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Adult attachment style, early sexual experiences, and dating violence victimization

Nicole Yarkovsky
University of Windsor

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ADULT ATTACHMENT STYLE, EARLY SEXUAL EXPERIENCES, AND DATING
VIOLENCE VICTIMIZATION

by
Nicole Yarkovsky

A Thesis
Submitted to the Faculty of Graduate Studies
through Psychology
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada
2011
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Adult Attachment Style, Early Sexual Experiences, and Dating Violence Victimization

by

Nicole Yarkovsky

APPROVED BY:

Dr. E. Maticka-Tyndale
Department of Sociology and Anthropology

Dr. J. Hakim-Larson
Department of Psychology

Dr. P. Timmons-Fritz Advisor
Department of Psychology

Dr. Stewart Page Chair of Defense
Department of Psychology

August 8, 2011

AUTHOR'S DECLARATION OF ORIGINALITY

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ABSTRACT

Recently, Canadians have reported an increase in the prevalence of dating violence, with adolescent girls reporting 10 times the amount of victimization reported by boys (Mahony, 2010). Studies exploring the relation between age of sexual debut and dating violence have shown that an early age at first intercourse significantly predicts victimization, but the research on this association is limited and warrants replication. Additionally, insecure attachment has been independently linked to both dating violence victimization and an early age at first intercourse, but no study to date has examined the relations between all three variables. This study extended the literature on dating violence by exploring the relations between attachment style, age of sexual debut, and dating violence victimization. Anxious attachment and age of sexual debut were significantly correlated with victimization; however, they did not predict victimization above and beyond control variables. Future directions and practical implications are discussed.

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CHAPTER I

Introduction

Intimate partner violence (IPV), or dating violence, is a widespread social concern with consequences affecting the lives of children, adolescents, and adults. Although victims of IPV experience the most obvious emotional and physical consequences, perpetrators, family members, health care organizations, law enforcement, and the general population also endure associated costs (Coker, 2004; Plichta, 2004). Because prevention has been shown possible (Foshee et al., 2004; Wolfe et al., 2003), increased effort should be placed on identifying risk and protective factors.

Research has consistently shown that experiencing dating violence in adolescence places individuals at a heightened risk for revictimization in adulthood (Himelein, 1995; Smith, White, & Holland, 2003). Although considerable research has focused on risk factors associated with partner violence (see Lewis & Fremouw, 2001; Murray & Kardatzke, 2007; Vézina & Hébert, 2007 for reviews), only a history of family violence and substance use have been thoroughly studied. Recent research has found that an early age at first sexual intercourse not only predicted IPV victimization, but also distinguished between individuals who experienced dating violence solely in adolescence versus those who experienced continued victimization into young adulthood (Halpern, Spriggs, Martin, & Kupper, 2009). Interestingly, insecure attachment style has been independently linked to both an early age at first intercourse (Bogaert & Sadava, 2002; Gentzler & Kerns, 2004;) and a heightened risk for IPV (Alexander, 2009; Henderson, Batholomew, Trinke, & Kwong, 2005; Higginbotham, Ketring, Hibbert, Wright, & Guarino, 2007; Sandberg, Suess, & Heaton, 2007)

The purpose of this study was to further evaluate the association between age at first sexual intercourse (sexual debut), attachment style, and the risk of experiencing dating violence. Assessing the relations between these variables will hopefully aid in the development of future prevention and intervention strategies.

Definition and Prevalence Rates

The definition of IPV and other related terms varies widely within the literature and a universally accepted definition has yet to be determined. For instance, IPV, dating violence, dating aggression, couple violence, partner violence, and domestic violence are just some of the terms that have been used interchangeably throughout the literature, which unnecessarily complicates the study of partner violence. The previous terms all share two common elements: a portion referring to the violent or aggressive act, and a portion referring to the individuals involved. Despite the confusion caused by the interchangeable use of the terms “abuse”, “aggression” and “violence”, Emery (1989) argues that distinguishing between these terms requires a social judgment and is beyond the researcher’s responsibility. Instead, he reasons that the responsibility of researchers is to provide a clear operational definition of whichever term they utilize. Conversely, Archer (1994) claims that “aggression” and “violence” are objectively distinct, with physical aggression focusing on the act itself (e.g., hitting) and violence incorporating the consequences (e.g., aggression that leads to injury or death). A review of the literature reveals that most studies do not differentiate aggression and violence by the presence of consequences, and as such, this study will use the terms “aggression” or “violence” to refer to the act itself, regardless of the consequences.

Sugarman and Hotaling (1989) provide a simple definition of dating violence that has been widely adopted in the dating violence literature. They state that dating violence encompasses “the use or threat of physical force or restraint carried out with intent of causing pain or injury to another” within a dating relationship (p. 5). For the purpose of this study, their definition will be expanded upon to include sexual abuse, as well as psychological or emotional abuse. A relationship will be considered to be violent if one or more of the above-mentioned forms of abuse are present.

Moreover, authors differ on how they define a romantic partner. Some restrict their study to individuals who are dating, whereas others include cohabiting, engaged, and married couples. Same-sex relationships and relationships with a higher level of commitment add complexity to the study of IPV because they may be associated with a different set of risk factors. For the sake of parsimony, the present study will only examine current or former heterosexual relationships with commitment levels ranging from dating to cohabiting. Because the present study excludes married or engaged women, the term ‘dating violence’ will be used, as it is most reflective of the study’s population. Nonetheless, various terms will be used in the literature review as they are commonly interchanged and not all mentioned studies pertain solely to “dating or cohabiting” individuals.

As a consequence of the inconsistency in defining IPV, prevalence rates vary depending on the defining criteria used in the specific study. Makepeace (1981) conducted a landmark study investigating the prevalence of dating violence, which subsequently sparked numerous attempts at replication. He found that 61% reported knowing someone who had been a victim of dating violence, and that one in five college

students had experienced physical abuse in a dating relationship. Depending on the criteria used to define dating violence, prevalence rates have ranged from 9% (Roscoe & Callahan, 1985) to 65% (Laner, 1983), with most studies reporting rates somewhere in between (Arias, Samios, & O'Leary, 1987; O'Keefe, Brockopp, & Chew, 1986; Pederson & Thomas, 1992; Stacy, Schandel, Fallnery, Conlon, & Milardo, 1994). In 2006, 29% of a nationally representative sample of Canadian women reported being physically assaulted by a romantic partner at some point after the age of 16 (Lips, 2006). Using a sample of female college students, the same study reported that the lifetime prevalence rate of being a victim of attempted or completed rape was above 20% (Lips, 2006). Similarly, Straus (2004) reported that 29% of a sample of students reported that they had been physically violent toward a partner within the past year. It is important to note that Straus' study did not include psychological abuse, which tends to be even more prevalent (Murray & Kardatzke, 2007). As a result, Straus' already alarming finding may in fact be an underestimate. These percentages are especially worrisome given that social desirability and the subjectivity of violence definitions likely lowers the amount of abuse reported.

Although the literature on spousal abuse reports that the majority of victims are female, the gender prevalence of perpetration and victimization in the dating violence literature has received mixed results. Some studies found that women perpetrate more violence compared to men (Foshee, 1996; Magdol et al., 1997). Alternatively, gender symmetry in perpetration and victimization rates of dating violence is commonly found in the literature. For example, White and Koss (1991) found that 35% of women perpetrated dating violence against their male partners, and 37% of men reported

perpetrating dating violence against their female partners. Although White and Koss found similar rates of perpetration in both men and women, they did not account for possible differences in the motivations driving the use of violence (e.g., self defense). Another complicating factor is the difference in societal perceptions of male and female perpetrators and victims. Male-perpetrated violence against women is likely viewed more negatively than female-perpetrated violence against men. As a result, male perpetrators may be less likely to participate in dating violence research. By the same token, men may be less likely to report victimization, compared to women.

Regardless of the mixed results, violence initiated by men towards women has more devastating consequences (Arias & Johnson, 1989; Makepeace, 1986). Makepeace (1986) reported that women are three times more likely than men to experience severe emotional trauma as a consequence of dating violence. Moreover, there is some evidence to suggest that there are gender differences behind the motivations for using violence (Arias & Johnson, 1989; Bookwala, Frieze, Smith, & Ryan, 1992; Makepeace, 1986; O'Keefe, 1997). Men are more likely to use violence for the purpose of injuring, manipulating, or controlling their partners (Bookwala et al., 1992; Makepeace, 1986), whereas women are much more likely to use violence as a means of self defense (Arias & Johnson, 1989; O'Keefe, 1997). Thus, strictly comparing prevalence rates across genders camouflages the important differences in severity and motives. Clearly, the current research status on dating violence and gender is not definitive, and further research is warranted. In light of the gender differences regarding IPV severity and motivations, the current study will focus solely on female victims of dating violence.

Gender differences aside, dating violence is present as young as early adolescence and continues throughout adulthood, with expected nuances as the duration and commitment level of the relationship vary. Although the majority of early dating violence research focused on young adult samples (Makepeace, 1981; O’Keefe, 1997), recent interest has shifted to adolescence (Halpern et al., 2009; Schiff & Zeira, 2005; Silverman, Raj, Mucci, & Hathaway, 2001). Studies of high school students in the United States have reported IPV rates ranging from 7% to 39% (Bennett & Fineran, 1998; Bergman, 1992; Molidor & Tolman, 1998). Similarly, Wekerle and Wolfe’s (1999) review of dating violence in mid-adolescence concluded that physical and sexual dating violence rates ranged from 10% to 25% in high school, and increased to 20% to 30% by college age. They emphasize the importance of intervening early in the developmental trajectory, before violence takes on a more severe, “adult-like” form. Furthermore, Smith et al. (2003) demonstrated that women who experienced physical IPV in adolescence were at a heightened risk for revictimization in college. They concluded that adolescent IPV was a better predictor of young adulthood IPV than was childhood victimization.

For the majority of adolescents, dating is a healthy part of their development. Unfortunately, for a subset of youth that experience violence in their early relationships, dating may result in unhealthy consequences. In addition to the heightened risk of revictimization, IPV is also associated with physical injury, mortality, substance use, pregnancy complications, and sexually transmitted infections (see Plichta, 2004). Moreover, Silverman and colleagues (2001) found significant associations of dating violence with unhealthy weight control, sexual risk behaviour, and suicidality. The high

rate of dating violence in adolescence and young adulthood, as well as the associated negative consequences, underlines the importance of identifying risk factors associated with dating violence victimization. Early identification of factors indicative of victim-proneness will allow at-risk youth to be more effectively targeted for intervention and support.

Plenty of research has been devoted to identifying risk factors associated with perpetration of dating violence, but less attention has been paid to identifying characteristics associated with victimization. This may be a result of researchers fearing that such a study would imply blame or fault towards the victims of dating violence. By no means does the present study have any such intentions. Simply, this area of research has been identified as a research priority (Lewis & Fremouw, 2001), and the current study hopes that gaining a better understanding of victimology and associated risk factors will serve to improve prevention strategies.

Review of Risk Factors

Dating violence victimization can be described by the term equifinality; meaning that multiple pathways lead to the same outcome (i.e., victimization). The literature contains studies that explore a wide range of variables as possible pathways, or risk factors, associated with dating violence victimization. Recently, Vézina and Hébert (2007) conducted a review of 61 empirical studies that examined risk factors associated with dating violence victimization in adolescent girls and young women age 12 to 24. They assessed a wide range of variables, which they grouped into four categories: sociodemographic, environmental, contextual, and individual factors. While the focus of the proposed study is largely on individual factors, a general overview of the current

research status on risk factors is useful, as these factors likely do not operate in isolation. Vézina and Hébert's overall conclusions were consistent with the findings from other studies, and the following overview has been supplemented when necessary to include other important or more recent research.

