externalizing symptoms over time, regardless of gender.

However, positive peer behaviour show mixed findings in the influence of person the timing of sexual debut. In a study of 2,436 ADD Health participants (56% female), Sieving, Eisenberg, Pettingell, and Skay (2006) examined how peer behaviours predict adolescent sexual debut controlling for gender, family structure, and romantic relationship history. Logistic regression analysis showed adolescents with sexually active peers had only slightly greater odds (odds ratio, 1.01) of early sexual debut, compared to adolescents who did not have sexually experienced peers. Adolescents who believed sexual experience would gain them respect from peers had 1.20 times greater odds of sexual debut between waves compared to adolescents that did not hold this belief. Conversely, having peers that engage in prosocial behaviour (i.e., community or religious

affiliations) or that do not engage in sexual activity is associated with delayed onset of sexual activity (Carvajal et al., 1999; Landor et al., 2010).

As highlighted above, a large body of literature exists showing early sexual debut is associated with gender- and age- specific pre-debut differences (Diamond & Savin-Williams, 2009). The current study accounts for initial differences in SES, alcohol use, internalizing, and externalizing symptoms between early, on-time, and late debut groups and examine post-debut outcomes associated with timing of sexual debut.

Why is Early Sexual Debut Risky?

Risk-centric research has highlighted negative consequences associated with early sexual debut, including sexual risk behaviours, substance use, and poor mental health (Diamond & Savin-Williams, 2009). Early sexual debut is also associated with sexual risk behaviours in adolescence. For example, Coker and colleagues (1993) estimated that adolescents with an early sexual debut were 50% less likely to use condoms and seven times more likely to experience unintended pregnancy. Earlier sexual debut has also been linked to more sexual partners. In a cross-sectional study of sexually active 16- to 18-year-olds (N = 5315, 48% female) youth classified as the early debut group (sexual debut before age 13) had more sexual partners within a three-month period, engaged in sexual activity while intoxicated, and had unprotected sex (Sneed, 2009).

Early sexual debut is also linked to sexual risk behaviours in young adulthood. In a longitudinal study using data from the National Longitudinal Study of Adolescent Health, Kugler et al. (2015) examined the consequences of early sexual debut (before age 15) on health and behavioural outcomes of young adults ages 20-25 years old. With a sample of 1,902 individuals, early initiators had 3.33 greater odds of having two or more

sexual partners in the last year, regardless of gender. Early debuting females also had 3.13 times greater odds of having a sexually transmitted infection (STI) in the last year, compared to females with a normative debut.

Risky alcohol use. Adolescents with an early debut are also more likely to have sex while intoxicated (Diamond & Savin-Williams, 2009; Sneed, 2008; Vasilenko et al. 2014). Moreover, associations between timing of sexual debut and post-debut levels of substance use persist throughout adolescence and into young adulthood (Golden, Furman, & Collibee, 2016; Hallfors et al., 2005). In a longitudinal study of 289 adolescents (57% females), Crockett, Bingham, Chopak, and Vicar (1996), found both males and females who reported an earlier sexual debut than their on-time or late debuting peers (<15.5 years for females and <14.75 years for males) also report higher alcohol and drug use throughout adolescence. As predicted by the problem behaviour framework, the comorbidity of sexual risk, substance use, and other problem behaviours has also been shown to persist into adulthood (Epstein, Hill, Bailey, & Hawkins, 2013; McGue & Iacono, 2005).

Internalizing symptoms. Sexual risk and substance use behaviours also predict internalizing symptoms in adolescence. With a large sample (N = 13,491, 52% female) of participants from the ADD Health survey, the temporal order of depressive symptoms, sexual risk, and substance use was examined to better understand if sexual risk taking and substance use risk is preceded by depressive symptoms or if depressive symptoms arise after sexual and substance use risks emerge (Hallfors et al., 2005). Results showed that high-risk sexual and substance use behaviours predicted later adolescent depressive symptoms, for both males and females. Further, for adolescents who initially abstained

from high-risk sexual and substance use behaviours; depressive symptoms did not predict subsequently engaging in these behaviours. However, depressive symptoms predicted engaging in high-risk behaviours (eg. increased substance use) for females who were already experimenting with sexual activities and substances when they began having sexual intercourse.

Research on the effect of sexual debut on internalizing symptoms also indicates gender- and age- specific outcomes. Meier (2007), with a sample of 8,563 ADD Health participants (54% female), compared post-debut depressive symptoms in sub-groups of adolescents who had sexual debut earlier than their same-age peers to symptoms in an adolescents who had an on-time or later debut. Overall, sexually active adolescents had higher depressive symptoms than abstinent peers. Analysis by subgroups also showed significant differences in depressive symptoms in females, but not males. Also, significantly higher levels of depressive symptoms were found in the early-debut subgroup compared to both on-time and late debut groups. In addition, adolescents who ended a sexually active romantic relationship had higher depressive symptoms than adolescents that ended a sexually abstinent romantic relationship regardless of timing of sexual debut. These results highlight the interconnectedness of sexual debut, internalizing symptoms, and romantic relationships; however, the connection is not well understood.

