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Exploring Cyber-Based Dating Aggression in Adolescent Romantic Relationships: Past, Present, and Future

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Exploring Cyber-Based Dating Aggression in Adolescent Romantic Relationships:
Past, Present and Future.

by

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Abstract

The present study examined adolescents' perpetration of Cyber-Based Dating Aggression (CBDA) in current, past, and potential future romantic relationships. The sample included 39 males and 47 females. Results revealed that, on average, CBDA occurred in 22.7% of relationships and that Monitoring was the subtype of CBDA that adolescents reported the most. Results also revealed that there was a significant gender difference in the perpetration of Relational CBDA from those adolescents reporting on past relationships. Moreover, there were significant positive correlations between CBDA and traditional adolescent dating aggression (i.e., face-to-face aggression), meaning that both of these types of aggression tended to co-occur in the same relationship. Lastly, length of relationship and relationship satisfaction did not significantly predict any subtype of CBDA in current and past relationships, however these variables significantly predicted Monitoring CBDA in future romantic relationships. Interpretations of these findings and suggestions for future research are provided.

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List of Abbreviations

Abbreviation	Definition
CBDA	Cyber-Based Dating Aggression
TADA	Traditional Adolescent Dating Aggression
PATS	Partner Aggression Technology Scale
CADRI	Conflict in Adolescent Dating Relationships Inventory
RAS	Relationship Assessment Scale
BIDR	Balanced Inventory of Desirable Responding
SDE	Self Deceptive Enhancement
IM	Impression Management

CHAPTER ONE: INTRODUCTION

During adolescence, individuals are progressing through a developmental time period that involves the search for romantic relationships in order to promote their own autonomy and identity (Glass, Fredland, Campbell, Yonas, Sharps, & Kub, 2003). By the end of adolescence, most teens have been in a romantic relationship at least once (e.g., past research has found that 89% of adolescent's ages 13 to 18 have reported being in a relationship; Glass et al., 2003). Moreover, on average, about half of teens are in a relationship currently (Connolly & Josephson, 2007). These romantic relationships play quite a significant role in the life of adolescents, as interactions between couples have been found to be more frequent than with parents, siblings, or friends (Laursen & Williams, 1997). Although most of these interactions provide youth with the opportunity to learn many positive aspects about what it is to have a partnership, some of the dynamics of adolescent romantic relationships are negative. In some cases this negative dynamic is in the form of dating aggression.

Dating aggression in general is defined as “actual or threatened harm between adolescent dating partners” (Connolly & Josephson, 2007, p. 3). The majority of aggression within adolescent relationships tends to be psychological in nature (e.g., Halpern, Oslak, Young, Martin, & Kupper, 2001; Holt & Espelage, 2005; Jouriles, Garrido, Rosenfield, & McDonald, 2009; Munoz-Rivas, Grana, O'Leary, & Gonzalez, 2007; Schnurr, Lohman, & Kaura, 2010), and such psychological aggression is defined as hostile behaviour used to undermine or cause mental/emotional impairment to another (Muñoz-Rivas et al., 2007). Interestingly, psychological aggression has been rated by adolescents as more unpleasant than other types of aggression (e.g., physical aggression) and is seen less as “playing around” behaviour (Jouriles et al., 2009). Past research has found that females engage in psychological aggression more than males (Munoz-

Rivas et al., 2007) and that this may be a female's way of responding to conflict in light of changes in physical strength (Sears, Byers, & Price, 2007).

Physical aggression in adolescent dating relationships (e.g., reports of hitting, slapping, or any other physical interaction; Jouriles et al., 2009) is much less common than psychological aggression (Jouriles et al., 2009). Prevalence rates tend to be dependent upon the severity of violence (Leen, Sorbring, Mawer, Holdsworth, Helsing, & Bowen, 2013). For instance, in a past study, 44% of adolescents reported having been pushed by their partner, but only 2% reported being threatened with a knife or a gun (Krahe & Berger, 2005). Interestingly, past research has found that girls are more physically aggressive towards their male partners (Foshee, 1996; Poitras & Lavoie, 1995; Wolfe, Wekerle, Reitzel- Jaffe, & Lefebvre, 1998). This may be because the perpetration of physical aggression by males is less socially accepted and can result in more bodily harm (Price, et al., 1999). Moreover, when females are physically abusive, their male partners do not take these actions as seriously. Therefore, females are more likely to continue to behave this way (Sears, et al., 2006).

Similarly, sexual aggression (e.g., forced sexual acts such as kissing, touching, or intercourse; Jouriles et al., 2009) is also much less common than psychological aggression and studies have found that it is the least prevalent out of the three types (Leen et al., 2013; Williams, Ghandour, & Kub, 2008). The occurrence of sexual aggression in adolescence has been attributed to pubertal changes, which drive an increase of sexuality and involvement in romantic relationships (McMaster, Connolly, Pepler, & Craig, 2002). Moreover, youth of this age have not necessarily learned the interpersonal skills needed for appropriate intimacy, conflict, and sexual desire (Furman & Shoemaker, 2008; Shulman, 2003). Most research has pointed to males perpetrating this type of aggression more than females (Leen et al., 2013; Foshee & Matthew,

2007), however, research examining adolescent romantic sexual aggression in general is limited (Reyes & Foshee, 2012).

What is especially concerning is that because of the developmental period they are in, adolescents have a greater risk at being psychologically harmed from dating aggression (Callahan, Tolman, & Saunders, 2003). For instance, some of the consequences of experiencing dating aggression in adolescence include substance abuse, eating disorders, dropping out of school, risky sexual behaviours and suicidal thoughts (Silverman, Raj, Mucci, & Hathaway, 2001). Moreover, aggressive acts between adolescents are more likely to carry over into adult relationships (e.g., Connolly & Josephson, 2007; Capaldi, Shortt, & Crosby, 2003; Callahan, et al., 2003).

In general, the amount of attention that adolescent dating aggression has received over the years has increased. This may be due to the findings that aggressive behaviour can occur as early as an adolescent's first romantic relationship, which highlights the importance of research on intervention and prevention programs (Connolly, Pepler, Craig, & Taradash, 2000). The majority of past research on adolescent dating aggression has focused mainly on face-to-face aggression within the three previously mentioned subtypes (i.e., physical, sexual, and psychological). However, with the advent of different types of technology used to communicate, the means by which this aggression is perpetrated are vastly changing.