Sociodemographic factors. For the most part, the link between dating violence and sociodemographic factors (e.g., age, ethnicity, family structure, and religion) remains relatively weak and inconsistent. Some of the studies on adolescent girls and young adult women found that the risk of experiencing dating violence increased with age (Halpern, Oslak, Young, Martin, & Kupper, 2001; Silverman et al., 2001); however, most of the evaluated studies did not find any relationship between age and dating violence. In his analysis of the prevalence of IPV across the lifespan, O'Leary (1999) indicated that the pattern is best represented by an inverted U-shaped curve, with lower rates among the very young and old and peak rates among individuals aged 15 to 25 years. Likewise, the research on the relationship between ethnicity and dating violence is mixed. Some studies have found that belonging to a minority group acted as a risk factor for experiencing violence (e.g., Halpern et al., 2009), others found that individuals belonging to these same minority groups were less likely to experience dating violence (e.g., Gover, 2004), and still others failed to find any link at all (e.g., Halpern et al., 2001). Lastly, while multiple studies suggested that lack of an intact family structure and not having a religious affiliation were risk factors for victimization, about an equal number of studies found no such link (see Vézina & Hébert, 2007). Nevertheless, these variables may be potential prevention targets as separate studies found that living with both parents (Magdol, Moffitt, Caspi, & Silva, 1998) and participating in regular religious activities

(Gover, 2004) may actually serve as protective factors against experiencing dating violence.

Environmental factors. Environmental factors such as family factors and social network characteristics have been studied in relation to dating violence victimization in adolescent females. Family factors explored in the literature include such variables as parenting style, parental physical abuse, child sexual abuse, and witnessed domestic violence. Small and Kerns (1993) found that an authoritative parenting style, and increased parental supervision, served as protective factors against dating violence. Cyr, McDuff, and Wright (2006) conducted a study on 126 female adolescents to examine the influence of different child sexual abuse (CSA) characteristics (e.g., frequency and duration of abuse, whether penetration occurred, perpetrators relation to the victims) on dating violence. In addition to finding that victims of CSA had an increased likelihood of dating violence victimization, they also found that exposure to and/or being a victim of family violence predicted dating violence victimization. Alexander (2009) extended these findings to a sample of repeatedly victimized adult women, emphasizing the strength of the relation between childhood victimization (i.e., parental physical abuse, CSA, and witnessed IPV), and dating violence victimization. In a longitudinal study, Smith et al. (2003) assessed the relations between the same childhood victimization experiences (i.e., parental physical abuse, CSA, and witnessed IPV) and dating violence among adolescent and college-age women. The authors noted that young women who were at the greatest risk of physical or sexual dating violence were those with a history of childhood victimization (any type) and physical victimization during adolescence. These results were consistent with Vézina and Hébert's (2007) review, which cited 19 studies

that reported a positive association between witnessing or being a victim of family-of-origin violence and dating violence victimization during adolescence. Recently, it has been suggested that abuse during childhood is a distal contributor to dating violence victimization (Alexander, 2009), and that mediating variables, such as an insecure attachment style, may reinforce the relation (Wekerle & Wolfe, 1998).

In their review of social network characteristics, Vézina and Hébert (2007) found a consistent association between the characteristics of the peer group (e.g., having friends who have experienced dating violence) and dating violence; however, the results were mixed as to whether witnessing community violence was a risk factor.

Contextual factors. The characteristics of a couple's relationship that may be associated with dating violence have not been studied extensively, or with proper methodology (i.e., utilizing data from both partners). Mixed results have been reported for the association between length of relationship, time spent with their partner, and emotional attachment to their partner (Vézina & Hébert, 2007). Perceiving a partner to have more power and control, having an older partner, and attending dates in isolated settings have been more consistently linked to an increased risk. It has also been found that most victims of violence are also aggressors (Gray & Foshee, 1997). Because male-perpetrated violence towards women/girls has more serious consequences than female-perpetrated violence towards men/boys, recognizing that aggressive women may also be at an increased risk for victimization is important.

Individual factors. Individual characteristics that are associated with dating violence victimization may change and develop during adolescence making them desirable target variables for preventative strategies. There are a variety of individual

factors, both intrapersonal and interpersonal, that have been investigated as possible risk factors for dating violence victimization. Seven of the studies in Vézina and Hébert's (2007) review examined depressive symptoms as a risk factor, and all seven found that depressive symptoms significantly predicted physical or sexual violence. Self-esteem as a risk factor has received mixed results, with some studies finding that low self-esteem was associated with dating violence (e.g., O'Keefe & Treister, 1998), but others failing to find such link (e.g., Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004). It is important to note that reverse causation is a problem common to studies examining internalizing factors. Thus, it is often difficult to determine whether low self-esteem, suicidal behaviours, and depressive symptoms are predictors of victimization, consequences of victimization, or both.

Externalizing problems (e.g., conduct disorder, substance use, and risky sexual behaviour) have more consistently been linked with dating violence victimization than internalizing problems (Vézina & Hébert, 2007). Similar to the findings on internalizing problems, Roberts, Klein, and Fisher (2003) found that antisocial behaviours and substance use acted as both predictors and as consequences of dating violence victimization among female adolescents. Moreover, because alcohol and drug use is illegal in adolescence, this behaviour may be linked with a deviant peer group or with decreased parental supervision.

In addition to the above-mentioned individual factors, dating-specific variables (such as attitudes and beliefs about relationships and sexuality and past relationship experiences) have also been evaluated as potential risk factors for dating violence victimization. Studies have found that believing dating violence is acceptable (O'Keefe

& Treister, 1998) or having a less conservative view of sexuality (Himelein, 1995), significantly predicted dating violence victimization. Moreover, the association between dating violence and engaging in multiple romantic and sexual relationships has been well supported in the literature (Gover, 2004; Halpern et al., 2001; O'Keefe & Treister, 1998). Nonetheless, some have argued that individuals who have more partners, simply have a greater probability of encountering a violent partner (O'Keefe & Treister, 1998). Other variables related to romantic and sexual experiences (e.g., inadequate use of contraceptives and teenage pregnancy) have also been associated with an increased risk of experiencing dating violence (see Vézina & Hébert, 2007).

Early sexual debut. Developing and accepting one's sexuality is an important developmental task often accomplished during adolescence and an integral part of building and maintaining healthy romantic relationships. In 2005, the average age of first sexual intercourse in Canada was 16.5 years of age (Garriguet, 2005). Garriguet found that approximately 13% of female Canadian adolescents had had sexual intercourse by the age of 14 or 15, and similar studies have reported ranges anywhere from 15% to 39% (Bogaert & Sadava, 2002; Gentzler & Kerns, 2004; Halpern et al., 2009, Maticka-Tyndale, 2008). Unfortunately, the relatively small number of national data sets that have collected data on sexual practices (Maticka-Tyndale, Barrett, & McKay, 2000) is an indication that adolescent sexual behaviour remains understudied. Recently, the age at which an individual first has sexual intercourse has been shown to be predictive of dating violence victimization among adolescent girls (Halpern et al., 2009; Silverman et al., 2001). Early sexual debut may be an event that changes the individual in such a way as to increase the risk of experiencing dating violence, or it may serve as a marker for other

individual characteristics that are associated with dating violence. Silverman et al. (2001) utilized data from the Youth Risk Behavior Survey (YRBS), a self-report questionnaire that is mandated by the Centers for Disease Control and Prevention and administered every two years to high school students in all states of the United States of America. Data were analyzed from the 1997 and 1999 YRBSs, which had 1,977 and 2,186 female participants, respectively. Silverman and colleagues found that approximately 1 in 5 adolescent girls had experienced physical and/or sexual dating violence at some point in their lifetime. They also found that individuals who had sexual intercourse before the age of 15 were more likely to have experienced physical, sexual, or both physical and sexual dating violence. Moreover, the association was strongest for girls that had experienced both forms of violence, suggesting that age at first intercourse may help identify a particularly vulnerable population. Nonetheless, this study contained two important limitations. First, the analysis relied solely on a single item to assess dating violence. Second, like many cross-sectional studies that evaluated the risk factors of dating violence, the direction of the relation between early age at first intercourse and dating violence victimization was unknown. In other words, it cannot be concluded from Silverman and colleagues' study if an early age at first intercourse was a predictor or a consequence of dating violence victimization or whether they occur concomitantly.

In addition to replicating Silverman et al.'s (2001) finding of the association between an early age at first intercourse and dating violence victimization, Halpern et al. (2009) extended this line of research by using prospective data to determine the direction of the relation. Data from 4,134 individuals, who completed all three waves of the National Longitudinal Study of Adolescent Health, were utilized to determine the onset

of victimization, the patterns of persistence or desistance of violence between adolescence and adulthood, as well as the associated individual and experiential characteristics. Whereas some variables significantly predicted one or two patterns of dating violence (i.e., victimization limited to adolescence, onset of victimization in young adulthood, or persistent victimization from adolescence into adulthood), having intercourse before the age of 16 was the only variable associated with all three patterns. Furthermore, an early age at first intercourse was found to significantly differentiate between individuals who experienced victimization solely during adolescence (desistent victimization) and those that experienced victimization in both adolescence and adulthood (persistent victimization), with individuals who had an early sexual debut more likely to experience persistent victimization. Variables that differentiate between adolescent-limited and persistent victimization may be more worthy of investigation as they may distinguish between adolescents who are involved in “play-fighting” behaviour versus those at risk for more severe victimization. Lastly, Halpern et al. demonstrated that an early age at first intercourse was predictive of persistent victimization after controlling for number of sexual or romantic partners. Therefore, an early sexual debut was not associated with a higher risk of dating violence simply because those individuals had more exposure to romantic partners.

Halpern et al.’s (2009) study significantly expanded Silverman et al.’s (2001) by using prospective data and focusing on different patterns of victimization; nonetheless, a few limitations are noteworthy. First, Halpern et al. (2009) had data on physical victimization during adolescence only, and this was derived solely from three items of the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman,

1996). Second, they examined both physical and sexual victimization in adulthood, but did not include data for psychological victimization. Lastly, both Silverman et al. (2001) and Halpern et al. (2009) relied on national data sets that were not designed for the purpose of assessing dating violence, thereby leaving room for future studies to improve upon the methodology by using multi-item measures with reliable psychometric properties.

Both of these studies suggest that an early age at first intercourse may be an important marker for identifying female adolescents who are at risk for experiencing dating violence. However, one major limitation of these two studies is that they did not address whether or not the experience of first sexual intercourse was a consensual experience. Given that individuals who have experienced dating violence in the past are at a heightened risk for revictimization (Himelein, 1995; Smith et al., 2003), specifying that the sexual debut experience was not a victimization experience in itself is necessary. In addition, many studies failed to define sexual intercourse in their survey items leaving the term open to interpretation (e.g., Garriguet, 2005; Silverman et al., 2001). To avoid misinterpreting sexual intercourse as synonymous with vaginal intercourse, Halpern and colleagues (2009) added the specifier “vaginal” to their items. This study expands on Halpern and colleagues’ initiative, and includes separate questions pertaining to age at first vaginal, oral, and anal sexual intercourse.