Golden, Furman, and Collibee (2016), using linear growth curve analysis, found that early debut predicted increased internalizing and externalizing symptoms, and substance use throughout adolescence and into young adulthood. However, early debut was also associated with greater romantic relationship satisfaction and sexual satisfaction for males, but not females. The current study examines the relationship between sexual

debut and negative outcomes (internalizing and externalizing symptoms, and substance use) as well as how the association between sexual debut and negative outcomes relate to relationship quality in young adulthood.

Early Sexual Debut and the Quality of Romantic Relationships

Historically, sexual debut and establishing romantic relationships were examined in separate bodies of literature, with little overlap (Tolman & McClelland, 2011). However, recent literature that adopts a developmental perspective now looks at how sexual debut and romantic relationships co-develop and influence each other. Furman and Winkle (2012) argue that sexually active romantic relationships have different meanings and outcomes in adolescence than in young adulthood. For example, the frequency of sexual intercourse in adolescent relationships is negatively associated with relationship satisfaction and may be associated with increased dating worries and anxiety, whereas frequency of sexual intercourse in young adult relationships is positively related to relationship satisfaction and commitment.

Longmore, Manning, Copp, and Giordano (2016) examined the longitudinal association between adolescent sexual activity and young adult relationship satisfaction and intimate partner violence (IPV). With a sample of 294 young adults, ages 22 to 25 (55.10% females), they found that having had more sexually active romantic relationships in adolescence was associated with greater odds of experiencing IPV in young adulthood. Relationship churning (i.e., breaking up and getting back together) and sexual non-monogamy (i.e., multiple concurrent sexual partners) also mediated the relationship between number of sexual romantic partners and young adult IPV during young adulthood. In an earlier study, sexual non-monogamy in adolescence was

associated with higher depressive symptoms and lower self-esteem in young adulthood (Manning, Longmore, Copp, Giordano, 2014). Yarovsky and Timmons (2014) examined the longitudinal relationship between attachment style, sexual debut, and IPV in a sample of 137 undergraduate females, ages 18-25. Early sexual debut and anxious attachment styles were both independently associated with higher levels of IPV; however, the association did not persist in multivariate models.

Late Sexual Debut

Although early sexual debut is associated with adolescent and young adult outcomes, some research suggests that late sexual debut may also have implications for young adult relationships (Sandford et al., 2008). Developmental theories such as the developmental-task theory (Havighurst, 1948) argue that adolescent romantic relationships provide opportunities to practice emotional and social skills that can be used to negotiate and maintain future relationships. Individuals who delay these experiences may lack the opportunities to practice intimate relationship behaviours (Vasilenko, Lefkowitz, and Welsh, 2014). Sandfort et al. (2008) found that late sexual debut (after age 18) was associated with lower sexual risk taking in young adulthood, including fewer sexual partners, and less substance use. Males with a late sexual debut also reported increased sexual dysfunction including difficulty with arousal and orgasm. Holway and Tillman (2015) found that females with a late sexual debut report higher relationship satisfaction in young adulthood and that the association was moderated by a lower likelihood of experiencing coerced or forced sexual activity. The existing literature highlights that there are varying outcomes associated with early, on-time, and late sexual debut. However, a better understand of how the timing of sexual debut influences

relationship quality throughout adolescence and into young adulthood would help inform prevention efforts to support healthy social, emotional, sexual and romantic development in adolescence and young adulthood.

The Present Study

The current study adds to the research on the co-development of sexual activity and romantic relationships from adolescence to young adulthood by examining how the timing of adolescent sexual experiences are associated with young adult romantic relationship quality. With a community-based sample, I examine the longitudinal impact of timing of sexual debut on young adult romantic relationship quality, including positive relationship experiences, negative relationship experiences, and dating worries and anxiety. I hypothesized that non-normative debut (early and late) will moderate the association between individual factors (risky alcohol use, internalizing, and externalizing symptoms) and the quality of romantic relationships in young adulthood. Specifically non-normative sexual debut and higher levels of individual factors are associated with lower quality romantic relationships in young adulthood.

Chapter 2: Method

Participants

Data are from the Victoria Healthy Youth Survey (V-HYS), a prospective longitudinal survey which followed a randomly selected community-based sample of youth (N = 662; 52% female) biannually from 2003 (T1) to 2013 (T6). The majority of participants identified as Caucasian (85%) and the sample is representative of diverse socioeconomic classes. The final sample of the V-HYS is representative of the population from which it is drawn (see Leadbeater, Thompson, & Gruppuso, 2012 for further study details). At T1, participants ranged in age from 12 to 19 (M_{age} = 15.5 years, SD = 1.9 years); 64% lived with their biological parents; 90% of fathers and 76% of mothers were employed (either part-time or full-time).