The new types of communication technology include, but are not limited to, cell phone, text messaging, e-mailing, and the use of social networking websites such as Facebook and Twitter. In Western culture the use of these means to communicate is very prominent within the adolescent population. A Kaiser Family Foundation study found that 66% of 8-18 year olds reported that they owned a cell-phone; the vast majority of that percentage was aged 15 to 18

years old (Rideout, Foehr, & Roberts, 2010). Those who reported using their cell phone to text message estimated that they sent, on average, 118 messages in a typical day. Fifteen to 18 year-olds specifically reported spending the most time sending and receiving text messages at almost two hours a day (Rideout et al., 2010). Among all ages, girls spent more time texting (1 hour and 58 minutes) than boys (1 hour and 14 minutes). In addition, in the same Kaiser Family Foundation study, youth ages 8-18 spent, on average, one hour daily, on social networking websites (the most popular computer activity among this sample). Furthermore, in a report conducted by the PEW Research Centre's Internet & American Life Project (2011), it was found that out of 799 teens aged 12-17 in their sample, 80% were users of social media sites. Thus, it is apparent that these new types of communication technology are used very frequently in adolescents' day-to-day life.

What was once a technology that could only be used at home, adolescents are extremely adept at using mobile technology to find, develop, and nurture their relationships. In addition to the high prevalence rates of adolescent use of communication technology, cell phones now allow many types of media to be available at one's fingertips (e.g., social networking website, Internet, and text messaging), which provides multiple uses of communication technology in a single device (Rideout et al., 2010). For example, 83% of teens report that they are able to receive photo or video messages to their cell phone, and they also reported that they can upload these directly to social networking websites and YouTube (Alvarez, 2012).

Past research has found that most use technology to communicate with people they already know (Blais, Craig, Pepler & Connolly, 2008; Gross, 2004). In this sense, using technology to communicate can be an enjoyable experience and keep others connected (e.g., by using a social networking website such as Facebook). One of the major drawbacks of the use of

technology, however, is that it can be used in aggressive ways towards others. For instance, cyber-bullying has become a recent concern in society and research on this topic is increasing (Bhat, 2008; Kowalski, & Limber, 2007; Walker, Sockman, & Koehn, 2011). Cyber-bullying can be defined as “an aggressive intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself” (Smith, Mahdavi, Carvalho, Fisher, Russell, & Tippett, 2008, p. 376).

Similar to cyber-bullying is a type of cyber-aggression that has limited coverage in the literature, but one that is equally as important and potentially harmful. Cyber-Based Dating Aggression (CBDA) is defined as aggression through communication technology within a dating relationship (Attewell & Fritz, 2010; Piitz & Fritz, 2009). As indicated above, adolescence is a developmental time period that involves the search for romantic relationships in order to promote their own autonomy and identity (Glass et al., 2003). These relationships set the stage for adult intimacy (Connolly et al., 2010). It has been found that adolescents have a greater risk at being psychologically harmed due to dating aggression because of the developmental period they are in (Callahan, et al., 2003). For instance, traditional adolescent dating aggression (i.e., face to face aggression; TADA) has found to lower adolescents’ psychological wellbeing (Callahan et al., 2003). Furthermore, psychological aggression has been rated as more unpleasant than physical aggression (Jouriles et al., 2009), and is the most common subtype that adolescents have reported to engage in (Connolly & Josephson, 2007).

Since CBDA is made up entirely of non-physical aggression (i.e., psychological aggression) and given that it has been rated by adolescents as more unpleasant than physical aggression (Connolly & Josephson, 2007), this may pose an even greater danger to adolescent’s wellbeing. This may be due to the idea that psychological aggression can seriously undermine

one's self esteem (Connolly & Josephson, 2007). As a result, low self-esteem can lead to other concerning consequences, such as depression and poor interpersonal functioning (Blatt & Zuroff, 1992). Therefore, experiencing CBDA may consequently have damaging effects on the health and well-being of adolescents. In addition, the nature of communication technology results in less bystanders and in the ability to reach a mass amount of people in a short amount of time (Alvarez, 2012). This feature poses an extremely dangerous threat to victims of dating aggression and thus, it is imperative to explore the impact of adolescent CBDA.

CBDA within this study is specifically defined as including five forms of communication technology (i.e., telephone, text, e-mail, instant message, or social networking website), which are used to perpetrate five forms of aggression (i.e., emotional/verbal aggression, domineering/controlling behaviors, monitoring, relational aggression and stalking; Piitz & Fritz, 2009). This definition of CBDA was based on research by Piitz and Fritz (2009) who settled on these five forms of CBDA after analyzing measures used in the psychological intimate partner violence and cyber bullying literature. Emotional/verbal aggression includes insulting or swearing at a romantic partner through a social networking website such as Facebook. Dominance/controlling behaviours include telling a partner who he or she can and cannot contact or communicate with, or further, when individuals outright prevent their partners from communicating with others of whom they do not approve. An example of monitoring includes an individual keeping track of who talks to or texts their romantic partner. By extension, relational aggression is when individuals instant message other people to start rumors about their partners. Lastly, stalking may emerge through technology when individuals continue to instant message their partners at a frequent rate when their partners do not want them to (Attewell & Fritz, 2010).

A survey of the current published literature reveals that only one empirical article has explored the aggressive use of communication technology in an adolescent dating relationship context. Draucker and Martsolf (2010) conducted a retrospective study whereby young adults (aged 18-21) explained their experience of cyber-aggression with a romantic partner when they were adolescents (i.e., when they were aged 13-18). The purpose of their study was to identify ways in which technology was used aggressively in a dating relationship and to explore examples of these experiences (Draucker & Martsolf, 2010). The authors concluded that there were several ways in which technology was used in dating violence. These included: Arguing, monitoring or controlling the whereabouts of a partner, seeking help during a violent episode, limiting a partner's access to oneself (i.e. turning off their phones so their partner could not contact them), and reconnecting with a partner after a break-up or violent encounter (Draucker & Martsolf, 2010). The only aggressive way in which this study found romantic partners to use communication technology that was potentially representative of CBDA were arguing (e.g., emotional/verbal aggression) and monitoring/controlling the whereabouts of a partner.

Current Study

The current study sought to extend the results of Draucker and Martsolf's (2010) study by separating monitoring/controlling into two separate categories, as these two types of aggression are quite different. For instance, where as monitoring may appear as keeping track of who their partner text messages, domineering/controlling behaviours may appear as telling their partner to stop talking to that particular person all together. In addition, seeing as there are other important ways in which cyber aggression between romantic partners can be perpetrated (i.e., relational aggression and stalking), the current study will add to the literature by providing a more comprehensive look at dating aggression by exploring the use of technology in current

adolescent dating relationships in a more robust manner (i.e., by analyzing several types of CBDA). More specifically, the current study will add to the literature by a) providing a more robust look at dating aggression through the use of communication technology and b) exploring this type of behaviour enacted through technology within relationships using an adolescent sample.