Attachment style. Attachment style is an individual characteristic that has been independently associated with dating violence victimization (Alexander, 2009; Henderson et al., 2005; Higginbotham et al., 2007; Sandberg et al., 2007; Tracy, Shaver, Albino, & Cooper, 2003) as well as an early sexual debut (Bogaert & Sadava, 2002;

Gentzler & Kerns, 2004). Attachment theory purports that individuals develop beliefs (or working models) about themselves and others in early childhood (Bowlby, 1973), which then provides the framework for the development of sexuality, as well as thoughts and behaviours in later romantic relationships (Diamond & Blatt, 2007). Bowlby (1973) theorized that attachment patterns (secure and insecure) are shaped by actual experiences that occur in one's family of origin and are fairly stable from infancy to adulthood. Furthermore, he noted that people often attract romantic partners who are congruent with the working models they developed during childhood, further reinforcing the model. Hazan and Shaver (1987) extended Bowlby's work on parent-child attachment into the realm of romantic relationships by creating a 3-category (secure, anxious, and avoidant) model that mirrored the original parent-child attachment categories (Ainsworth, Blehar, Waters, & Wall, 1978). Although other models of adult romantic attachment exist (e.g., Batholomew & Horowitz, 1991), all of the models can essentially be reduced down to scales of avoidance and anxiety (Brennan, Clark, & Shaver, 1998).

Regardless of the method chosen to measure adult attachment, research generally shows that insecurely attached individuals are more likely than securely attached individuals to experience negative relationship outcomes. For example, having an insecure attachment style, specifically an anxious attachment style, has been associated with dating violence victimization (e.g., Henderson et al., 2005; Higginbotham et al., 2007; Werkerle & Wolfe, 1998). Higginbotham et al. (2007) examined the relations between adult attachment, religiosity, and dating violence in a sample of 299 female college students. They found that women with insecure attachment styles reported more dating violence victimization than those with secure attachment styles. Henderson et al.

(2005) provided a more specific analysis of the relation between attachment style and dating violence victimization, and found that individuals with a preoccupied attachment style (i.e., high in anxiety and low in avoidance) were at greater risk for physical and psychological abuse. Individuals high in anxiety and low in avoidance traits were characterized as overly invested in others, dependent on others for self-worth, and needy (Henderson et al., 2005). The strong desire for emotional intimacy may cause anxious individuals to overlook potential warning signs of an abusive partner, thus increasing their likelihood of experiencing dating violence.

In addition to associations with dating violence victimization, an insecure attachment style has also been linked to an early age at first intercourse among women (Bogaert & Sadava, 2002; Gentzler & Kerns, 2004). Although avoidant individuals have been found to limit emotional intimacy in a relationship by either avoiding sexual intercourse or participating in casual sex (Brennan & Shaver, 1995; Cooper, Shaver, & Collins, 1998), anxious individuals strongly desire emotional intimacy, which heightens their risk of engaging in risky sexual behaviour (Gentzler & Kerns, 2004). Feeney, Peterson, Gallois, and Terry (2000) found that college students who scored high on attachment anxiety were less able to decline unwanted sex. Moreover, anxious individuals were more likely to see sexual intercourse as a means of expressing love for one's partner (Tracy et al., 2003).

Gentzler and Kerns (2004) examined the relation between insecure attachment and sexual experiences, as well as the potential mediating or causal mechanisms. Their sample consisted of 328 male and female undergraduate students from a midwestern U.S. university. To test the hypothesis that anxiously attached individuals would be more

likely to engage in sexual intercourse at an early age, they divided their sample into three groups: those who had had sexual intercourse at the age of 15 years or younger (below the sample's average age at first intercourse); those who had had sexual intercourse at 16 years or older (above the sample's average age at first intercourse), and those who had not had sexual intercourse. They found a marginally significant interaction between first sexual intercourse and gender ($p < .07$), such that women who had had an early sexual debut scored higher on measures of anxious attachment than those who had a later sexual debut, and men who had not engaged in sexual intercourse scored higher on measures of anxious attachment than those who had had sexual intercourse. Gentzler and Kerns' study demonstrated important gender differences in the age of first intercourse of anxiously attached individuals. Perhaps a significant finding between anxious attachment and an early age at first intercourse would have been found if the women were classified as "early" or "late" based on the average age that girls had first intercourse, instead of the average age of both genders.

Lastly, Tracy et al. (2003) conducted the only known study that has incorporated all three of the present study's domains of interest: adult attachment style, sexual experiences, and dating violence victimization. Two thousand and eleven adolescents aged 13 – 19 were categorized as avoidant, anxious-ambivalent, or secure using Hazan and Shaver's (1990) attachment questionnaire (which Tracy et al. cited as the only self-report attachment measure available at the time their study was designed). Participants were queried on sexual experiences as well as experiences of sexual dating violence. Sexual experience differed by gender, with anxiously attached girls and securely attached males evidencing the most sexual experience. Furthermore, secure individuals were less

likely to be perpetrators or victims of sexual dating violence. Although this study is the only known study to include questions pertaining to first sexual intercourse, attachment style, and dating violence victimization, the authors did not ask about participants' age at first intercourse, nor did they explore experiences of physical or psychological dating violence. Therefore, no known study has explored the relation between age at sexual debut, attachment style (as measured by a dimensional model), and multiple forms (physical, psychological, and sexual) of dating violence victimization.

Purposes and Hypotheses of Present Study

In summary, a number of studies have found significant relations between: (1) early age at first sexual intercourse and dating violence victimization, (2) adult attachment style and dating violence victimization, and (3) adult attachment style and an early age at first sexual intercourse. Nevertheless, these findings warrant replication as the majority of these studies contained methodological limitations that could be improved upon. The present study aims to replicate previous findings with a sample of dating or cohabiting women ranging in age from late adolescence to young adulthood. Although evidence suggests that men and women may be equally likely to become victims of dating violence (e.g., White & Koss, 1991), this study focused solely on women due to the fundamental differences in severity and motivations between male-perpetrated and female-perpetrated dating violence (Bookwala et al., 1992; Makepeace, 1986). Furthermore, the relation between attachment style and age at first sexual intercourse has been shown to differ as a function of gender; anxiously attached women, but not men, are more likely to have an early age at first intercourse (Bogaert & Sadava, 2002; Gentzler & Kerns, 2004). In fact, the opposite pattern appears in men; anxiously attached men are

more likely to have never had sexual intercourse compared to less anxiously attached men (Gentzler & Kerns, 2004). Lastly, for the sake of parsimony, only data from young women identifying as heterosexual were utilized. An increased effort was placed on improving the methodological limitations of past research by utilizing more reliable, multi-item measures, and by inquiring about multiple forms of dating violence and sexual intercourse. Moreover, this study aimed to extend previous findings by being the first to explore the associations between age at first sexual intercourse (vaginal, oral, and anal), adult attachment style, and dating violence victimization concurrently. The specific research questions addressed include:

- 1) How does anxious attachment style relate to dating violence victimization?
- 2) How does age of first sexual intercourse (vaginal, oral, and anal) relate to dating violence victimization?
- 3) How does anxious attachment style relate to the age at which an individual has first sexual intercourse (vaginal, oral, and anal)?
- 4) To what extent and with what predictive ability do anxious attachment style and age at first intercourse predict experiences of dating violence?
- 5) Does one predictor variable (i.e., anxious attachment style or age at first intercourse) moderate the effect of the other predictor variable on dating violence victimization?

Based on the review of the literature presented above, the following hypotheses were tested to better understand the relations between individual characteristics (attachment style and age at first intercourse) and dating violence victimization. In light of the mounting evidence that victims of dating violence are likely to experience multiple

forms of dating violence (e.g., psychological, physical, sexual) on the same or different occasions (Dutton & Gollant, 1995; White, 2009), as well as limited research assessing the relation between age at first intercourse, attachment style, and dating violence, separate hypotheses will not be made for the different forms of dating violence. In addition, Wolfe et al. (2001) propose that dating violence in adolescence may be less differentiated by subtype, and may be better represented as a single underlying dimension composed of all interrelated forms of violence. As such, all dating violence hypotheses will refer to the total abuse score obtained from the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001), which is comprised of the following subscales: physical abuse, sexual abuse, threatening behaviour, emotional or verbal abuse, and relational abuse. A particular strength of using the total abuse score, is the inclusion of more prodromal forms of abuse (e.g., threatening behaviour, relational abuse), which may better represent the nature of violence in adolescent and young-adult dating relationships.

It is hypothesized that: anxious attachment will be positively correlated with dating violence victimization (Hypothesis 1); age at first sexual intercourse will be negatively correlated with dating violence victimization (Hypothesis 2); and anxious attachment will be negatively correlated with age at first sexual intercourse (Hypothesis 3). Although there seems to be more research suggesting an association between attachment style and dating violence than an association between age at first sexual intercourse and dating violence, these topics have not been explored thoroughly enough to hypothesize differences in predictive strength. Therefore, in regards to the fourth research question (Research Question 4), the relations between these variables were

examined in an explorative manner. Similarly, no hypothesis was made regarding whether age at first sexual intercourse moderates the relation between anxious attachment style and dating violence victimization or whether anxious attachment style moderates the relation between age at first intercourse and dating violence (Research Question 5). It is conceivable that the relation between age at first intercourse and dating violence may change at varying levels of anxious attachment (i.e., individuals with an early age at first intercourse and high levels of anxious attachment may differ from individuals with an early age at first intercourse and low levels of anxious attachment in their likelihood to experience dating violence). Likewise, it is also conceivable that the relation between anxious attachment and dating violence victimization may change across varying ages at first intercourse (i.e., individuals with high levels of anxious attachment and an early age at first intercourse may differ from individuals with high levels of anxious attachment and a late age at first intercourse).

CHAPTER II

Method

Participants

Data were collected from 159 heterosexual female undergraduate students from the University of Windsor who endorsed engaging in consensual sexual intercourse (vaginal, oral, or anal) with a member of the opposite sex. Women were recruited online through the Psychology Participant Pool and received course credit for their involvement in the study. Aside from having to have had consensual sexual intercourse, other inclusion criteria included: age of 25 years or younger, identified themselves as heterosexual, had at least one romantic relationship, and were not currently engaged or

married. Data from 20 female participants were excluded from analyses because 12 women failed to meet the eligibility criteria (three women were over the age of 25 years and nine women were currently married or engaged), six women withdrew from the study, one woman failed to complete an entire measure, and one woman was determined to be an influential outlier. Therefore, the final data set consisted of 139 women.

Women ranged in age from 18 – 25 years ($M = 20.73$, $SD = 1.87$), the majority of which identified themselves as White (82.01%) and predominantly Roman Catholic (48.20%). Most women were full-time students (89.20%) majoring in Arts and Social Science (76.98%) and were dispersed across year of enrollment (first year = 12.95%, second year = 29.50%, third year = 32.37%, and fourth year or higher = 25.20%). The modal family income reported was \$80,000 or more (32.27%); 12.23% reported income between \$70,000 and \$79,000; and 13.67% reported income between \$60,000 and \$69,000.

To meet eligibility criteria for the study, all women must have reported having at least one romantic relationship; however, current relationship status could vary between single (19.42%), casually dating (3.60%), or dating exclusively (76.98%). In this study, romantic relationship is synonymous with dating relationship, and does not necessitate sexual behaviour. The average age women reported having their first dating relationship at 15 years ($SD = 1.67$), with most having had a total of five dating relationships ($SD = 5.45$). Ninety-six percent of women reported ever having vaginal intercourse ($n = 133$), with the average age at first vaginal intercourse being 17.14 years ($SD = 1.59$) and the average number of partners being four. Ninety-seven percent of women reported ever having oral intercourse ($n = 135$), with the average age at first oral intercourse being

17.00 years ($SD = 1.68$) and the average number of partners being four. Twenty-four percent of women reported ever having anal intercourse ($n = 34$), with the average age at first anal intercourse being 18.47 years ($SD = 1.76$) and the average number of partners being two. Most women accessed the survey from the privacy of their own home (83.45%).