Attrition analyses compared youth who remained in the study by T6 (n = 478) and those who did not have data (n = 184) on T1 demographic and study variables. Participants who remained in the study were more likely to be female ($\chi^2(1, 662) = 8.77$, $p = .003$) and had slightly higher T1 SES (parental occupational prestige; M = 6.73, SD = 1.66), $F(1, 636) = 19.39$, $p < .001$, compared to non-participants (M = 6.05, SD = 1.94).

Procedure

Households (n = 1,036) with an eligible (ages 12 to 18) youth were identified from a random sample of 9,500 telephone listings. Six hundred and sixty-two youth agreed to participate and youth (and the parent or guardian for under age 18) provided written consent for their participation at each wave. Trained interviewers conducted the assessments through individual interviews in the youth's home or another private place.

Items dealing with sensitive topics (e.g., sexual behavior and substance use) were strictly self-report. This self-administered package was placed in a sealed envelope not accessible to the interviewer. Participants receive honorariums at each time point. Retention rates were high across assessments: 87% (T2), 81% (T3), 69% (T4), 70% (T5), and 72% (T6). The university's research ethics board approved the research protocol each wave.

Due to legal considerations, participants under 14 years were not asked questions regarding sexual behaviour, also, participants who reported never having sex, did not answer sexual behaviour questions, and were excluded from analysis. The current study includes a sample of 585 participants who reported sexual activity at some point during the 6 waves of data collection. Table 1a and 1b provides a breakdown on number of participants in each sexual debut group.

Measures

Negative Dating Experiences. Negative dating experiences is measured using of the sum total of three subscales from the Romantic Relationship Quality self-report measure (Linder et al., 2002; Morales & Crick,1998). The subscales used include relational dating aggression, relational dating victimization, and overt dating victimization. The current study uses T6 relationship data to represent young adult relationship outcomes, T5 relationship data was used in cases when T6 data was unavailable.

Relational dating aggression. Relational dating aggression is a five-item subscale derived by asking participants to rate how true each statement was for them, from 1 (not at all true) to 5 (very true). Items were (i) I have cheated on my partner because I was angry with her/him; (ii) If my partner makes me mad, I will flirt with another person in

front of him/her; (iii) I give my partner the silent treatment when s/he hurts my feelings in some way; (iv) I try to make my partner jealous when I am mad at him/her; and (v) I have threatened to break up with my partner in order to get her/him to do what I wanted. Cronbach's alpha for T5 and T6 are .52 and .51 respectfully.

***Relational dating victimization*.** Relational dating victimization is a five-item subscale derived by asking participants to how true each statement was for them, from 1 (not at all true) to 5 (very true). Items were (i) My partner doesn't pay attention to me when s/he is mad at me; (ii) My partner tries to make me feel jealous as a way of getting back at me; (iii) When my wants something, s/he will ignore me until I give in; (iv) My partner has threatened to break up with me in order to get me to do what s/he wants; and (v) When my partner is mad at me, s/he won't invite me to do things with our friends. Cronbach's alpha for T5 and T6 are .71 and .75 respectfully.

***Overt dating victimization*.** Overt dating victimization is a four-item subscale derived by asking participants to rate how true each statement was for them, from 1 (not at all true) to 5 (very true). Items were (i) My partner has threatened to physically harm me in order to control me; (ii) My partner has threatened to physically harm me in order to control me; (iii) My partner has pushed or shoved me in order to get me to do what s/he wants; and (iv) My partner verbally or physically pressures me to take sexual risks (such as not using a condom or contraceptive, or being sexually active with certain people, etc.). Cronbach's alpha for T5 and T6 are .70 and .77 respectfully.

Positive Dating Experiences. Positive dating experiences is measured using the Relationship Commitment subscale from the Romantic Relationship Quality self-report measure (Linder et al., 2002; Morales & Crick,1998). The three-item subscale is derived

by asking participants to rate how true each statement was for them, from 1 (not at all true) to 5 (very true). Items were (i) I feel a strong bond with my partner; (ii) My partner and I are really important to each other; and (iii) I can rely on my partner. The current study focuses on T5 and T6 relationship data to represent young adult relationship outcomes. Cronbach's alpha for T5 and T6 are .76.

Dating worries and anxieties. Worries about the continuity of one's romantic relationship were assessed using nine items developed for the Victoria Healthy Youth Survey (Leadbeater, Banister, Ellis, & Yeung, 2008). Participants rated on a five-point Likert scale (0 = never to 4 = always) how often they spent time worrying about specific aspects of their relationship (e.g., ''Whether he/she is committed to the relationship;'' ''How much he/she likes you,'' "Whether he/she likes your physical appearance."). Participants were asked to report on the partner they have the most involvement with. The current study focuses on T5 and T6 relationship data to represent young adult relationship outcomes. Cronbach's alpha for T5 and T6 are .83 and .85 respectfully.