Additionally, the present study sought to analyze adolescent romantic relationships in the context of three different relationship types. These included current relationships (i.e., romantic relationships that adolescents were in currently), past relationships (i.e., romantic relationships that adolescents experienced in the past), and future relationships (i.e., romantic relationships that adolescents predicted they might experience in the future). The rationalization for including three different types of relationships in this study was two fold. Firstly, including those who had never been in a relationship before to complete surveys based on a future relationship allowed for the inclusion of all sampled adolescents to participate in the study without causing the feeling of exclusion and/or embarrassment for not ever being in a relationship. Secondly, including adolescents who predicted whether CBDA would occur in their future relationships may help to understand how youth think about relationships and the prevalence of aggression therein. For example, if the current study found that adolescents predicted CBDA *would* occur in their future relationships, this may mean that adolescents have a preconceived notion that this is acceptable romantic relationship behaviour. Also of note is the notion that adolescents may have a biased view of their future in that they may under predict negative events and over predict positive events (Chapin, Alas, & Coleman, 2005; Halfond, Corona, & Moon, 2012; Klaw, 2008; Weinstein, 1980). This will be considered in all analyses of the present study.

Operationalizing cyber aggression in dating relationships, the current study examines four important research questions: 1) What is the prevalence (or future possibility) of CBDA in current, past or future romantic relationships in a sample of adolescents?; 2) Are there gender differences in the perpetration of CBDA in current, past, and future romantic relationships?; 3) What is the relationship between CBDA and Traditional Adolescent Dating Aggression (i.e., TADA)?; and 4) Does relationship length and relationship satisfaction predict the perpetration of each subtype of CBDA in current, past, and present relationships? The current literature supporting the relevance of asking these four research questions will be presented next. However, due to the paucity of literature on CBDA in adolescent romantic relationships, the literature supporting the above research questions will be examined using TADA (i.e. face to face aggression) and CBDA in university samples as previously studied.

CHAPTER TWO: LITERATURE REVIEW

Prevalence of Cyber-Based Dating Aggression

The prevalence rates of CBDA in an adolescent sample are scarce, as there is only one study that has examined the occurrence (e.g., Draucker & Martsof, 2010). However, this particular study only looked at two types of CBDA: Emotional/verbal aggression and monitoring/controlling behaviours (Draucker & Martsof, 2010). These authors found that 30 out of 56 (53.5%) participants reported both these particular types of electronic aggression towards their romantic partner.

There are more studies within the literature that examine prevalence rates of CBDA in college/university student samples. Madlock and Westerman (2011) found that 54% of participants reported “hurtful cyber teasing” in their current romantic relationships. Hurtful cyber teasing was defined as verbal aggression (e.g., psychological abuse, criticism, social rejection, social aggression, hurtful messages, transgression, and disconfirming messages) sent via technology, followed by at least a partially unsuccessful rectifying message (Madlock & Westerman, 2011). Bennett, Guran, Ramos and Margolin (2011) found that out of 437 undergraduate students, 76.5% of females and 77.1% of males reported being electronically victimized by their dating partner. Electronic victimization included direct hostility, intrusiveness, public humiliation, and exclusion (Bennett et al., 2011). Furthermore, Burke, Wallen, Vail-Smith and Knox (2011) found that out of 804 undergraduate students, half of all male and female participants reported using communication technology to monitor or control their partners either as the perpetrator or the victim. The prevalence rates in these college/university sample prevalence rates may be similar in adolescent samples; however, they do not look at cyber aggression as a whole (i.e. examining emotional/verbal aggression,

domineering/controlling behaviors, monitoring, relational aggression and stalking) and only look at certain subtypes of CBDA (i.e. just verbal aggression or just monitoring behaviours). Thus, the present study will add to the literature in examining prevalence rates of all subtypes of cyber-aggression in one study using an adolescent sample.

When looking at literature on TADA (i.e., face-to-face aggression), it has been found that psychological violence is more prevalent in adolescent dating relationships than is physical or sexual violence (e.g., Halpern et al., 2001; Holt & Espelage, 2005; Jouriles et al., 2009; Muñoz-Rivas et al., 2006). For instance, Schnurr and colleagues (2010) found that 80% of reported violence was psychological versus the 30% that was reported as physical violence. Psychological violence has been previously defined as hostile behaviour used to undermine or cause mental/emotional impairment to another (Muñoz-Rivas et al., 2006).

Since Draucker and Martsolf's (2010) research is the only study that looks partially at the prevalence of cyber-based aggression in an adolescent study, the first research question asks how often cyber-aggression is reported in total and in current, past and future relationships and what type is occurring the most frequently? Based on traditional adolescent dating aggression literature, studies using college/university samples, and Draucker and Martsolf's study (2010), it is predicted that, in total, adolescent CBDA will be reported by more than half of adolescents in the current sample. Furthermore, based on literature revealing that adolescents may have a biased view of their future in that they may under predict negative events and over predict positive events (Chapin, et al., 2005; Halfond, et al., 2012; Klaw, 2008; Weinstein, 1980), it is predicted that those reporting on future romantic relationships will report less CBDA than those in current and past romantic relationships. It is important to look at the frequency of CBDA in order to get

an idea of the extent that this type of aggression is occurring in an adolescent relationship. This will allow others (such as parents and teachers) to be more aware of the seriousness of problem.

Gender Differences in Cyber-Based Dating Aggression

Currently, there are no studies in the literature exploring gender differences in the perpetration of adolescent CBDA. However, there is more research comparing gender differences in TADA. For instance, recent literature has found that females engage in dating aggression perpetration just as much or more than males do. Munoz-Rivas and colleagues (2007) found that a significantly higher percentage of women perpetrated verbal and physical aggression towards their significant other, while Harned (2001) has argued that males are more likely to experience psychological aggression (i.e., be victimized) versus females.

Contrary to these results above, Marquart (2007) found that females reported being victimized more than males (i.e., males perpetrated physical and threatening aggression more often than their female partners). Other researchers have argued that it is the definition of violence that may affect gender differences (Jouriles et al., 2009; Halpern, et al., 2001). For example, when violence is more broadly defined (e.g., any type of psychological violence, such as being sworn at, insulted or threatened) there are no gender differences in the experience of this overall type of aggression (Halpern et al., 2001). However when violence is defined in a more narrow way (e.g., looking only at participants who insulted their partner), gender differences start to appear. In this study, females (19%) insulted their partner more than males (14%; Halpern et al., 2001). Thus, it is apparent in TADA literature that gender differences in the perpetration of dating aggression are inconsistent.

In the small amount of literature on CBDA where gender differences are explored in college/university samples, females tend to perpetrate this type of aggression more than males in

both the monitoring and stalking subtypes of CBDA. For instance, Burke and colleagues (2011) found that females (25%) were significantly more likely than males (6%) to monitor their partners e-mail accounts. Interesting about this study was the fact that females engaging in these monitoring behaviours did not see their behaviour as being inappropriate (Burke et al., 2011). Furthermore, Alexy, Burgess, Baker, and Smoyak (2005) found that male students were statistically more likely than female students to be cyberstalked by their partner or former intimate partner. Although these studies use college/university student samples and lack information on gender differences in emotional/verbal aggression, domineering/controlling behaviors, or relational aggression, adolescent gender differences in perpetration of CBDA may be similar.