Based on an estimated medium effect size (Gentzler & Kerns, 2004), approximately 84 participants were necessary to detect significant effects at a power of .80 and an alpha level of .05 (Cohen, 1992). According to formulas recommended by Field (2009) to estimate the sample size necessary in regression analyses, a sample size of 90 was necessary to test the overall model, and a sample size of 109 was necessary to test each predictor. Thus, the final sample size of 139 participants was sufficient to obtain accurate results.

Measures

The online survey consisted of the five questionnaires described below. Refer to Table 3 for a summary of their psychometric properties and calculated alpha coefficients.

Demographics (Appendix A). A 29-item questionnaire was included to acquire background information such as age, gender, ethnicity, and religion. In addition to standard demographic questions, items regarding romantic relationships and sexual history were included to obtain information such as current relationship status, age when dating relationships commenced, number of dating partners, number of sexual partners, and age at first (vaginal, oral, and anal) intercourse.

History of childhood maltreatment (Appendix B). The History of Childhood Maltreatment Questionnaire was created for the purpose of this study and is a self-report

questionnaire that assesses childhood experiences including: childhood sexual abuse, witnessing domestic violence and experiencing parental physical abuse. Other studies measuring a history of childhood maltreatment often use standardized measures, such as The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994), The Parent-Child Conflict Tactic Scales (CTSPC; Straus, Hamby, Finkelhor, Moore, & Runyan, 1995), and The Child Abuse and Trauma Scale (CAT; Sanders & Becker-Lausen, (1995), or they create their own set of questions that suit the needs of their study (Alexander, 2009; Gagné, Lavoie, & Hébert, 2005; Halpern et al., 2009; Humphrey & White, 2000; Smith et al., 2003). Although any of these measures would have sufficed as a measure of childhood parental physical abuse or witnessed domestic violence, the questions pertaining to childhood sexual abuse (CSA) were not suitable for the current study. Specifically, the items pertaining to CSA posed two problems: (1) they did not consistently identify the perpetrator of the sexual abuse, and (2) the items pertained to experiences in childhood *and* adolescence. Consequently, it would have been impossible to distinguish CSA (perpetrated by an adult) from adolescent sexual dating abuse (perpetrated by a dating partner). Because the purpose of this measure was to control for the effect of a history of childhood maltreatment on dating violence victimization, it is necessary to exclude sexual abuse that may have occurred in the context of a dating relationship. Therefore, not unlike many other studies (Alexander, 2009; Gagné et al., 2005; Halpern et al., 2009; Humphrey & White, 2000; Smith et al., 2003), a unique set of questions was created for the current study.

The questionnaire is comprised of six questions, two pertaining to parental physical abuse, two pertaining to childhood sexual abuse, and two pertaining to witnessed

domestic violence. The CSA items are specific to adult-to-child abuse, and exclude the possibility of sexual abuse perpetrated by a dating partner. Items were preceded by the sentence stem, “When you were a child [before the age of 14]...” and included: “did your parents or caregiver slap you in the face, hit, beat, or otherwise physically harm you?” (parental physical abuse); “did you ever engage in sexual intercourse (i.e., vaginal intercourse) with an adult?” (childhood sexual abuse); and “did you ever see or hear physical fights (i.e., pushing, grabbing, showing, or hitting) between your parents or caregivers?” (witnessed domestic violence). Participants were asked to rate each item on a 5-point Likert scale (ranging from 0 = *Never (0 times)* to 4 = *Always (more than 20 times)*) based on how often they recall these experiences occurring.

Attachment style. The Experiences in Close Relationships Scale (ECR; Brennan et al., 1998) is a self-report attachment measure designed to assess how participants generally feel in close relationships (e.g., with romantic partners, close friends, or family members). In 1998, Brennan and colleagues factor-analyzed the nonoverlapping items from all of the existing self-report measures with the goal of reducing the existing measures down to measures of Ainsworth’s two major dimensions – anxiety and avoidance. Based on their results, Brennan et al. proposed a 36-item questionnaire consisting of two 18-item scales; one measuring Attachment Anxiety (Cronbach’s alpha = .91), and one measuring Avoidant Attachment (Cronbach’s alpha = .94). The Attachment Anxiety and Avoidant Attachment dimensions have been demonstrated to be uncorrelated with each other ($r = .11$), to have moderate test-retest reliability (alpha range = .50 - .75), and to be highly correlated with scales measuring similar constructs (Brennan et al., 1998). The ECR has been reliably used in hundreds of studies, with

alpha coefficients always near or above .90 and has served as a benchmark for evaluating other attachment measures (Mikulincer & Shaver, 2007).

Participants were asked to rate each item on a 7-point Likert scale (ranging from 1 = *disagree strongly* to 7 = *agree strongly*) based on how they generally experience relationships, not solely on their current or most recent relationships. Examples of Attachment Anxiety items include: “I worry about being abandoned”; “I worry about being alone”; and “my desire to be very close sometimes scares people away”. Examples of Avoidant Attachment items include: “I don’t feel comfortable opening up to romantic partners”; “I try to avoid getting too close to my partner”; and “I find it difficult to allow myself to depend on romantic partners”. Separate scores were computed for Anxious Attachment and Avoidant Attachment by averaging the 18 items in each scale, with higher scores reflecting greater anxiety and avoidance; however, only the Attachment Anxiety scale was used in the present study. Anxious Attachment scores were centered for analyses that explored the interaction between attachment style and age at first intercourse. Brennan et al. (1998) provide a formula to convert the dimensional scores into type categories (secure, fearful, dismissive, and preoccupied); however, it is recommended to use the dimensional scores as the classification equation can be misleading (Mikulincer & Shaver, 2007).

Dating violence. The Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001) is a 35-item self-report questionnaire designed to measure physical abuse, threatening behaviour, sexual abuse, verbal or emotional abuse, and relational abuse among adolescent dating partners. It has demonstrated fair internal consistency with an alpha for the overall abuse factor in the mid-.80s, and test-retest

reliabilities for the individual scales ranging from .28 to the mid-.60s. The age range of the participants in the current study was slightly older than the age range the CADRI was validated on (18- to 25-years of age compared to 14- to 16-years of age); however, other studies have reliably used the CADRI on late adolescents age 18 - 21 (Simon, Kobielski, & Martin, 2008). Moreover, participants in the current study were asked to reflect upon past relationships, which likely occurred during the span of early to late adolescence. Thus, the CADRI items were expected to be more appropriate than other measures intended for assessing conflict in adult romantic relationships.

The CADRI instructed participants to estimate how often each item occurred while having an argument with a current or past partner. To assess whether or not participants had ever experienced intimate partner violence, I modified the instructions so that participants estimated how often each item occurred across all romantic relationships (past or present). Although only data from individuals who identify as heterosexual were analyzed for the present study, a slight modification was made to the instruction, such that the term “boyfriend” was changed to “partner” as a means of including individuals who identified as lesbian or bisexual in the data collection. Response choices for each item are *never: this has never happened* (1), *seldom: this has happened only 1 to 2 times* (2), *sometimes: this has happened about 3-5 times* (3), and *often: this has happened 6 times or more* (4). Item scores are summed to create subscale scores. The subscale scores are then summed to create a total score, with higher scores indicative of greater abuse. Example items include: “My partner insulted me with put-downs” (verbal/emotional abuse); “My partner slapped me or pulled my hair” (physical abuse); “My partner threatened to hurt me” (threatening behavior); “My partner touched me

sexually when I didn't want him to" (sexual abuse); and "My partner tried to turn my friends against me" (relational aggression). The sentence stem "During a conflict or argument with my partner..." precedes the statements and recurs every five items to increase adherence to the instructions. Each item is asked twice, once in relation to the participant's behaviour towards their partner (perpetration), and once in relation to their partner's behaviour towards them (victimization). In accordance with the purpose of the current study, only victimization scores were utilized.

Social desirability. The Marlowe-Crowne Social Desirability Scale Short Form C (MCSDS Form C; Reynolds, 1982) is a 13-item, true-false format, self-report questionnaire designed to measure socially desirable responding. It is a widely used shortened version of the original 33-item Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960), which when compared against five other shortened versions, proved to be a more reliable (Cronbach's alpha = 0.76) and efficient means of measuring social desirability (Reynolds, 1982). The original MCSDS items were chosen on the basis that they described culturally appropriate behaviours that have a low incidence of occurrence (Crowne & Marlowe, 1960). Example items selected for the MCSDS-Form C included: "I'm always willing to admit it when I make a mistake", "I sometimes try to get even rather than forgive and forget", and "I am sometimes irritated by people who ask favors of me". True or false responses are coded 1 or 0 and summed to create a total score ranging from 0 to 13. Higher scores indicate a greater degree of social desirability. Due to the sensitive nature of dating violence, as well as sexual experiences, a measure of social desirability is necessary to control for this response tendency.

Procedure

Following clearance from both the Research Ethics Board (REB) and the coordinator of the University of Windsor Psychology Participant Pool, an advertisement was placed on the participant pool website inviting students to participate in a web-based study titled “Dating Experiences during Adolescence and Young Adulthood”. The study was web-based because evidence suggests that web-based samples are diverse and motivated, and that findings from these studies are consistent with findings from more traditional methods (Gosling, Vazire, Srivastava, & John, 2004). Moreover, participants may feel increased comfort responding to relationship and sexuality questions in the privacy of their own home.

The advertisement provided a description of the study, duration, credits awarded, and the survey’s URL. Once interested students accessed the URL, they were presented with an Information Letter/Consent Form (Appendix C). After reading about the purpose of the study, individuals decided to consent or to decline participation. The Information Letter/Consent Form included an option for printing the form, web-safety instructions, as well as a list of community resources in the event that they became distressed at any point during the study. It also included a User ID and password to ensure that only eligible individuals from the Psychology Participant Pool could participate in the survey. Once participants agreed to participate in the survey, they were prompted for their User ID and password, and allowed access to the questionnaires. All participants were asked to complete the demographic questionnaire first. The four remaining questionnaires (The History of Childhood Maltreatment Questionnaire, CADRI, ECR, and the MCSDS-Form C) were presented in a randomized order. The total time required to complete the

questionnaires was approximately 30 minutes. All participants who started the questionnaire received 0.5 bonus credit points.

Upon exiting the web-based questionnaire, participants were provided with a debriefing letter outlining the purpose of the study (Appendix D). This letter contained another copy of the community resource list should the participant desire to speak with someone regarding past or current issues. Information on steps to take to ensure internet security was also provided (Appendix E). Participants were thanked for their time, and asked to indicate whether they had any questions or concerns regarding the study or their responses. Due to the nature of the on-line participant pool, complete anonymity could not be offered as names and email addresses were required to assign bonus credit points; however, participants were assured that all data would be handled in a confidential manner.

Data Analysis

Two-tailed Pearson correlations were used to assess whether there were significant correlations between:

Hypothesis 1. Anxious attachment style and dating violence victimization

Hypothesis 2. Age at first sexual intercourse (vaginal, oral, or anal) and dating violence victimization

Hypothesis 3. Anxious attachment style and age at first sexual intercourse (vaginal, oral, and anal)

Three multiple regression analyses (one for each type of sexual intercourse) were conducted to assess whether anxious attachment style and age at first intercourse predicted experiences of dating violence victimization (Research Question 4). Interaction

terms were included in the model to assess whether one predictor variable moderated the effect of the other predictor variable on predicting dating violence victimization (Research Question 5).