Sexual debut. At each wave, age of sexual debut was determined by asking, "How old were you the first time you had sex?" Response options ranged from "younger than 15" and increased by increments of one year to "29 years old." Participants first response to this question was used to determine debut group for the current analysis (N = 585, M = 16.67, SD = 2.27). Consistent with the literature, responses of "younger than 15" are classified as 'early sexual debut' (n = 90, 15% of respondents) (Albert et al., 2003). Participants who reported sexual debut within one standard deviation of the mean (15 to 18 years of age) make up the 'on-time' debut group (n = 385, 65.8% of

respondents) and participants who reported sexual debut one standard deviation about the mean (19 years or older) make up the 'late' debut group (*n* = 110, 19% of respondents).

Internalizing symptoms. Internalizing symptoms were assessed using the Brief Child and Family Phone Interview (BCFPI; Cunningham, Boyle, Hong, Pettingill, & Bohaychuk, 2009). The BCFPI includes items based on DSM-IV criteria for child and adolescent mood and anxiety disorders and has demonstrated strong psychometric properties (Leadbeater et al., 2012). The internalizing subscale contains 12 items that assess symptoms of general anxiety (e.g., ''Do you notice that you worry about past behavior?'') and depression (e.g., ''Do you notice you get no pleasure from usual activities?''). Participants were asked to rate each item on a 3-point Likert scale ranging from 0 (never) to 2 (often). Items were summed. Cronbach's alpha for across all waves ranged from .81 to.89.

Externalizing symptoms. Externalizing symptoms were assessed by measuring symptoms of Oppositional Defiance Disorder (ODD) and Attention Deficit Hyper Activity Disorder (ADHD). The Brief Child and Family Phone Interview (BCFPI; Cunningham et al. 2009) assesses DSMIV-oriented criteria for child and adolescent psychiatric disorders, including ODD and ADHD symptoms. Each disorder was measured by 6 items that were rated on a three-point Likert scale (0 = never,1=sometimes, or 2 =often) in response to the question, "Do you notice that you […item]." Items for the ODD scale include; "…are easily annoyed by others?" "…are angry and resentful?" and "… are cranky (irritable)?" Items for the ADHD scale include "…jump from one activity to another?" and "are impulsive?". Scale scores were summed

for this study and ranged from 0 to 12. Cronbach's alpha for ODD symptoms across all waves ranged from .71 to .76 and from .66 to .73 across all waves for ADHD symptoms.

Risky alcohol use. Risky alcohol use was measured by the frequency of heavy episodic drinking (HED). Participants' self-reported frequency of binge drinking events (e.g., "How often in the past 12 months have you had 5 or more drinks on one occasion?") on a five-point Likert scale ranging from, 0 = never to 4 = more than once a week (Thompson, Stockwell, Leadbeater & Homel, 2014). At wave 6, 93 participants reported binge drinking once a week or more. The most common response 'a few times a year' was endorsed by 160 participants.

Socio-economic status. Participant-reported parental occupation was coded from 1 to 9 using the Hollingshead Occupational Status Scale (Bornstein, Hahn, Suwalsky, amd Hanes, 2003). The highest level of occupational prestige for either parent was used as a proxy for adolescent SES.

Statistical Analysis

Using Mplus version 7.3 (Muthen & Muthen, 1998-2012) for all analysis. A three-step regression analysis was conducted and all steps were included in a single model to account for covariance between variables. Full-information maximum likelihood estimator was used to minimize bias due to missing data. The first step in the regression model included time-invariant demographic variables: age at time 1 (centered at age 12), sex, SES, and sexual debut group. The second step used each individuals' time-in-study as a metric of time, to estimate slopes and intercepts of substance use, internalizing, and externalizing which were then regressed on the romantic relationship outcomes. The third step evaluated the moderating effects of sexual debut, by creating

interaction terms between debut group and the slopes and intercepts of the individual factors in the second level of the model. Interaction terms were then regressed on each of the three romantic relationship outcomes.

Chapter 3: Results

Descriptive Statistics

Tables 1 shows the number of participants in each sexual debut groups as well as the number of each group that are in romantic relationships (i.e., early, on-time, and late). Table 2 provides descriptive statistics (M of individual variables for each debut group. Table 3 provides descriptive statistics of young adult relationship outcome variables for each debut group.