As the literature above demonstrates, it is important to explore gender differences in CBDA in order to determine which gender self-reports more perpetration of this type of aggression. Thus, the second research question is which gender is more likely to be perpetrators of CBDA in present, past and potential future relationships? Given the previous research on CBDA in college and university samples, it is predicted that females will engage in CBDA more than males. Knowing gender differences can also create the groundwork for further research in exploring the secondary effects of cyber aggression and gender. For instance, females may internally and externally react differently than males when experiencing this type of aggression.

Cyber-Based Dating Aggression & Traditional Adolescent Dating Aggression

As stated earlier, dating aggression has been previously defined as “actual or threatened harm between adolescent dating partners” (Connolly & Josephson, 2007, p. 3). CBDA within this study is specifically defined as including five forms of communication technology (i.e., telephone, text, e-mail, instant message, or social networking website), which are used to

perpetrate five forms of aggression (i.e., emotional/verbal aggression, domineering/controlling behaviors, monitoring, relational aggression and stalking; Attewell & Fritz, 2010). As there appears to be only one published study (Draucker & Martsolf, 2010) that partially examines adolescent CBDA (i.e. emotional/verbal aggression, monitoring and controlling behaviours), the correlation between CBDA and traditional adolescent dating aggression has not been explored in great detail. Even in TADA research, when multiple forms of aggression have been measured, each are typically analyzed independent from one another (Jackson et al., 2000). Important in this trajectory are the previous findings that psychological aggression can sometimes be a warning sign of physical aggression to come (Cano, Avery-Leaf, Cascardi, & O’Leary, 1998; Kasian & Painter, 1992; O’Leary & Slep, 2003).

Important to the present study are the findings that that psychological and physical aggression may co-occur in the same relationship. Sears, Byers and Price (2007) studied the extent to which teens used multiple forms of dating violence in the same relationship. Results revealed that 19% of boys and 26% of girls had used two or more forms of dating violence and that a small number of teens used all three forms of violence (i.e. psychological, physical, and sexual). Interestingly, girls significantly reported perpetrating more than one form of violence with a dating partner more than boys did. In addition, an earlier qualitative study by Sears and colleagues (Sears et al., 2006) about adolescents’ ideas of dating violence found that both boys and girls viewed psychological and physical abuse to be integrated together in relationships. Lastly, Bossarte, Simon, and Swahn (2008) examined the co-occurrence of physical and psychological dating violence, peer violence and suicidal behaviour. From their research, they suggested that specific types of violence are unlikely to occur in isolation of each other in dating relationships. For instance, they identified one particular cluster of behaviours, which they called

the High Violence (HV) cluster, whereby members of this group reported the highest levels of psychological and physical abuse in relationships, with half of this cluster being female. What was more concerning was that this cluster of behaviours had the highest level of suicidal behaviour (e.g., thought about, made a plan, or attempted suicide).

Taking the above literature into account, it is reasonable to expect that those who engage in CBDA may also be more likely to engage in traditional, face-to-face dating aggression as well. This leads to the third research question: How is CBDA and traditional adolescent dating aggression correlated in total and in current, past and potential future romantic relationships? It is expected that there will be significant positive correlations among the subtypes of TADA and the subtypes of CBDA. For example, it is expected that as domineering/controlling CBDA increases, threatening TADA will also increase or as emotional/verbal CBDA increases, relational TADA will increase as well. Examining the relationship between these two types of aggression could extend our knowledge on this understudied topic, as adolescents may not be experiencing CBDA in isolation. Multiple forms of aggression may decrease adolescent's psychological wellbeing and has the potential to negatively affect other areas of their life as well.

Cyber-Based Dating Aggression, Relationship Length, and Relationship Satisfaction

Relationships play a momentous role in the adolescent developmental period, as 89% of adolescent's ages 13 to 18 have reported being in a relationship (Glass et al., 2003). The average length of adolescent romantic relationships within the literature is quite variable and can range from 7-8 weeks (Purdie & Downey, 2000) to 3 to 4 months (Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004; Williams, Connolly, Pepler, Craig & Laporte, 2008) to 6 to 12 months (Connolly & McIsaac, 2008; Haugen, Welsh, & McNulty, 2008). Research has found that as time goes on within a relationship, individuals may act upon certain emotions or behaviours that

they may not have acted on at the beginning of the relationship. For instance, Capaldi, and colleagues (Capaldi et al., 2003) found that young men engaged in significantly more psychological aggression across time with the same female partner than those young men who had re-coupled with new partners. Roberts, Auinger, and Klein (2006) found similar results, as increased length of time in adolescent relationships was associated with heightened risk of experiencing verbal abuse and psychological aggression. These researchers examined the victimization of aggression, however, one has to perpetrate in order for one to be victimized.

In addition to the findings using adolescent samples, there have been similar correlations between relationship length and aggression found in college/university samples. For example, Hettrich and O'Leary (2007) found that there was a significant positive association between the length of female romantic relationships in college and the amount of self-reported physical aggression received by and perpetrated against their partner, a finding shared in other studies (e.g., Burke et al., 1988; Gaertner & Foshee, 1999; Giordano, Soto, & Manning, 2010; Hammock and O'Hearn, 2002). Taking this literature into consideration, it is reasonable to expect that adolescents' length of relationship may be associated with the perpetration of CBDA, in that as relationship length increases, so too might the self-reported aggression via cyber-based technology.

Relationship satisfaction is another variable that may be related to the perpetration of CBDA. For instance, Cramer (2003) examined the impact of low relationship satisfaction on violence perpetration and found that adolescents who were not satisfied with their relationship were more likely to experience dating violence perpetration. Similarly, Schnurr and colleagues (Schnurr et al., 2010) and O'Leary and Slep (2003) found that low relationship satisfaction was a precursor to dating violence perpetration. In other words, when adolescents were not satisfied

with their relationship, the potential for dating violence perpetration increased. On the contrary, past studies have found that when adolescents experience violence in their romantic relationships, levels of satisfaction do not change; these couples are still satisfied with their relationship (Capaldi & Crosby, 1997; Gray & Foshee, 1977).