Predictor Variables: Age at first sexual intercourse (vaginal, oral, and anal);
anxious attachment style

Outcome Variable: Dating violence victimization

CHAPTER III

Results

Preliminary Analyses

All of the following analyses were conducted using SPSS Version 19.0. Prior to conducting the main analyses, data were examined for accuracy and completeness by assessing the frequency and pattern of missing values, as well as by ensuring that all values were within the appropriate range for each variable. Missing values appeared randomly scattered throughout the dataset, with one case excluded due to data from an entire measure missing. Less than 5% of the data were missing; therefore, in accordance with Tabachnick and Fidell's (2001) recommendation, an expectation maximization (EM) method was chosen to estimate missing values. All data were within their appropriate ranges.

The data were examined to ensure that the statistical assumptions of multiple linear regression were upheld. An examination of standardized residuals, scatterplots, leverage values, Mahalanobis and Cook's distances revealed several outliers on the x and y axes, a small number of which may potentially influence the model. Regression

analyses with and without the suspect cases yielded negligible differences, therefore all cases were kept in the dataset. Multicollinearity did not exist between predictor variables as confirmed by tolerance values greater than 0.2 and variance inflation factor (VIF) values less than 10. Examination of residual plots revealed that the variance of the residual terms at each level of the predictor variables was constant (homoscedasticity) and that the relation between predictor and outcome variables was linear. The Durbin-Watson test yielded values close to two, therefore the assumption of independent errors was upheld. Normality of the residuals in the model was assessed by observing histograms and normal probability plots (P-P plots), as well as significance tests. Although histograms and P-P plots appeared relatively normal, the Kolmogorov-Smirnov test indicated that the residuals were non-normally distributed ($p < .05$). Multiple regression analysis is relatively robust to mild violations of normality when sample sizes are larger than 100 (Stevens, 2009; Tabachnick & Fidell, 2001); nonetheless, a conservative bootstrapping method of resampling was used in the main analyses to compensate for this violation.

As previously discussed, there are a variety of extraneous variables (i.e., other sociodemographic, environmental, contextual, or individual risk factors) that have also been linked to dating violence victimization (Vézina & Hébert, 2007 for a review). It would be impossible to control for all potential confounds, therefore a selection of variables that have been consistently linked with dating violence victimization or seemed particularly relevant to this study, were measured. Correlations between the following variables were investigated: dating violence victimization, current age, total family income, age at puberty, age at first romantic relationship, total number of dating

relationships, history of childhood physical maltreatment, and social desirability. Correlations between these variables and the outcome variable are presented in Table 1. Only number of dating relationships, a history of childhood physical maltreatment, and social desirability were significantly correlated with the outcome variable and were therefore controlled for in the main analyses.

Table 1

Correlations between Dating Violence Victimization and Extraneous Variables

	1	2	3	4	5	6	7	8	9
1. Victimization	-								
2. Age	-.06	-							
3. Family Income	-.01	-.09	-						
4. Puberty Age	.03	.15	-.09	-					
5. Age of first RLP	-.16	.22**	.03	.35**	-				
6. No. of RLPs	-.20*	.21*	-.18*	-.13	-.34**	-			
7. CPA	.24**	.16	-.32**	-.08	.01	.27**	-		
8. CSA	.06	.09	-.21**	-.10	-.08	.08	.05	-	
9. Social Desire	-.31**	.14	.03	-.04	.02	-.16	-.37**	-.07	-

Note. RLP = relationship; CPA = child physical abuse; CSA = child sexual abuse.
* $p < .05$. ** $p < .01$.

A principal component analysis (PCA) with orthogonal rotation (varimax) was conducted using the six questions comprising the History of Childhood Maltreatment questionnaire to ensure that they all measured the same underlying variable (i.e., childhood maltreatment). As a preliminary analysis, the R-matrix was examined to ensure that variables correlated fairly well, but not perfectly, and that there were no variables that did not correlate with at least one other. The Kaiser-Meyer-Olkin measure of sampling adequacy indicated that the sample size ($n = 139$) was mediocre ($KMO = .56$) for PCA. Although Tabachnick and Fidell (2001) reported that it's "comforting to have at least 300 cases for factor analysis" (p. 588), Field (2009) reports that with communalities in the 0.5 range, samples between 100 and 200 can be adequate provided there are only a few factors each with only a small number of indicator variables. Bartlett's test of sphericity $\chi^2(15) = 174.36, p < .001$, indicated that the relation between items was sufficient for PCA. An initial analysis revealed two components with eigenvalues greater than 1 that in combination explained 58.87% of the variance. Table 2 shows the factor loadings after rotation. Items pertaining to physical abuse (both witnessed parental and parent-child) appeared to cluster on component 1, and items pertaining to sexual abuse clustered on component 2. The loadings for the item pertaining to a more severe level of witnessed parental physical abuse were similar for both components; however, it made theoretical sense to group it with under component 1 (Physical Abuse).

Table 2

Summary of Principal Component Analysis Results for History of Childhood

Maltreatment Questionnaire (N = 139)

Item	Rotated Factor Loadings	
	Physical Abuse	Sexual Abuse
Child Physical Level 1	.85	.04
Child Physical Level 2	.71	-.21
Witnessed Parental Level 1	.70	.49
Witnessed Parental Level 2	.45	.59
Child Sexual Level 1	-.02	.69
Child Sexual Level 2	-.09	.70

Note. Factor loadings > .40 are in boldface. Level 1 and Level 2 refer to different levels of abuse severity, with Level 2 representing a greater severity.

Thus, the History of Childhood Maltreatment questionnaire consisted of two subscales, namely, physical abuse and sexual abuse. The sum of sexual abuse scores did not significantly correlate with the outcome variable, $r = .06, p = .47$, therefore only the sum of the four physical abuse scores, $r = .24, p = .005$, was controlled for in this study. Internal consistency for the physical abuse scale was fair, Cronbach's $\alpha = .67$. See Table 3 for psychometric properties of included measures and major study variables.

Table 3

Psychometric Properties of Measures and Major Variables

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	α	Range	
					Potential	Actual
No. of RLPs	139	5.27	5.45		1 - ∞	1 - 40
CPA	139	1.47	2.34	.67	0 - 16	0 - 12
CSA	139	0.35	1.06	.45	0 - 12	0 - 8
Social Desire	139	5.66	3.04	.74	0 - 13	0 - 12
Vaginal Age	133	17.14	1.59		12 - 25	14 - 22
Oral Age	135	17.00	1.68		12 - 25	13 - 22
Anal Age	34	18.47	1.76		12 - 25	15 - 23
Anxious	139	3.96	1.03	.92	1 - 7	2 - 6
Total Victimization	139	13.72	8.73	.88	0 - 75	0 - 43
Threatening	139	1.27	1.65	.65	0 - 16	0 - 10
Physical	139	0.46	1.15	.60	0 - 16	0 - 6
Emotional	139	10.09	5.39	.83	0 - 40	0 - 26
Sexual	139	1.48	1.71	.58	0 - 16	0 - 8
Relational	139	0.37	0.92	.71	0 - 12	0 - 5

Note. RLP = relationship; CPA = child physical abuse; CSA = child sexual abuse.

Main Analyses

As described earlier, 95.68% of women reported ever having vaginal intercourse ($n = 133$), with 15% reporting first intercourse at the age of 15 years or younger ($M = 17.14$, $SD = 1.59$). Ninety-seven percent of women reported ever having oral intercourse ($n = 135$), with 19.3% reporting age at first intercourse at 15 years or younger ($M = 17.00$, $SD = 1.68$). Twenty-four percent of women reported ever having anal intercourse ($n = 34$), with only one individual (2.94%) reporting an age at first intercourse as 15 years or younger ($M = 18.47$, $SD = 1.76$). Modal ages for first vaginal, oral, and anal intercourse were 18 years, 16 years, and 18 years, respectively.

Approximately 75% of women reported an anxious attachment score of 4.78 or lower, out of a possible score of 7.00 ($M = 3.96$, $SD = 1.03$). All women scored at least a 2 out of 7 on the measure of anxious attachment, with higher scores indicating greater anxious attachment.

Approximately 75% of women reported a total dating violence victimization score of 17.00 or lower, out of a possible score of 75.00 ($M = 13.71$, $SD = 8.73$). Only one woman reported never experiencing any form of dating violence victimization. The total dating violence victimization score is comprised of five subscales, of which women reported the following frequencies: 61.2% of women reported experiencing at least one act of threatening behaviour, 19.4% of women reported experiencing at least one act of physical aggression, 98.6% of women reported experiencing at least one act of emotional aggression, 60.4% of women reported experiencing at least one act of sexual aggression and 18.7% reported experiencing at least one act of relational aggression. Refer to Table 3 for means, standard deviations, and item ranges.

Bivariate correlations. A two-tailed Pearson correlation was calculated to test the hypothesis that there would be a positive correlation between anxious attachment style and dating violence victimization (Hypothesis 1). There was a significant correlation between total dating violence victimization (as measured by the CADRI) and anxious attachment style (as measured by the ECR), $p = .001$. See Table 4 for complete summary of bivariate correlations.

Three separate 2-tailed Pearson correlations were conducted, one for each type of sexual intercourse (vaginal, oral, and anal), to test the hypothesis that age of first sexual intercourse would be negatively correlated with dating violence victimization. Although all correlations were in the expected direction, only age at first vaginal intercourse was significantly correlated with dating violence victimization. (Table 4).

Three separate two-tailed Pearson correlations were conducted, one for each type of sexual intercourse (vaginal, oral, and anal), to test the hypothesis that age of first sexual intercourse would be negatively correlated with an anxious attachment style. Again all correlations were in the expected direction; however, there were no significant correlations between attachment anxiety and vaginal intercourse, oral intercourse, or anal intercourse (Table 4).

Table 4

Correlations between Age at First Intercourse and Dating Violence Victimization

	1	2	3	4	5
1. Victimization	-				
2. Vaginal Age	-.18* ^a	-			
3. Oral Age	-.14 ^b	.59** ^c	-		
4. Anal Age	-.09 ^d	.22 ^d	.19 ^d	-	
5. Anxious	-.28** ^e	-.12 ^a	-.003 ^b	-.19 ^d	-

^a $n = 133$. ^b $n = 135$. ^c $n = 129$. ^d $n = 34$. ^e $n = 139$.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Regression analyses. Multiple regression analyses (MRA) using bootstrapped estimates were conducted to explore the predictive ability of anxious attachment style and age at first intercourse on dating violence victimization (Research Question 4). An interaction term was created for anxious attachment and sexual debut and added to the model as a means of exploring whether or not one predictor variable moderated the effect of the other predictor variable (Research Question 5). Because the small sample of individuals endorsing anal intercourse ($n = 34$) was insufficient to conduct MRA, separate analyses were conducted for vaginal and oral intercourse only. The order of predictors entered into the model remained consistent for vaginal and oral intercourse. In each analysis, the variables being controlled for (i.e., number of dating relationships, history of childhood physical maltreatment, and social desirability) were entered in Block 1. Block 2 contained the main predictors, anxious attachment style and age at first intercourse, as well as the interaction term; however, the interaction term was nonsignificant for both types of intercourse and was thus removed from the model. Furthermore, for interpretive purposes, age at first intercourse was dichotomized into those who had their sexual debut at the age of 15 years or earlier, and those who had their sexual debut at an age greater than 15 years. Results from the bootstrap regression analyses are presented in Tables 5 and 6.

Vaginal intercourse. As discussed above, the bivariate correlations between predictor variables (i.e., age at vaginal intercourse and anxious attachment) and dating violence victimization were statistically significant (Table 4). The overall model significantly predicted dating violence, $R = .37$, $F(5, 127) = 4.09$, $p = .002$. However,

anxious attachment and age at first vaginal intercourse did not significantly predict dating violence victimization above and beyond the control variables $\Delta R^2 = .02, p = .30$.