Table 1
Debut Group Descriptive Statistics

	Early	On-Time	Late
Debut Age Range	<15 years old	15-18	>19
N by Wave 6	90 (15.4%)	385 (65.8%)	110 (18.8%)
# In Relationship at Wave 1	31 (34.4%)	101 (26.2%)	4 (3.63%)
# In Relationship at Wave 6	34 (37.8%)	231 (60.0%)	64 (58.2%)

Table 2
Means and Standard Deviations of individual variables by debut group

	N= 585		Parental SES	Heavy Episodic Drinking		Internalizing Symptoms		Externalizing Symptoms	
	Male	Female	T1	T1	T6	T1	T6	T1	T6
On-time Debut	186	199	6.64 (1.72)	0.68 (1.03)	1.56 (1.22)	8.75 (4.13)	8.15 (4.76)	4.34 (2.27)	3.09 (2.24)
Early Debut	45	45	6.23 (1.87)	**1.09 (1.30)**	1.71 (1.23)	**9.59 (4.87)**	**9.86 (5.27)**	**5.29 (2.52)**	3.76 (2.34)
Late Debut	48	62	6.69 (1.68)	.24 (0.56)	**1.06 (1.08)**	7.99 (4.02)	7.79 (4.61)	**3.68 (2.00)**	**2.83 (1.88)**

Note. Bolded items represent one-way analysis of variance results showing significant differences compared to the on-time debut group ($p < .05$).

Table 3

Means and Standard Deviations of relationship variables and subscales by debut group

	Relationship Quality (Positive)		Dating Worries/ Anxiety		Relational Dating Aggression		Relational Dating Victimization		Overt Dating Victimization	
	T1	T6	T1	T6	T1	T6	T1	T6	T1	T6
On-time Debut	10.00 (2.16)	10.41 (2.16)	6.69 (5.65)	10.91 (5.56)	2.13 (2.42)	1.87 (2.10)	1.85 (2.02)	2.46 (2.63)	0.18 (0.73)	0.26 (1.11)
Early Debut	10.74 (1.81)	**9.38 (2.66)**	6.77 (7.18)	**14.06 (7.26)**	2.19 (3.05)	**2.76 (2.64)**	1.82 (2.38)	**3.66 (4.56)**	0.25 (0.96)	**1.08 (2.34)**
Late Debut	11.75 (.50)	**10.91 (2.09)**	6.75 (2.87)	**8.93 (5.67)**	0.00 (0.00)	**1.41 (1.55)**	0.25 (0.05)	**1.59 (2.36)**	0.00 (0.00)	0.17 (0.70)

Note. Bolded items represent one-way analysis of variance results showing significant differences compared to the on-time debut group ($p < .05$).

Demographic Variables on Romantic Relationship Quality.

Table 4 summarizes the association between demographic variables individual factors and interaction terms on the three romantic relationship quality outcomes. The first step looked at the association between time-invariant demographic variables and romantic relationship quality outcomes.

Positive dating experiences. Sex was positively associated with positive dating experiences in young adulthood ($b = 0.57$, SE = .22, $p < .01$), indicating that females are more likely to report more positive dating experiences. Age, SES, and sexual debut group were not significantly associated with positive dating experiences.

Negative dating experiences. Age at time 1 was significantly associated with higher reported negative dating experiences ($b = 0.25$, SE = .11, $p < .05$), indicating that older adolescents repost more negative dating experiences. Early sexual debut was also

significantly associated with negative dating experiences (b = 19.67, SE = 9.27, p < .05). Adolescents that have an earlier sexual debut compared to their peers report higher levels of negative dating experiences in young adulthood.

Dating worries and anxiety. Ages, sex, SES, and sexual debut group were not significantly associated with dating worries and anxieties.

Individual Factors on Romantic Relationship Quality.

Step 2 of Table 4 summarizes the association between the slopes and intercepts of individual factors on the three romantic relationship quality outcomes.

Positive dating experiences. Slopes and intercepts for risky alcohol use, internalizing, and externalizing symptoms were not associated with positive dating experiences in young adulthood.

Negative dating experiences. Higher baseline levels of externalizing symptoms were positively associated with higher levels of negative dating experiences in young adulthood (b = 0.25, SE = .09, p < .01). Slopes and intercepts of risky alcohol use and internalizing symptoms were not associated with negative dating experiences in young adulthood.

Dating worries and anxiety. Both baseline levels and the slope of internalizing symptoms were associated with dating worries and anxieties in young adulthood. Higher baseline levels of internalizing symptoms is associated with higher levels of dating worries and anxieties (b = 0.27, SE = .07, p < .001). In addition, steeper increasing slopes of internalizing symptoms is associated with higher levels of dating worries and anxieties (b = 19.62, SE = 8.24, p < .05).

The Moderating Influence of Sexual Debut Group.

Step 3 of Table 4 summarizes the moderating effect of timing of sexual debut on the association between the slopes and intercepts of individual factors on the three romantic relationship quality outcomes.