Schnurr and colleagues (Schnurr et al., 2010) have suggested that both relationship satisfaction and relationship length are two characteristics (among others; i.e., jealousy and commitment to the relationships) that are commonly linked to TADA. However, the correlation between relationship length, relationship satisfaction, and CBDA has not been previously examined. Therefore, the fourth research question asks: Does relationship length and relationship satisfaction predict the perpetration of each subtype of CBDA in current, past, and present relationships? For the purpose of this study, relationship satisfaction is defined based on Hendrick, Dicke, and Hendrick's (1988) Relationship Assessment Scale. That is, relationship satisfaction is dependent upon how well the partner is reported to meet one's needs and expectations, how well the relationship compares to others, whether there are any regrets about the relationship, how much they love their partner, and the degree of perceived problems in the relationship. It is important to look at the predictive relationships among relationship satisfaction, dating length, and CBDA so that adolescents can be more aware of the possible risk factors that are correlated with cyber aggression.

Purpose of Study

The purpose of this study is to explore the nature and presence of Cyber-Based Dating Aggression (i.e., emotional/verbal aggression, domineering/controlling behaviors, monitoring, relational aggression and stalking enacted through phone, text, e-mail, instant message, or social networking website) in a sample of adolescents. Currently, there are very few published studies

that empirically investigate the aggressive use of communication technology to perpetrate romantic dating aggression in an adolescent dating context (e.g., Draucker & Martsof, 2010). Extant research generally uses a retrospective study design whereby young adults (i.e. 18+ years of age) report on their experience of cyber aggression with a romantic partner while they were adolescents. As such, it is likely that retrospective reports are not as accurate in providing estimates of the prevalence and nature of CBDA in adolescent dating relationships. In addition, because technology and social media are changing so quickly, past findings are generally limited to describing how romantic partners use communication technology that is only partially representative of the full scope of CBDA behaviours (e.g., emotional/verbal aggression and monitoring/controlling the whereabouts of a partner). Thus, the current study extends the results of previous studies by exploring the use of technology in current adolescent dating relationships in a more robust manner. More specifically, the current study will add to the literature by a) providing a more comprehensive look at dating aggression through the use of communication technology (i.e., exploring more subtypes of CBDA) and b) exploring this type of behaviour enacted through technology within relationships using an adolescent sample.

To review, the present study will attempt to add to the current literature in this area by answering four main questions: 1) What is the prevalence of cyber-aggression as self-reported by adolescents to occur in current, past and future romantic relationships?; 2) Which gender is more likely to be perpetrators of CBDA in present, past and future romantic relationships?; 3) How is CBDA and TADA correlated overall and specifically in current, past and future romantic relationships?; and 4) Does relationship length and relationship satisfaction predict the perpetration of each subtype of CBDA in current, past, and present relationships?

CHAPTER THREE: METHODOLOGY

Participants: Demographics

Eighty-eight High school students ($N= 88$; 39 males and 47 females; Mean age =16.4) from two different schools within a major city were recruited for the study. Eleven participants were excluded from the study due to 1) not providing consent or 2) choosing to leave the survey.

A series of questions were constructed for the present study in order to gather information about the participant such as their grade in school, race/ethnicity, religious preference, parents' marital status, family structure and sexual orientation. The mean grade that participants were in at the time of the survey was grade 11. The majority of the participants (61.4%) were Caucasian/white. Other ethnicities included: South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.; 2.3%), Arabic (4.5%), Southeast Asian (e.g., Cambodian, Indonesia, Laotian, Vietnamese, etc.; 3.5%), African American (4.5%), Chinese (8.0%), and Japanese (2.3%). Religious preferences included: Catholic (11.4%), Protestant (10.2%), Agnostic (3.5%), Buddhist (3.4%), Lutheran (6.1%), Muslim (5.7%), None (42.0%), and Other (21.6%).

In terms of parent marital status, 55.7% of participants' parents were legally married, 10.2% were separated, 10.2% were divorced, 17.0% were single (i.e., never legally married), and 4.5% were widowed. Parents' highest level of education was college/university graduate (45.3%). Most participants indicated that they hoped to graduate from college/university (65.1%). In terms of family structure within the home, most participants lived in a two-parent (biological) household (59.3%). Fourteen percent lived in a single parent household with their mother, 9.3% lived in a two-parent, step-family household (e.g., children from one or both parents living in the same household), 8.1% lived in a single parent household, but shared equal time between their mother and father, 2.3% lived in a single parent household with their father,

2.3% lived in a two-parent blended household (e.g., children from one or both parents and new children), and 1.2% lived in a two-parent household, but were adopted. The majority of participants were the first or second child in their family (31.4%), 14.0% were the fourth or younger child, 11.6% were the only child, 10.5% were the third child, and 1.2% was a twin. Lastly, the majority of participants were heterosexual (90.7%), 5.8% were bisexual, and 3.5% said “other” (e.g., no sexual preference).

Participants: Dating Information

In addition to demographic information, participants were also asked specific questions about dating relationships. These latter relationship questions asked the participant to respond based on a current, past, or potential future relationship. For instance, if a participant had never been in a relationship before, they were asked to respond to the estimated number of hours they thought they would spend with a future partner. 38.4% of participants indicated that they were currently in a dating relationship and completed the survey about their current partner. Just over forty percent (40.7%) of participants were not in a relationship at the time, so completed the survey about a past relationship. Over one in five (20.9%) of participants had never been in a relationship before, so completed the survey while thinking about a potential future relationship. The average age participants reported being in their first dating relationship with someone was 10.63 years. More participants (98.8%) indicated that they thought it was okay for a male to ask a female to be in a dating relationship with them versus 86.0% who indicated that they thought it was okay for a female to ask a male to be in a dating relationship with them. An overwhelming majority (95.3%) of participants indicated that they did not think it was okay for a male to be in a dating relationship with more than one female at one time. A similar percentage (96.5%) of participants indicated that they did not think it was okay for a female to be in a dating

relationship with more than one male at one time. Table 1 provides descriptive results of dating relationship items separated into current, past and future relationships.

Materials

Cyber-based dating aggression.

Cyber-based dating aggression (CBDA) was measured in the present study using the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2009). This measure consists of 130 items and measures victimization and perpetration across five dimensions of psychological partner aggression (i.e., monitoring, stalking, emotional/verbal aggression, relational aggression, and dominance/controlling behaviours) enacted or experienced through five forms of technology (i.e., phone, e-mail, text message, instant message and social networking websites such as Facebook and Twitter) in past dating relationships. For the purpose of this study, just the perpetration measure was used. The questions asked were based on a Likert scale from 0 (*never*) to 3 (*very often*). Example items from this questionnaire include: “*Instant messaged your partner something to hurt your partners feelings on purpose*” and “*Told your partner they could not text message their family.*” Each item was altered to either past, current, or future language to produce three variations of this measure depending on the participant’s dating status. See Appendix A for an example of the PATS for current relationships. The mean for each subscale was computed for each participant and higher scores indicated more perpetration of CBDA. Past studies have found the PATS to be psychometrically sound (i.e., Cronbach’s alpha ranging from $\alpha=.80$ to $\alpha=.98$ for individual subscales; Attewell & Fritz, 2010).

Traditional Adolescent Dating Aggression.