Table 5

Prediction of Dating Violence Victimization (Vaginal Intercourse)

Predictor	B	SE B	β	95 % Confidence Interval	
				LL	UL
Step 1					
Constant	10.60	3.99		2.73	18.47
No. of RLPs	0.23	0.14	.14	-0.20	0.66
CPA	0.18	0.36	.05	-0.82	1.17
Social Desire	-0.57	0.27	-.20*	-1.07	-0.07
Step 2					
Anxiety	1.25	0.80	.15	-0.46	2.96
Vaginal Age	-0.26	2.05	-.01	-4.38	3.85

Note. RLP = relationship; CPA = child physical abuse.

$R^2 = .14$ for Step 1, $\Delta R^2 = .02$ for Step 2 ($p > .05$). LL = lower limit; UL = upper limit.

* $p < .05$.

Oral intercourse. Even though the bivariate correlation between age at first oral intercourse and dating violence victimization was not statistically significant, age at first oral intercourse was included in the regression model due to a priori hypotheses. As discussed above, the bivariate correlations between predictor variables (i.e., age at oral intercourse and anxious attachment) and dating violence victimization were not statistically significant (Table 4). Although the overall model significantly predicted dating violence, $R = .39$, $F(5, 128) = 4.55$, $p = .001$, anxious attachment and age at first oral intercourse did not significantly predict dating violence victimization above and beyond the control variables $\Delta R^2 = .03$, $p = .12$.

Table 6

Prediction of Dating Violence Victimization (Oral Intercourse)

Predictor	B	SE B	β	95 % Confidence Interval	
				LL	UL
Step 1					
Constant	9.20	4.00		1.61	16.79
No. of RLPs	0.22	0.15	.13	-0.32	0.76
CPA	0.31	0.34	.08	-0.62	1.23
Social Desire	-0.51	0.27	-.17	-1.01	0.00
Step 2					
Anxiety	1.35	0.78	.16	-0.20	2.89
Oral Age	1.93	1.84	.09	-1.80	5.66

Note. RLP = relationship; CPA = child physical abuse.

$R^2 = .15$ for Step 1, $\Delta R^2 = .03$ for Step 2 ($p > .05$). LL = lower limit; UL = upper limit.

CHAPTER IV

Discussion

Summary of Findings

The present study investigated the relations between two specific individual characteristics (attachment style and age at first intercourse) and dating violence victimization. Correlations between individual characteristics and victimization were explored, as well as their predictive strength and potential moderating effects. Prevalence estimates of dating violence victimization were consistent with previous findings (Ashley & Foshee, 2005; Wolfe et al., 2001), as most women reported at least one incident of dating violence. A close examination of the prevalence of each subtype of dating violence victimization highlights the importance of using clear and consistent definitions. Depending on the definitional criteria used, women's report of victimization ranged from a low of 18.5% (relational aggression) to a high of 98.6% (emotional aggression).

Consistent with Hypothesis 1, significant bivariate correlations were found between anxious attachment style and dating violence victimization, such that women who were more anxiously attached, also reported higher amounts of dating violence victimization. This result is consistent with previous findings (e.g., Henderson et al., 2005; Higginbotham et al., 2007; Tracy et al., 2003) and may exist because women who have an anxious attachment style (i.e., are more preoccupied with relationships, have a greater fear of abandonment or rejection) may be more likely to remain in an abusive partnership compared to women who have a more secure attachment style. It makes intuitive sense that women who remain with an abusive partner are at an increased risk of experiencing additional abuse from the same partner. Because the CADRI did not ask

women to distinguish between multiple abusive incidents occurring in one partnership and multiple abusive incidents occurring across partners, it is impossible to determine if anxiously attached women were more likely to remain in the violent relationship than women with secure attachments. Nonetheless, even if anxiously attached women did leave their abusive partner, they may be more susceptible to choosing another aggressive partner (i.e., have less stringent mate selection criteria) due to their preoccupation with relationships and the desire to be close to others.

A significant negative correlation between age at first intercourse and dating violence victimization was found for vaginal intercourse, but not for oral or anal intercourse. The association between age at first intercourse and dating violence victimization is a recent finding in the literature, with studies either specifying vaginal intercourse (Halpern et al., 2009), or leaving the term open to interpretation (Silverman et al., 2001). Thus, although it would be expected that oral and anal intercourse would follow the same pattern as vaginal intercourse, these hypotheses were exploratory in nature. Previous research indicates that the large majority of individuals have their first (vaginal) intercourse between the ages of 16 and 18 years, with reports of 13% to 39% having intercourse before the age of 16 (Bogaert & Sadava, 2002; Garriguet, 2005; Gentzler & Kerns, 2004; Halpern et al., 2009, Maticka-Tyndale, 2008). The mean age for first oral intercourse and first vaginal intercourse (17.14 years and 17.00 years, respectively), as well as the percentage of women classified as having early vaginal intercourse and early oral intercourse (15.0% and 19.3%, respectively) were similar to those reported in the literature. Furthermore, the means and prevalence rates for these two types of intercourse were similar to one another and were positively correlated

(Table 4), meaning that women who reported having an early first vaginal intercourse were also more likely to report having an early first oral intercourse. Because the correlation between age at first oral intercourse and dating violence victimization was trending toward significance ($p = .06$, one-tailed), there are likely no underlying conceptual differences between age at first oral and age at first vaginal intercourse. Lastly, the nonsignificant correlation between age at first anal intercourse and dating violence victimization is likely the result of a small and overly homogenous sample of women who reported engaging in consensual anal intercourse – only one woman reported having anal intercourse before the age of 16 years. Future studies should re-examine the correlates of age at first anal intercourse with a larger sample size, as this would likely increase the response variability.

The significant bivariate correlation between age at first vaginal intercourse and dating violence victimization replicates findings in other studies (e.g., Halpern et al., 2009), and suggests that women who have vaginal intercourse at a younger age are more likely to experience or to have experienced victimization in their romantic relationships compared to women who postpone vaginal intercourse. An early age at first intercourse may be associated with other individual characteristics that place women at an increased risk for dating violence victimization. The current study explored attachment style as a characteristic that may co-occur with, or predict, age at first intercourse and subsequently increase women's vulnerability to dating violence. Although these two characteristics were not significantly correlated, other individual characteristics (e.g., substance use, academic failure) or qualities of the sexual debut (e.g., degree to which women consented to unwanted intercourse, associated affect) should be explored as they could compound

the risk. There is a body of literature supporting a problem behaviour construct or “syndrome” in which a wide array of problem behaviours are intercorrelated (Jessor, 1982, 1991). The constellation of behaviours which typically include antisocial behaviour, substance use, academic failure, and risky sexual behaviour, have been shown to be preceded by peer deviance and inadequate parental monitoring (Ary, Duncan, Duncan, & Hops, 1999). Howard and Wang (2003) found that this cluster of problem behaviours make up a risk profile for adolescent girls who were victims of dating violence. Alternatively, an early age at first intercourse may be a pivotal event that changes young adolescent girls in such a way as to place them at a heightened risk for dating violence victimization. Armour and Haynie (2007) analyzed three waves of data from the National Longitudinal Study of Adolescent Health ($N = 7,297$) and found that having intercourse earlier than ones peers can produce changes in an individual such that they are at an increased risk for certain behaviours (in their case, delinquency). Both predictors and consequences of an early sexual debut should be explored as this study provides further support for an association between an early age at first intercourse and dating violence victimization.

One limitation to this finding is that despite asking women to report their age at first *consensual* intercourse (as a means of ensuring that their first intercourse was not, itself, an incident of dating violence), the possibility remains that their first partner was aggressive at some point prior to engaging in intercourse. Therefore, as a result of the bidirectional nature of correlational analyses, it is unknown whether having an early age at first vaginal intercourse increases the likelihood of experiencing dating violence victimization, or if an experience of partner aggression increases the likelihood of

engaging in vaginal intercourse at an earlier age. Prospective, longitudinal research is necessary in order to determine the directionality between dating violence victimization and early sexual experiences in adolescence.

Contrary to expectations derived from previous research on sexuality and attachment style, (Bogaert & Sadava, 2002; Gentzler & Kerns, 2004), anxious attachment style was not related to the age at which women first engaged in sexual intercourse. There are a number of possible explanations for why a significant relation was not found. First, differences in sample characteristics might be (at least partially) responsible for the differences in findings between the current study and past research. Gentzler and Kerns' sample, for instance, embodied a larger age range (18 – 50 years) and sample size ($N = 328$) than the current study (18 – 25 years, $N = 139$). Similarly, Bogaert and Sadava (2002) analyzed archival data from 1995/1996 and included participants from the age of 19 to 35 years old ($n = 792$). Second, historical factors could help explain the discrepancies in findings. In light of the decline in age at first intercourse seen between the 1980s and 1990s (Maticka-Tyndale, 2008), women who participated in the two aforementioned studies and who endorsed having first intercourse in the early 1980s may be characteristically different (i.e., more anxiously attached) than those who endorsed first intercourse in the late 1990s. Although average age at first intercourse in Canadian youth has not decreased in the last decade (Maticka-Tyndale, 2008), it may be appropriate for future researchers to redefine the age at which first intercourse is considered “early” or sufficiently deviant from the societal norms. The last decade has seen significant changes in dating and sexual behaviour due to the increased use of various technologies (e.g., internet, cell phones) and these cohort effects may alter the

way age at first intercourse is related to both anxious attachment style and dating violence victimization.

Third, another explanation for the surprising lack of a significant relation between age at first intercourse and an anxious attachment style is that participants' attachment styles may have changed between the time of first intercourse and the time of survey participation. Although attachment style is presumed to be stable across the lifespan, Bowlby (1988) stated that it might be modifiable through significant life experiences. In 2002, Lopez and Gormley demonstrated that the transition from high school to college could result in individuals' attachment style changing from secure to insecure, or vice versa. Thus, when assessing the link between attachment style and a significant event (e.g., first sexual intercourse), attention should be paid to the possibility that other events occurring in the time span between the occurrence of that event and the measurement of attachment style may have modified an individual's attachment style. Anxiously attached women may have been more likely to engage in early intercourse or an anxious attachment style may have been strengthened as a consequence of an early sexual debut. Unfortunately, in the current study there was a greater time lapse between sexual debut and measurement of attachment style for women who reported an earlier age at sexual debut compared to women who reported a later sexual debut, allowing more time for other events to have modified the attachment styles of early sexual debut women. A study design whereby the time-lapse between the event under study and the measurement of attachment style is minimized would improve the accuracy of the findings.

Lastly, neither anxious attachment style nor age at first intercourse (vaginal and oral) predicted dating violence victimization above and beyond a history of childhood maltreatment, participants' total number of past romantic relationships, and social desirability. The overall fit of the model was significant, meaning that the linear combination of these variables significantly predicted dating violence better than the mean of dating violence victimization scores alone. However, attachment style and age at sexual debut did not add any significant predictive ability above that provided by the control variables. A comparison of beta weights reveals that anxious attachment may be superior to age at first sexual intercourse (vaginal or oral) as an indicator of dating violence victimization, as anxious attachment style had a larger beta weight in both models (Table 5 and 6). Anxious attachment and age at first vaginal intercourse were significantly correlated with dating violence victimization at the bivariate level, and although they did not significantly predict dating violence victimization once entered into a model with other variables, they retain clinical value as potential identifying markers of women who may be at risk for experiencing dating violence victimization or who may have already experienced dating violence victimization.