Positive dating experiences. Late sexual debut has a moderating effect on baseline levels of externalizing symptoms and positive dating experiences in young adulthood (b = 0.21, SE = .09, $p < .05$). More specifically, late-debuting individuals with high baseline levels of externalizing symptoms report higher levels of positive dating experiences in young adulthood.

Negative dating experiences. Early sexual debut has a moderating effect on the association between baseline levels of internalizing symptoms and negative dating experiences in young adulthood (b = 0.50, SE = .25, $p < .05$). Adolescents with an early sexual debut and higher baseline levels of internalizing symptoms have more negative dating experiences in young adulthood. Early sexual debut also had a moderating effect on the association between the slope of externalizing symptoms and negative dating experiences (b = 151.37, SE = 57.71, $p < .01$). Adolescents with an early sexual debut and steeper increasing slopes in externalizing symptoms report higher levels of negative dating experiences.

Dating worries and anxiety. Early sexual debut also had a moderating effect on the association between the slope of externalizing symptoms and dating worries and anxieties in young adulthood (b = 158.91, SE = 80.79, $p < .05$). Adolescents with an early sexual debut and steeper increasing slopes in externalizing symptoms report higher levels of dating worries and anxieties in young adult romantic relationships.

Table 4

Model estimates and standard errors of demographic, debut group, and individual factors predicting young adult relationship outcomes.

		Positive Dating	Negative Dating	Dating worries
Demographic Factors	Sex	**0.57 (0.22)****	-0.77 (0.47)	0.64 (0.54)
	Age	0.02 (0.05)	**0.25 (0.11)***	-0.04 (0.14)
	SES	-0.04 (0.06)	-0.10 (0.15)	0.13 (0.17)
	Early Debut	-4.29 (2.63)	**19.67 (9.27)***	18.82 (11.37)
	Late Debut	0.36 (0.26)	-0.96 (0.52)	-1.14 (0.14)
Individual Factors	HED int	-0.06 (0.08)	0.23 (0.20)	-0.17 (0.23)
	HED slope	-11.31 (16.05)	-7.20 (23.10)	59.12 (58.97)
	INT int	-0.02 (0.03)	0.08 (0.05)	**0.27 (0.07)*****
	INT slope	-4.44 (2.59)	6.62 (4.27)	**19.62 (8.24)***
	EXT int	0.01 (0.05)	**0.25 (0.09)****	0.18 (0.12)
	EXT slope	-11.59 (28.16)	32.46 (48.31)	-40.40 (65.21)
Moderating Effects	HED*Early	-0.19 (0.19)	0.31 (0.58)	-0.37 (-0.51)
	HEDslope*Early	32.30 (32.14)	5.40 (76.03)	30.48 (65.82)
	INT*Early	0.01 (0.07)	**0.50 (0.25)***	0.23 (0.17)
	INTslope*Early	-0.18 (4.04)	-15.23 (12.32)	-12.54 (11.57)
	EXT*Early	-0.25 (0.13)	0.15 (0.37)	-0.01 (0.31)
	EXTslope*Early	-11.59 (28.16)	**151.37 (57.71)****	**158.91 (80.79)***
	HED*Late	-0.03 (0.20)	-0.54 (0.39)	0.62 (0.58)
	HEDslope*Late	-8.10 (25.23)	-43.93 (86.27)	-55.73 (84.95)
	INT*Late	-0.08 (0.05)	-0.04 (0.14)	-0.11 (0.13)
	INTslope*Late	2.27 (2.98)	7.37 (13.63)	9.02 (10.84)
	EXT*Late	**0.21 (0.09)***	0.00 (0.21)	-0.07 (0.26)
	EXTslope*Late	-0.75 (19.95)	-61.43 (49.9)	-29.41 (61.12)

Note. SES = socioeconomic status; HED = heavy episodic drinking; INT = internalizing behaviors; EXT = externalizing symptoms; int = intercept. **p* < .05, ***p* < .01, ****p* < .001.

Chapter 4: Discussion

This study adds to our understanding of how adolescent sexual experiences can influence the quality of young adult romantic relationships and how adolescent sexual experiences moderates the association between alcohol use, internalizing symptoms, and externalizing symptoms and young adult romantic relationship quality. The current study is also one of the few studies that uses a community-based Canadian sample and further expands our knowledge of the health and well-being of Canadian youth and young adults. The proportion of adolescents in each of the sexual debut classes (i.e., early – 15%; on-time - 66%; late- 19%) were consistent with Canadian statistics (Rotterman, 2012), suggesting that 15% of Canadian adolescent may be experiencing a cluster of early emotional and social difficulties and are at-risk for negative consequences in romantic relationships in young adulthood.