Traditional adolescent dating aggression was measured in the current study using the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe, Scott, Reitzel-Jaffe,

Wekerle, Grasley, & Straatman, 2001). The CADRI measured how often physical, sexual, emotional/verbal, threatening, and relational aggression occurred in a dating relationship within the last year during a conflict or argument on a Likert scale from 1 (*never: this has never happened in your relationship*) to 4 (*often: this has happened 6 times or more in your relationship*). The CADRI also includes a Reasoning subscale (e.g., “I told my partner that I was partly to blame”). The original CADRI consists of 70 questions and measures both perpetration and victimization of the above forms of aggression. For the purpose of this study, only the perpetration measure (i.e., 35 items) was distributed. Example items of the perpetration questionnaire used included: “*I tried to turn my partners friends against my partner*” and “*I did something to make my partner feel jealous.*” Each item was also altered to either past, current, or future language to produce three variations of this measure. See Appendix B for an example of the CADRI for current relationships. The CADRI has demonstrated good reliability in the past ($\alpha=.83$ for combined subscales and ranging from $\alpha=.51$ to $\alpha=.83$ for individual subscales; Wolfe et al., 2001).

Relationship satisfaction.

The Relationship Assessment Scale (RAS; Hendrick et al., 1988) measured relationship satisfaction in current or past dating relationships. The RAS measured seven areas of satisfaction using a 5-point Likert scale where 1=Low and 5=High. The seven areas of satisfaction measured include general satisfaction, how well the partner meets one’s needs, how well the relationship compares to others, regrets about the relationship, how well one’s expectations have been met in the relationship, love for their partner, and problems in the relationship. Lower scores indicated less relationship satisfaction and higher scores indicated more relationship satisfaction. Items 4 and 7 were reversed scored. Examples of items include: “*In general, how satisfied are you with*

your relationship?” and *“To what extent has your relationship met your original expectations?”*

Each item was also altered to either past, current, or future language to produce three variations of this measure. See Appendix C for an example of the RAS for current relationships. The RAS was chosen to measure relationship satisfaction, as it is appropriate in measuring a broad array of partnered relationships as oppose to just measuring marital satisfaction (Hendrick, et al., 1998). The RAS has been found to be psychometrically sound ($\alpha=.86$, test-retest reliability=.85), and is consistent across cultures (Hendrick et al, 1998).

Social desirability.

To control for social desirability in predicting the prevalence of CBDA, the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1984) measured whether participants were responding in a socially desirable manner. The BIDR measures two constructs: *Self-Deceptive Enhancement (SDE)*, which is the tendency for participants to give self-reports that are honest, but positively biased, and *Impression Management (IM)*, which is the tendency for deliberate self-presentation to an audience. An example of an SDE item is, *“I never regret my decisions.”* An example of an IM item is, *“When I hear people talking privately, I avoid listening.”* Respondents rate their agreement with each statement using a seven-point scale ranging from 1 (not true) to 7 (very true). Higher scores indicate exaggerated desirable responses and scores may be added together to yield an overall Socially Desirable Response (SDR). All even items on the SDR scale were reversed scored as well as all odd items on the IM scale. See Appendix D for an example of the BIDR for current relationships. The BIDR yields good overall internal consistency ($\alpha= .83$) and good reliability for the SDE scale ($\alpha= .68-.80$) and IM scale ($\alpha= .75-.86$; Paulhus, 1988). In addition, it also yields concurrent validity ($\alpha=.71$) with the Marlowe Crown Social Desirability Scale (Crowne & Marlowe, 1960; Paulhus, 1988) and with the

Multidimensional Social Desirability Inventory ($\alpha=.80$; Jacobson, Kellogg, Cauce, & Slavin, 1977; Paulhus, 1988).

Procedure

Participants were recruited through schools within the Calgary, Alberta area. First, permission was granted from the Conjoint Faculties Research Ethics Board at the University of Calgary to conduct the study. Second, permission was granted from the school board's Research Ethics Board in order to conduct the study within the selected schools. Next, respective teachers who agreed to have their class participate in the study were contacted. The primary researcher then visited each class and distributed Parental Consent Forms to the students, which outlined the purpose and procedures of the study (see Appendix E). Students were asked to have the form signed by their parent(s)/guardians and returned to their teachers. The primary researcher then collected the signed forms from each school and formulated a list of all students who were given permission to participate in the study. On the day of data collection, those students who were given permission to participate were administered the online survey on computers within the school computer lab. The first page of the survey included the Participant Assent Form as well as a brief outline of the study (see Appendix F). The total questionnaire package took approximately 45-50 minutes to complete and the primary researcher was present throughout the entire survey. To ensure that responses were confidential, computer labs were set up so that each computer tower was separating each computer screen. As well, all students were asked not to communicate with each other throughout the duration of the survey.

In terms of the structure of the survey, each student was guided through different streams of questionnaires depending on whether they were in a current, past, or future dating partner. For instance, participants were asked whether they were 1) currently in a dating relationship, 2) not

in a dating relationship at the time, but had been in a relationship in the past, or 3) not in a dating relationship at the time and had never dated anyone in the past. Depending on the participants' answer, the SurveyMonkey format ensured that each participant was directed to the appropriate version of the questionnaire (i.e. in current, past or future language). This allowed for all participants to take part in the study and also prevented those who had not been in a relationship from being singled out. In addition, during two separate time points of the survey, the researchers included a question that served to monitor potential participant distress (e.g., *"If you are feeling distressed about any of the previous questions asked and would like to exit the survey now, please indicate so below. If you do choose to exit the survey now, all information that you have given up to this point will not be used in the study"*). Following completion of the online questionnaire, students were directed to an "Explanation of Study" page, which debriefed the students about the study and also included various resources for youth, should they need it (see Appendix G).

Research Design & Analysis

The present study was a quantitative, exploratory study using a convenience sample. In order to study research question #1 – How often is cyber aggression in general happening and what type is occurring the most in current, past and potential future relationships?) – descriptive and frequency tests were completed using IBM SPSS. The total frequency in which cyber aggression occurred and what type of cyber aggression occurred the most was then analyzed. Research question #2 – which gender is more likely to perpetrate CBDA in present, past and potential future relationships? – was analyzed using a one-way Analysis of Variance (ANOVA) to analyze the mean group differences. In order to study research question #3 – How is CBDA and traditional adolescent dating aggression correlated in current, past and potential future

relationships? – bivariate Pearson correlations were conducted and analyzed. For research question #4 – Does relationship length and relationship satisfaction predict the perpetration of each subtype of CBDA in current, past, and present relationships? – a multiple linear regression was run in order to analyze the linear combination of predictors (relationship length and relationship satisfaction) that correlate maximally with the outcome variable (CBDA).