A history of childhood maltreatment and the number of romantic partners a person has dated have demonstrated predictive ability of dating violence victimization in previous studies, and were correlated with dating violence victimization in this sample; thus, they were deemed important variables to control for when testing the significance of attachment style and age at sexual debut. Although assumptions of multicollinearity were not violated, there may be sufficient overlap between the control variables and the predictor variables to limit the amount of unique variance available for the predictors to

account for. A history of childhood maltreatment was significantly correlated with anxious attachment style ($r = .34, p < .001$, one-tailed), and age at vaginal intercourse was significantly correlated with the total number of romantic relationships ($r = .16, p < .05$, one-tailed). Future research should test whether anxious attachment style mediates the relation between childhood maltreatment and dating violence, and similarly, if the number of romantic relationships mediates the relation between age at first intercourse and dating violence. Elucidating the mechanisms by which multiple variables interact and influence the risk of dating violence victimization would presumably increase the speed at which friends, family members, teachers, and health care providers can identify vulnerable individuals.

Limitations

This study made substantial contributions to the literature on risk factors associated with dating violence victimization by including more thorough, multi-item measures, by assessing the predictive validity of a model which contained more than one predictor variable, and by assessing attachment style with a state-of-the-art self-report measure. Be that as it may, this study is not without limitations that effect the interpretation and generalization of the results.

One such limitation is that the sample size was relatively small compared to some previous studies that utilized information from thousands of youth. A larger sample would have provided sufficient power to analyze the predictive ability of age at first anal sex, as the base rate was insufficient in this sample to conduct a regression analysis. Moreover, a large sample size ($n \sim 1000$) would allow for all predictor variables (including all three types of sexual intercourse) and all five subtypes of dating violence

victimization to be analyzed in the same model using a canonical correlation analysis or structural equation modeling. Given the substantial differences in reported prevalence rates of the different types of dating violence victimization, it may be the case that anxious attachment style and each type of sexual intercourse (vaginal, oral, and anal), differ in their ability to predict the five subtypes of dating violence measured using the CADRI.

Another limitation is the restricted generalizability of the findings. For reasons previously mentioned, only females were included in this study; therefore, any inferences made regarding factors associated with dating violence victimization pertain solely to women and should not be applied to men. The research assessing the relation between attachment style, early sexual experiences, and dating violence victimization is limited, with most studies utilizing female samples. Gentzler and Kerns (2003) found that males with an anxious attachment style were less likely to engage in intercourse at all, as opposed to anxiously attached females who were more likely to engage in intercourse at an early age. Because men are also victims of dating violence, future research should seek to explore these potential risk factors, in addition to others, in a male sample. Moreover, it would be interesting to explore how age at first intercourse and attachment style affect the likelihood of experiencing dating violence using couple data. Perhaps certain combinations of past experiences and attachment styles within a relationship increase the likelihood that an incident of dating violence would occur. If individuals are identified as at risk and are in a romantic relationship, these findings could be utilized to assess the stability of their relationship and direct prevention efforts.

The results from this study are also less generalizable to girls under the age of 18 years of age and women/girls, who are not attending university, and who have not had sexual intercourse. Women aged 18 – 25 years of age participated in the current study and were asked to recount their age at first intercourse and to reflect on experiences occurring across all past relationships. Despite that the average woman reported that they were 15.19 years old when they entered their first romantic relationship and that they were 16.68 years old when they engaged in their first form of sexual intercourse (be it vaginal, oral, or anal intercourse), caution should be used when making inferences about adolescent girls. Likewise, these results may not be representative of a population of women who are not attending post-secondary education. Women who are attending post-secondary school may have a unique set of protective factors that counteract the risk posed by engaging in sexual intercourse at an early age. Furthermore, as one of the main variables under study was age at first sexual intercourse, these results pertain solely to sexually active women. Women who have not have sexual intercourse, or who have sexual intercourse at a later age, are still at risk for dating violence victimization and future studies should explore the risk and protective factors associated with this subset of women.

Lastly, limitations exist in the measurement of the attachment style and dating violence victimization. As mentioned earlier, it has been suggested that attachment style may be malleable. If this is the case, than it would be important to assess attachment style immediately prior, or immediately post, the event of interest. Prospective research assessing the psychosocial effects of sexual debut and dating violence victimization could look at whether these two experiences significantly alter an individual's attachment style.

There are three limitations related to the current study's measurement of dating violence victimization: (1) the CADRI was validated on adolescents age 14 – 16 years old and the current study consisted of women age 18 – 25 years, (2) the study only investigated women's report of victimization and not perpetration, and (3) the CADRI does not account for the context of the situation in which the dating violence arose.

Participants in the current study were asked to reflect on past dating experiences that occurred at any point during their adolescence and young adulthood; however, CADRI scores may not be reflective of the same type or severity of dating violence victimization in a young adult sample compared to an adolescent sample. Due to unique behavioural norms for different age groups of women, adolescent girls who endorse certain CADRI items may have individual characteristics that are not shared by adult women who endorse the same items. Despite other studies reliably using the CADRI on individuals older than the age range it was validated on (Simon et al., 2008), caution should be used when extrapolating to relationships occurring in young adulthood, as the CADRI was developed to measure dating violence during adolescence.

The present study did not differentiate women who reported victimization-only from those who reported both victimization and perpetration of dating violence. Comparisons between women who are mutually aggressive and women who are victims-only would allow for a more comprehensive understanding of the risk factors associated with dating violence victimization. Adolescents involved in aggressive romantic relationships are often both victims and perpetrators of dating violence (Avery-Leaf, Cascardi, O'Leary, & Cano, 1997; Gray & Foshee, 1997) and women perpetrators, regardless of whether or not they are acting defensively, may be at a heightened risk.

Research has shown that women who perpetrate dating violence against male partners are more susceptible to becoming victims of dating violence themselves, often with more severe consequences (Cyr et al., 2006; Magdol et al., 1998; O'Keefe & Triester, 1998).

Lastly, the CADRI specifically measures behaviours reflecting threatening behaviour, physical abuse, emotional abuse, relational abuse, and sexual abuse, and does not take into account the context in which these behaviours occurred. Women may have under reported dating violence victimization if they confused truly aggressive acts as signs of affection or play-behaviour. On the other hand, women may have over reported dating violence victimization if they endorsed actual incidences of play and affection that occur outside of the context of relationship conflict as acts of aggression. Future research could differentiate aggressive from defensive behaviour, motivations for aggressive acts, and the events leading up to the aggressive incident in order to determine if the individual's endorsement of certain acts is an accurate representation of dating violence victimization.

As mentioned throughout the discussion of the current study's findings, more prospective research is necessary in order to provide a more accurate representation of the relation between early sexual experiences, attachment style, and subsequent dating violence victimization. Furthermore, further attention needs to be given to the strong influence of social desirability on predicting dating violence victimization. Due to the sensitive nature of dating violence, as well as other variables in this study, alterations to the procedure or measures may be necessary to decrease the likelihood of this response style. Assessing attachment style, and other individual characteristics, at multiple time points before and after experiences of first sexual intercourse and dating violence

victimization would help elucidate the cascade of individual changes that ultimately result in an increased risk for experiencing dating violence.

Conclusion

Overall, there is mixed evidence that age at first intercourse and anxious attachment style predict dating violence victimization among young women. Regardless of whether these individual characteristics place women at a heightened risk for dating violence victimization, or if experiences of victimization result in the development of these characteristics, their significant association with dating violence victimization at the bivariate level highlights their clinical utility as potential markers for a vulnerable subset of young women or girls that could be targeted for intervention and prevention strategies. Identifying these characteristics does not imply that these women are at fault for dating violence victimization; it is simply one of many possible means of improving the lives of women at risk. Future studies should explore possible protective factors, such as positive peer influence, culture, religion, family structure, parenting style, etc., that may promote the development of healthy relationships.

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APPENDIX A

Demographic Questionnaire

1. Age (in years): _____
2. Gender: Male Female Transgendered Other
3. What race or cultural group do you identify with the most (please select all that apply)?
 White South Asian (*e.g., East Indian, Pakistani, Sri Lankan, etc.*)
 Chinese Native-American
 Black Filipino
 Latin American Arab
 West Asian (*e.g., Iranian, Afghan, etc.*)
 Southeast Asian (*e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.*)
 Korean Japanese
 Other _____
4. School Enrollment: Full-time Part-time
5. Years in University:
 1st year 2nd year 3rd year 4th year
 More than 4 years
6. What is/are your major(s)? _____
7. What is/are your minor(s)? _____
8. Which faculty/program are you currently enrolled in at the University of Windsor (please select all that apply)?
 Arts and Social Science Law
 Education Nursing
 Engineering Business
 Human Kinetics Science
 Other _____

9. What is your religious preference?

- Protestant Christian
- Roman Catholic
- Evangelical Christian
- Muslim
- Jewish
- Hindu
- Buddhist
- Athiest
- Other _____

10. What is your Mother or guardian's highest level of education?

- Less than high school
- High school graduate
- Vocational/technical school
- College
- Other _____
- Bachelor's degree
- Master's degree
- Doctoral degree
- Professional degree (e.g., MD)
- N/A

11. What is your Father or guardian's highest level of education?

- Less than high school
- High school graduate
- Vocational/technical school
- College
- Other _____
- Bachelor's degree
- Master's degree
- Doctoral degree
- Professional degree (e.g., MD)
- N/A

12. What is your family's gross annual household income? (Make your best estimate)

- Under \$9,999
- \$10,000 to \$19,999
- \$20,000 to \$29,999
- \$30,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$69,999
- \$70,000 to \$79,999
- \$80,000 or more

13. What is your sexual orientation?

- Heterosexual Bisexual Lesbian Other

14. How old were you when you entered puberty (had your first menstrual period)?

_____ years

15. Have you been involved in a romantic relationship at any point in your life, regardless of how long term or serious, short term or casual?

- Yes No

16. Approximately how old were you when you first starting dating? _____ years

17. Approximately how many dating relationships have you been involved in since you first started dating, no matter how long term or serious, short term or casual? _____

18. Have you had consensual vaginal intercourse?

- Yes No

If you answered ‘yes’, please answer the following 2 questions. If you answered ‘no’, please skip ahead to question 21.

19. Approximately how old were you when you first had consensual vaginal intercourse?
_____ years.

20. Approximately, how many partners have you had consensual vaginal intercourse with? _____

21. Have you had consensual oral intercourse?

Yes

No

If you answered ‘yes’, please answer the following 2 questions. If you answered ‘no’, please skip ahead to question 24.

22. Approximately how old were you when you first had consensual oral intercourse?
_____ years.

23. Approximately, how many partners have you had consensual oral intercourse with?

24. Approximately, how many partners have you had consensual vaginal intercourse with? _____

25. Have you had consensual anal intercourse?

Yes

No

If you answered ‘yes’, please answer the following 2 questions. If you answered ‘no’, please skip ahead to question 28.

26. Approximately how old were you when you first had consensual anal intercourse?
_____ years.

27. Approximately, how many partners have you had consensual anal intercourse with?

28. What is your current relationship status?

- Single
- Casually Dating (different people at the same time)
- Dating Exclusively (single person, short term, long term, or serious)
- Engaged
- Married
- Divorced/Separated

29. Where did you access the computer you used to fill out this survey?

- Home
- Work
- Public access (e.g., library, school)
- Other _____

Thank you for providing us with some background information.

APPENDIX B

History of Childhood Maltreatment Questionnaire

The following questions ask about some of your experiences growing up as a child. Although these questions are of a personal nature, please try to answer as honestly as you can.