Sexual Debut and Individual Factors

Results in Table 2 show that adolescents with an early sexual debut (i.e., > 15 years) had significantly higher baseline levels of alcohol use, internalizing symptoms, and externalizing symptoms compared to their on-time debuting peers. The findings of the co-occurrence of early sexual debut with alcohol use, internalizing and externalizing symptoms is consistent with past research that classifies these behaviours with other problem behaviours (e.g. delinquency, fighting, and cigarette smoking Jessor & Jessor, 1977; Madkour et al., 2010;). Leadbeater, Thompson, and Grupposo (2012) also described the co-occurrence of internalizing and externalizing symptoms in adolescence as a cluster of symptoms that can reciprocally exacerbate each other and can lead to

difficulties coping and marginalization from parents and conventional peers. This explanation is consistent with research that shows that negative or unconventional social relationships predicts early sexual debut (Zimmer-Gembeck & Helfand, 2008). Results paint a picture of a sub-group of adolescents that experience a cluster of symptoms and early difficulties with coping and navigating social relationships causes high adolescent levels of early sexual debut, alcohol use, internalizing symptoms, and externalizing symptoms.

In contrast, late sexual debut may be a protective factor against adolescent symptoms and difficulties (Golden, Furman, & Collibee, 2016). The current study shows that adolescents with a late sexual debut had lower baseline levels of alcohol use and externalizing symptoms compared to on-time peers. This could be due to less opportunity to engage in alcohol use or externalizing behaviours because of the adolescents' positive peer groups or parental monitoring, which are also protective factors delaying adolescent sexual activity (Carvajal et al., 1999; Diamond & Savin-Williams, 2009; Landor et al., 2010;).

The associations between debut group and baseline levels of individual factors indicates that the psychological experience of adolescents who engage in sexual activity early is different than the experiences of adolescents who engage in sexual activity later in adolescence. This is consistent with a developmental approach that posits that salient developmental events that occur 'off-time' can result in atypical developmental trajectories and experiences compared to 'on-time' peers (Albert et al., 2003; Graber, 2013). However, the reasons for the association between sexual debut and alcohol use, internalizing, and externalizing symptoms is not well understood. More research is

needed to understand the temporal order and concurrent associations between timing of sexual debut and adolescent experiences with alcohol, internalizing, and externalizing symptoms as early sexual debut may be an outcome of higher levels of internalizing or externalizing behaviours.

Sexual Debut and Young Adult Romantic Relationships

The two objectives of the current study were to determine the association between debut group and relationship qualities in young adulthood and whether debut group moderated the association between individual factors and the quality of romantic relationships in young adulthood. As discussed, adolescents with an early sexual debut have higher baseline levels of alcohol use, internalizing, and externalizing symptoms, which may lead to difficulties navigating social situations. From a developmental perspective, difficulties in early social relationships may also have effects on the quality of young adult relationships (Spriggs & Halpern, 2008).

In the current study, when controlling for other study variables (i.e., sex, age, SES, and individual factors) early sexual debut directly predicted negative dating experiences and baseline levels and trajectories of internalizing symptoms predicted dating worries in young adult relationships. Early sexual debut also acted as a moderator between baseline internalizing symptoms and negative dating experiences as well as a moderator between slopes of externalizing symptoms and negative dating experiences and dating worries in young adult romantic relationships. These results are not surprising and are consistent with problem behaviour theories and attachment theories in the explanation of the development of romantic relationships. Tracey and colleagues (2003) found that anxious attachment and anxiety in adolescence is associated with high rates of

adolescent sexual activity and anxiety in young adult romantic relationships. Anxious attachment and anxiety in young adult relationships may lead to the tendency to keep partners engaged in a relationship at any cost to prevent abandonment, including self-silencing (Mikulincer & Shaver, 2007; Schachner & Shaver, 2004). Anxiety or fear of communicating ones needs is associated with negative dating experiences (e.g., lower perceived partner support and increased risk of intimate partner violence) in the literature (Furman & Collins, 2008).

It was hypothesized that late sexual debut would also have negative implications for young adult romantic relationships as it is classified as an off-time event; therefore, it is surprising that results showed that late debut has a protective effect moderating the relationship between baseline externalizing symptoms and positive dating experiences. This indicates that adolescents with a normative or late sexual debut may be better equipped to navigate sexual and social situations and make informed sexual and romantic decisions, all skills that are instrumental to negotiating boundaries, reducing self-silencing, and reducing dating worries (Madsen & Collins, 2011; Harper, Dickson & Welsh, 2006). However, the same protective effects were not evident for negative dating experiences or dating worries and anxieties. Kahn and Halpern (2017) found that partner selection rather than debut timing may be more predictive of young adult outcomes. If adolescents with a late sexual debut are making better-informed sexual decisions, partner selection and relationship characteristics may be fundamentally different from relationships between early debuting adolescents. Further research is needed to understand the more nuanced characteristics of romantic relationships early, on-time and

late sexual debut to understand the potential differences or impacts in romantic relationships attributed to the timing of sexual debut.