CHAPTER FOUR: RESULTS

Preliminary Analyses

Prior to conducting the main analyses of this study, descriptive statistics were run for each of the measures. The means of CBDA as measured by the PATS (Piitz & Fritz, 2008) are explained below under Primary Analyses (also, see Table 2 and 3). Overall Cronbach's reliability for the PATS was $\alpha=.97$, indicating excellent reliability. Cronbach's reliability ranged from $\alpha=.66$ to $\alpha=.97$ for individual subscales.

The mean of the total amount of traditional adolescent dating aggression (TADA; as measured by the CADRI; Wolfe et al., 2001) on a scale of 1 (never occurs in my relationship) to 4 (often occurs; i.e., 6 or more times in my relationship) was $M=1.37$ ($SD=.19$), indicating that on average, TADA occurred very little across all relationships types. Results also revealed that emotional/verbal aggression was the type of TADA reported most often in current ($M=1.36$, $SD=.52$), past ($M=1.44$, $SD=.37$), and potential future ($M=1.38$, $SD=.33$) relationships.

Cronbach's reliability of the physical aggression subscale (current relationship version) and the threatening subscale (future relationship version) of the CADRI are not reported, as the value was negative. This was because the majority of items within each scale were constant and thus deleted. Remaining items were also very close to being a constant variable, turning the reliability statistic into a negative number. Additionally, Cronbach's reliability for the relational aggression subscale (current relationship version) and the relational, sexual, and physical aggression subscale (future relationship version) of the CADRI was not calculated because each of the items with the subscales had zero variance and thus, too many items were deleted from the scale to produce a reliability statistic (see Table 4). Overall Cronbach's reliability was good ($\alpha=.85$) and ranged from $\alpha=.39$ to $\alpha=.90$ for individual subscales.

The mean of the total amount of relationship satisfaction on a scale of 1 (unsatisfied) and 5 (extremely satisfied) was $M=3.67$ ($SD=.93$), indicating that on average, participants were between average and extremely satisfied with their relationship. The total mean of relationship satisfaction in each condition was $M= 4.17$ ($SD=.84$; current), $M=3.13$ ($SD=.90$; past), and $M=3.77$ ($SD=.55$; future), indicating that participants in current relationships were the most satisfied with their relationship (i.e., between average and extremely satisfied), while participants who responded in reference to a past partner rated this relationship as the least satisfying (i.e., average). Overall Cronbach's reliability was good ($\alpha=.86$). For descriptive statistics and reliability of each relationship condition (i.e., current, past or future), see Table 5.

The total mean of social desirability was $M=11.24$ ($SD= 4.96$) with mean scores ranging from 3 to 24 (see Table 6). Higher scores indicate exaggerated desirable responding and thus on average, adolescents in this sample did not respond in a socially desirable manner. Overall Cronbach's reliability was on the lower end ($\alpha=.59$).

Primary Analyses

Prevalence rates of cyber-based dating aggression.

Examination of prevalence rates for CBDA revealed several important findings. The average amount of CBDA that occurred in all relationship types (i.e., current, past, and future) was 22.7% ($M=1.20$; $SD=.22$). The percentage of participants who reported perpetration of CBDA by way of current, past, and future relationships was 25%, 28.4%, and 14.8% respectively.

The type of CBDA reported to occur most often was monitoring in current ($M=1.40$, $SD=.46$), past ($M=1.35$, $SD=.39$), and future relationships ($M=1.41$, $SD=.30$). The second type of CBDA reported to occur most often was emotional/verbal aggression in current ($M=1.19$,

$SD=.32$) and past ($M=1.24$, $SD=.28$) relationships. Stalking was the second subtype of CBDA to be reported most often in future relationships ($M=1.24$, $SD=.44$).

The type of technology that participants reported to use the most to perpetrate CBDA in current, past, and potential future relationships was through text messaging ($M=1.31$, $SD=.37$; $M=1.36$, $SD=.33$; $M=1.30$, $SD=.22$). The second most reported type of technology that participants used to perpetrate CBDA was through a phone (current: $M=1.18$, $SD=.26$, past: $M=1.25$, $SD=.29$, and future: $M=1.25$, $SD=.20$). See Table 2 and 3 for more descriptive statistics of each of the PATS subscales and types of communication used.

To explore whether there were differences between the subtypes of CBDA in current, past, and future relationship conditions, a series of one-way analysis of variance (ANOVA) tests were completed. The independent variables represented the relationship condition (current, past, and future) and the dependent variables represented the different subtypes of CBDA (emotional/verbal, dominance/control, monitoring, relational and stalking). Results revealed a statistically significant main effect for the relational subtype of CBDA, *Welch's F* (2, 82) = 4.20, $p < .05$, indicating that there were differences between relationship conditions. *Welch's F* test was reported because the *Levene's F* test revealed that the homogeneity of variance assumption was not met for this main effect, $F(2, 82) = 8.17$, $p < .01$. Specifically, post hoc comparisons using a Bonferonni test indicated that the mean score for relational CBDA in current relationships ($M=1.04$, $SD=.08$) was significantly lower than the relational CBDA reported in past relationships ($M=1.17$, $SD=.27$). However, the future relationship condition ($M=1.10$, $SD=.16$) did not significantly differ from relational CBDA in current and past relationships. Taken together, this suggests that adolescents report more relational CBDA (i.e., spreading

rumours about their partner or telling others intimate details about their partner through technology) in past relationships versus current relationships.

Gender differences in cyber-based dating aggression.

The second research question explored which gender was more likely to perpetrate CBDA in current, past, and future relationships, and this question was examined using a one-way ANOVA. The independent variables represented gender (i.e., males or females) and the dependent variables represented the different subtypes of CBDA (i.e., emotional/verbal, dominance/control, monitoring, relational and stalking) in current, past, and potential future relationship conditions. The one-way ANOVA of gender on the perpetration of relational CBDA in past relationships revealed a statistically significant main effect, *Welch's F* (1, 32) = 7.03, $p < .05$, indicating that there were differences in the perpetration of CBDA between males and females. *Welch's F* test was reported because the *Levene's F* test revealed that the homogeneity of variance assumption was not met for this main effect, $F(1, 32) = 12.01, p < .01$. Specifically, females ($M=1.26; SD=.33$) were more likely to perpetrate the relational subtype of CBDA in past relationship versus males ($M=1.06; SD=.07$), meaning that females engaged more in spreading rumours about their partner and telling others intimate details about their partner through technology than males (see Table 8). There were no other significant differences in gender for any other subtype of CBDA in any other relationship condition (see Tables 7-9).

Correlation of cyber-based dating aggression and traditional adolescent dating aggression.

The third research question explored how TADA and CBDA were correlated and was analyzed using bivariate Pearson correlations. Results revealed various significant correlations between CBDA (as measured by the PATS) and TADA (as measured by the CADRI). When

examining the correlation between total CBDA and total TADA, results revealed a strong positive correlation ($r=.50, p=.01$). That is, the more participants in all relationship conditions (i.e., current, past and future) engaged in CBDA, the more those participants engaged in TADA as well (see Table 10).