When you were a child [before the age of 14]...	Never (0 times)	Rarely (1- 2 times)	Sometimes (3 – 10 times)	Often (11 – 20 times)	Always (more than 20 times)
1. did your parents or caregiver slap you in the face, hit, beat, or otherwise physically harm you?	0	1	2	3	4
2. did you get hit or beaten so badly by a parent or caregiver that someone like a teacher, neighbour, or doctor noticed?	0	1	2	3	4
3. did an adult try to touch you or make you touch him or her in a sexual way?	0	1	2	3	4
4. did you ever engage in sexual intercourse (i.e., vaginal intercourse) with an adult?	0	1	2	3	4
5. did you ever see or hear physical fights (i.e., pushing, grabbing, shoving, or hitting) between your parents or caregivers?	0	1	2	3	4
6. did one of your parents hit or beat the other so badly that someone else noticed (e.g., neighbour, police, or doctor)?	0	1	2	3	4

APPENDIX C

Information Letter/Consent Form



CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: **Dating Experiences during Adolescence and Young Adulthood**

You are asked to participate in a research study conducted by Nicole Yarkovsky (M.A. Student), under the supervision of Dr. Patti Fritz (Professor), from the Department of Psychology at the University of Windsor. The results of this study will contribute to Ms. Yarkovsky's M.A. thesis. The Research Ethics Board (REB) at the University of Windsor has reviewed and given clearance for this research study to take place.

If you have any questions or concerns about the research, please feel to contact Dr. Patti Timmons Fritz at pfritz@uwindsor.ca or (519) 253-3000 ext. 3707 or Nicole Yarkovsky at yarkovs@uwindsor.ca

PURPOSE OF THE STUDY

This study will assess university students' experiences with dating, sexuality, and relationship conflict as well as other individual characteristics that may be associated with certain dating outcomes. It will also help us evaluate why some individuals experience more relationship conflict than others.

PROCEDURES

If you volunteer to participate in this study, we will ask you to do the following things:

- Read through this consent form to decide whether you would like to participate in the study.
- You can print a copy of:
 - this consent form by clicking on the "Print Form" button
 - the "Web Safety Instruction" form by clicking on the "Print Web Safety Instruction" button, and
 - the "Resource List" by clicking on the "Print Resource List" button.
- Click the "I Agree" button at the bottom of the page if you would like to participate. By clicking the "I Agree" button, you have given consent to participate.
- To enter the study, you will need to enter the **User ID** and **password** provided at the bottom of this page. Please **DO NOT** use your University of Windsor User ID and password.

- Please follow the instructions at the beginning of each survey section before completing the surveys and answer the questions as openly and honestly as possible.

If you choose to participate, you will be asked to fill out a series of online questionnaires that will ask about your current and past dating relationships, previous sexual experiences, and how you generally feel in close relationships. This study should take about 30 minutes to complete. Once you have completed the survey or exited the survey, you will be provided with a research summary and a list of local resources.

POTENTIAL RISKS AND DISCOMFORTS

This study does not have any major risks except that you may have some negative feelings (e.g., anxiety, sadness, embarrassment, anger) in response to some of the things that you will be asked to think about and share. However, you do not have to answer any questions that you do not want to answer, and you can stop participating in this study at any time without penalty. Should you experience any form of distress after being in this study, please either contact someone from the community resource list that will be provided to you upon exiting the study or contact Dr. Patti Timmons Fritz. You may also contact the **Student Counselling Centre** on campus (Rm. 293, CAW) at <http://www.uwindsor.ca/scc>; (519) 253-3000 Ext. 4616 where support and assistance is provided to students free of charge OR the **Psychological Services Centre** (326 Sunset Avenue) at (519) 253-3000 Ext. 7012.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Information obtained from this study will add to our understanding about what allows young people to have good relationships. Such information can be used to help raise awareness and develop prevention and treatment programs aimed at helping individuals build healthy relationships. In addition, some people report that they learn something about themselves in the process.

COMPENSATION FOR PARTICIPATION

If you learned about this study through the Psychology Participant Pool, are registered in the pool and are enrolled in one or more eligible courses, you will receive 0.5 bonus points for approximately 30 minutes of participation towards the Psychology Participant Pool.

CONFIDENTIALITY

Any information that is collected in connection with this study and that can be associated with you will remain private and will not be disclosed. You will not be asked to give any identifying information on the survey and your survey responses will be identified by a code number, not your name. Your answers will not be matched to your identity or location and will be released only as summaries with other participants' responses. Once the surveys have been submitted, your responses will not be attached to your name and your survey responses will be stored in a non-identifiable data file with other participants' responses, separate from your personal information. This data file will be

downloaded onto a password-protected computer on a secure computer accessed only by the researchers in this study.

PARTICIPATION AND WITHDRAWAL

You can decide whether or not you wish to participate in this study. You may stop participating at any time without penalty. You may also refuse to respond to any items in the questionnaires that you do not wish to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. You can withdraw your data at any time prior to the end of the survey by exiting the study or by closing your web browser. However, once your data have been submitted, there is no way for your data to be withdrawn.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

When this research study is finished, we will write a summary of the study results that you can access through the following website: www.uwindsor.ca/reb. (You will need to click on “Study Results: Participants/Visitors”). The results are expected to be posted by December 2011.

SUBSEQUENT USE OF DATA

Your data may be used in subsequent studies.

RIGHTS OF RESEARCH PARTICIPANTS

The Research Ethics Board (REB) at the University of Windsor has reviewed and given clearance for this research study to take place. You may withdraw your consent at any time and drop out of the study without penalty. If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

User ID required to access the survey: [to be added]

Password required to access the survey: [to be added]

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I understand the information provided for the study “Dating Experiences during Adolescence and Young Adulthood” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given the opportunity to print this form. By clicking “I Agree” I am giving consent to participate in this study.

Name of Participant

Date

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

Electronic Signature of Investigator

[\["I Agree" Button\]](#)

[\["Print Form" Button\]](#)

[\["Print Web Safety Instruction" Button\]](#)

[\["Print Resource List" Button\]](#)

Date

[\["I do not wish
to participate\] button\]](#)

APPENDIX D

Research Summary

Thank you for participating. We are interested in studying factors that are related to conflict and violence in romantic relationships. In particular we are focusing on identifying risk factors associated with dating violence victimization, such as the role of early sexual experiences and attachment style in predicting dating violence.

By participating in this study, you have made a significant contribution to research in this area. Your responses may also be used to inform prevention and treatment efforts which will aid in the building of healthy and conflict-free relationships.

Please take a look at the list of resources that is provided to you. This list contains contact information for various community services in case you wish to contact someone to talk about some of your past or current experiences.

Thank you for your participation!

List of Community Resources and Services

The following resources are agencies within the community designed to help:

Student Counseling Centre, University of Windsor

The Student Counseling Centre (SCC) provides assessment, crisis, and short term counseling. If longer term therapy is indicated, the SCC will provide a referral to the Psychological Services Centre. All services are confidential and offered free to students. The SCC is open 8:30 am – 4:30 pm, Monday – Friday. Located in Room 293, CAW Centre.

519-253-3000, ext. 4616.
scc@uwindsor.ca

Psychological Services Centre, University of Windsor

The Psychological Services Centre offers assistance to University students in immediate distress and to those whose difficulties are of longer standing. They also seek to promote individual growth and personal enrichment.

519-973-7012
519-253-3000, ext. 7012

Teen Health Centre

The Teen Health Centre is dedicated to helping Essex County's young people achieve physical and emotional health and well-being through education, counseling, and support.

519-253-8481

www.teenhealthcentre.com

Sexual Assault / Domestic Violence & Safekids Care Center

This care center is located in the Windsor Regional Hospital and provides assessment, counseling, and treatment for domestic violence, sexual assault, and child abuse. It is open 8 am to 4 pm, Monday – Friday or 24 hours, 7 days a week through the hospital emergency services.

519-255-2234

Distress Centre Line Windsor / Essex

The Distress Centre of Windsor-Essex County exists to provide emergency crisis intervention, suicide prevention, emotional support and referrals to community resources by telephone, to people in Windsor and the surrounding area.

The Distress Centre of Windsor-Essex County provides an anonymous, confidential telephone services from 12 pm to 12 am, seven days a week.

519-256-5000

Community Crisis Centre of Windsor-Essex County

A partnership of hospital and social agencies committed to providing crisis response services to residents of Windsor and Essex counties.

Crisis center is open from 9 am to 5 pm, Monday – Friday, at Hotel-Dieu Grace Hospital in Windsor, ON.

519-973-4411 ext. 3277

24 Hour Crisis Line

24 Hour crisis telephone line provides an anonymous, confidential service from 12 pm to 12 am seven days a week. The 24 Hour Crisis Line serves Windsor and Leamington areas.

519-973-4435

APPENDIX E

Internet Security Measures

Here are Internet security steps that can be taken if you wish to prevent others who have access to your computer from seeing that you viewed this study's website. These instructions were taken directly from The Broken Spirits Network, which can be accessed at: http://www.brokenspirits.com/security/web_security.asp

Clearing the Internet cache

Risk: Low

Possible Repercussions: Any other user shouldn't notice a difference. However if they check the temporary internet files folder it will be empty, which might seem unusual. The probability that anyone would look in this folder is very small. Less than 1% of internet users even know where this folder is.

The Internet cache is designed to help pages load faster by storing images and web pages locally on your machine. This can result in a security risk if an unwanted viewer decides to poke through the cache folder. To prevent unwanted security risks please follow the following directions to clear your internet cache.

1. From the menu bar select "Tools"
2. Select the option "Internet Options"
3. Under the "General" Tab look for "Temporary Internet Files"
4. Click on the "Delete Files" button
5. Select the "Delete All Offline Content" checkbox and click "Ok"
6. Click "Ok" once more to return to your browser.

Removing sites from your browser history

Risk: Moderate

Possible Repercussions: If this is done properly there will be no obvious sign that anything has been changed. However if you delete the entire history there is a large possibility that other users may notice that their history has been cleared.

The browser history is designed to store previous visits in an area that is easily accessible at the click of a button. This is useful when you forget to bookmark a site and remember visiting it last week and wish to return. Unfortunately, in the case that you are researching

sensitive material that you do not wish others to see, this can be a security risk. To prevent unwanted security risks please follow the following directions to remove particular sites from your browsers history.

1. From the menu bar select "View"
2. Highlight "Explorer Bar"
3. Select "History"
4. A bar will show up on the left of your browser. Select the item you wish to delete.
5. Right Click on the selected Folder and select "Delete".

Removing cookies from your hard drive

Risk: High

Possible Repercussions: If this is done properly there will be no sign that anything has been changed. However if you delete ALL of the cookie files there is a very large possibility that other users may notice the change.

Cookies are small pieces of code left behind by web pages to store information frequently requested. For example if I clicked on a checkbox to say "save my login information" it would then write a cookie onto my hard drive that I can call next time you visit the site, preventing you from having to login again. This is why it can be very dangerous to delete all of the cookie files. If you delete all of them, all of the stored passwords, user information, and preferences from various sites will be forgotten and you will have to re-enter this information. This will be an obvious change. However, if you follow the directions below, we will instruct you how to delete only the cookies from sites which are high risk. In addition not all browsers will allow you to delete a single item.

1. From the menu bar select "Tools"
2. Select the option "Internet Options"
3. Under the "General" Tab look for "Temporary Internet Files"
4. Click on the "Settings" button
5. Click on the "View Files" button
6. A list of cookies will appear.
Most of the filenames will be in this format.
username@domain [i.e., user@cnet]

7. Select the cookie you wish to delete
8. Right mouse click & Select "Delete"

VITA AUTORIS

NAME: Nicole Yarkovsky

PLACE OF BIRTH: Sarnia, ON

YEAR OF BIRTH: 1985

EDUCATION: Northern Collegiate Institute and Vocational School
(N.C.I.V.S), Sarnia, ON
1999 – 2003

McMaster University, Hamilton, ON
2004 – 2008
B.Sc. (Honours)

University of Windsor, Windsor, ON
2009 – present
M.A. Clinical Psychology (candidate)