Limitations

The findings of this study are consistent with the literature; however, some methodological limitations should be considered. Firstly, participants are primarily Caucasian and homogeneity of the sample limits the generalizability of the findings. Although, the sample is representative of the population in which it was drawn (Leadbeater et al., 2012), the experiences of inner city or rural youth may be under-represented and results may not be generalizable to other cultures that have different views on adolescent sexuality and relationships.US-based sample typically show significant differences in the age of sexual debut between different ethnic groups. However, the current study is consistent with the Canadian average age of sexual debut and the proportion of early-, on-time, and late-debuting adolescents in the current study are consistent with nationally represented samples (Rotterman, 2012). A second limitation is that all data were self-report and thus are vulnerable to social desirability bias. To reduce the amount of social desirability bias, sensitive topics were part of the self-administered portion of the survey in which the participant completed the answers in private and sealed the answers in an envelope that used the participant ID number as the only identifier. Interviewers that did not conduct the face-to-face interview coded the self-administered portion of the survey. The stability in responses across waves indicates adequate reliability in the self-reported data.

Another limitation of the current study does not capture the complexity of adolescent romantic relationships and the role of biological development. For example,

Spriggs and Halpern (2008) found differences in pre-and post-debut levels of internalizing symptoms and substance use. Due to the length of the measurement interval it is difficult to determine pre-and post-debut levels of individual factors and baseline levels of alcohol use, internalizing, and externalizing symptoms in the early debut group may be significantly different than the on-time and late debuting peers due to these pre- and post-debut differences and may change during different stages of pubertal development. Also, as noted by Collins, Welsh and Furman (2009), adolescent romantic relationships often involve relationship churning (cycles of breaking up and reconciliation). Relationship churning has been associated with increased anxiety and depression (Cui et al., 2012; Grello, Welsh, & Harper, 2006), thus adolescent relationship experiences can have an impact on the trajectories of individual factors, which was not captured by the present assessment.

The limitations of the current study provide insight into opportunities for further research. Furthering research by Hallfors et al. (2005), examining the temporal order of developmentally salient events and pre- and post-event symptomology can provide more information regarding the experience of adolescents during developmental milestones. This information can inform education and prevention efforts as well as adding to the understanding of the development of romantic and sexual relationships. Another avenue for future research would be to evaluate the concurrent associations between of individual factors and romantic relationship quality for early, on-time, and late debuting adolescents. Understanding the bi-directional associations between romantic relationship quality and individual factors could provide insight into how adolescent romantic experiences and pubertal development influence young adult relationships, and highlight whether

adolescent individual factors and/or adolescent relationship experiences show stronger associations with future romantic relationship quality.

Conclusion

Despite these limitations, the present study contributes to the knowledge of the developmental nature of sexual and romantic relationships. First, I examined associations between demographic variables, timing of sexual debut and trajectories of alcohol use, internalizing, and externalizing symptoms from adolescence to young adulthood. I then examined the moderating effect of sexual debut on the association between individual factors and young adult romantic relationship quality. I build on past research examining associations between first intercourse and mental health during adolescence, by also including investigations of longitudinal associations of timing of sexual debut with internalizing and externalizing symptoms, and substance use. The findings suggest that, on average, adolescents with an early sexual debut have trouble in several domains of well-being as indicated by higher baseline levels of alcohol use, internalizing and externalizing symptoms compared to on-time and late debuting peers. Early sexual debut was also directly associated with negative dating experiences and moderated the effect between baseline levels of internalizing symptoms and negative dating experiences. Internalizing symptoms also predicted negative dating experiences and dating worries/anxieties regardless of the timing of sexual debut. The findings from the current study support literature that advocates for research to shift away from viewing early sexual debut as a deviant behavior, and instead as an indication of difficulties in emotional or social domains (Leadbeater, Thompson & Gruppuso, 2012). While both timing of sexual debut and individual factors contribute to romantic relationship qualities

in young adulthood, partner selection and adolescent dating experiences may also have important implications for young adult relationship outcomes (Kahn & Halpern, 2018).

Implications

The results from this study can inform research, practice, and policies that promote a more comprehensive and developmental approach to sexual education to focus on building capacity to make informed sexual and romantic decisions and to communication within sexual and romantic relationships. The results also highlight a gap in knowledge in the adolescent romantic relationships, early sexual debut, and young adult romantic relationships but indicate that internalizing symptoms may act as a mediator in this relationship. Future research should examine co-occuring association between internalizing symptoms and romantic relationship quality as well as the mediating effects of internalizing symptoms on adolescent and young adult romantic relationship quality. This information which, when considered with the results of the current study, can inform prevention efforts that identify and provide supports for students who are experiencing high levels of internalizing symptoms and who may be at risk of entering a sexual relationships at a young age and may experience negative relationship quality in adolescent and young adult romantic relationships.

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