For participants who were in current relationships, strong positive correlations were between the emotional/verbal subtype of CBDA and the emotional/verbal subtype of TADA ($r=.68, p < .01$); the relational subtype of CBDA and the sexual subtype of TADA ($r=.63, p < .01$); the emotional/verbal subtype of CBDA and the sexual subtype of TADA ($r=.59, p < .01$); and the emotional/verbal subtype of CBDA and the physical subtype of TADA ($r=.59, p < .01$). That is, for adolescents in a current romantic relationship, as reports of emotional/verbal CBDA increased, so did their reports of emotional/verbal TADA. Additionally, as reports of relational CBDA increased, so did their reports of sexual TADA. Lastly, as reports of emotional/verbal CBDA increased, so did their reports of sexual and physical TADA. For information on all correlations between CBDA and TADA in current relationships, see Table 11.

For participants who were not in a current relationship, but responded to the questionnaires in accordance to a past relationship (see Table 12), strong positive correlations were between the emotional/verbal subtype of CBDA and the emotional/verbal subtype of TADA ($r=.59, p < .01$), the relational subtype of CBDA and the relational subtype of TADA ($r=.73, p < .01$), the relational subtype of CBDA and the physical subtype of TADA ($r=.76, p < .01$), the stalking subtype of CBDA and the threatening subtype of TADA ($r=.62, p < .01$), and the stalking subtype of CBDA and the physical subtype of TADA ($r=.68, p < .01$). This suggests that the more adolescents in a past relationship engaged in emotional/verbal CBDA, the more they engaged in emotional/verbal TADA. Also, the more adolescents in a past relationship

engaged in relational CBDA, the more they engaged in relational TADA. Moreover, the more adolescents engaged in relational CBDA, the more they engaged in physical TADA. Lastly, the more adolescents engaged in stalking CBDA, the more they engaged in threatening TADA and the more they engaged in stalking CBDA, the more they engaged in physical TADA. For information on all correlations between CBDA and TADA in past relationships, see Table 12.

For participants who had not been in a relationship before and thus responded to items based on a potential future relationship (see Table 13), results revealed strong positive correlations between the dominance/controlling subtype of CBDA and the physical subtype of TADA ($r=.62, p < .01$), the emotional/verbal subtype of CBDA and the emotional/verbal subtype of TADA ($r=.66, p < .01$), the relational subtype of CBDA and the threatening subtype of TADA ($r=.61, p < .01$), and the stalking subtype of CBDA and the physical subtype of TADA ($r=.66, p < .01$). This suggests that as these adolescents look ahead in future relationships, their reporting of particular subtypes of CBDA is positively and significantly correlated with reports of TADA. In other words, as adolescents' reports of engaging in dominance/controlling CBDA increased, so did their reports of engaging in physical TADA. Also, as adolescents' reports of engaging in emotional/verbal CBDA increased, so did their reports of engaging in emotional/verbal TADA. Lastly, as adolescents' reports of engaging in relational CBDA increased, so did their reports of engaging in threatening TADA and as adolescents' reports of engaging in stalking CBDA increased, so did their reports of engaging in physical TADA.

Results also revealed strong negative correlations between the dominance/control subtype of CBDA and the reasoning subtype of TADA ($r=-.55, p < .05$); and between the stalking subtype of CBDA and the reasoning subtype of TADA ($r=-.52, p < .01$) in the future relationship condition. These results suggest that as adolescents looking ahead to a future

relationship reported that they would engage in more dominance/controlling CBDA the less they would engage in the reasoning subtype of TADA. Similarly, the more these adolescents reported that they would engage in more stalking CBDA, the less they would engage in the reasoning subtype of TADA as well. There was no relationship between any of the CBDA subtypes and the sexual subtype of TADA, as there was no variance in the responses for the sexual subscale.

Lastly, results revealed that there were strong positive correlations between the same or similar types of CBDA and TADA. For instance, as adolescents in current, past and future relationships engaged (or thought they would engage) in more emotional/verbal CBDA, engagement in emotional/verbal TADA also increased (current: $r=.68, p < .01$; past: $r=.59, p < .01$; future: $r=.66, p < .01$). Similarly, as adolescents in current relationships engaged in more dominance/controlling CBDA, engagement in threatening TADA increased ($r=.53, p < .01$). Lastly, as adolescents in past relationships engaged in more relational CBDA, engagement in relational TADA increased ($r=.73, p < .01$).

Cyber-based dating aggression, relationship length, and relationships satisfaction.

In order to analyze the final research question regarding whether relationship length and relationship satisfaction would predict the perpetration of each subtype of CBDA in current, past, and present relationships, a series of stepwise multiple regressions were conducted. At step 1 of the analysis of current relationships, the total mean of the BIDR was entered into the regression equation to control for social desirability accounting for any variance in the perpetration of any subtype of CBDA in current romantic relationships. Results revealed that social desirability did not predict any of the five subtypes of CBDA perpetration in current relationships (emotional/verbal: $F(1,25) = 1.18, p = .29, R^2=.05$; dominance/controlling: $F(1,25) = 1.37, p = .25, R^2=.05$; monitoring: $F(1,25) = .04, p = .85, R^2=.00$; relational: $F(1,25) = .33, p = .57,$

$R^2=.01$; stalking: $F(1,25) = .08, p = .78, R^2=.00$). The adjusted R^2 values of .01, .01, -.04, -.03, and -.04 respectively indicates that very little to none of the variance in each subtype of CBDA perpetration in current relationships was predicted by social desirability.

At step 2 of the analysis, relationship length and relationship satisfaction were entered into the regression equation to analyze whether these two variables predicted any subtype of CBDA perpetration in current romantic relationships. Results revealed that relationship length and relationship satisfaction did not significantly predict the perpetration of any subtype of CBDA in current romantic relationships (emotional/verbal: $F(2,23) = 2.03, p = .15, R^2=.19$, see Table 14; dominance/controlling: $F(2,23) = 1.55, p = .23, R^2=.16$, see Table 15; monitoring: $F(2,23) = .30, p = .75, R^2=.03$, see Table 16; relational: $F(2,23) = .90, p = .42, R^2=.09$, see Table 17; stalking: $F(2,23) = .06, p = .95, R^2=.01$, see Table 18). The adjusted R^2 values of .08, .06, -.10, -.04, and -.12 respectively indicates that very little of the variability in each of the the subtypes of CBDA in current relationships was predicted by relationship length and relationship satisfaction. Thus, for this small sample of adolescents, relationship length and relationship satisfaction did not significantly predict any of the five subtypes of CBDA in current relationships after controlling for the social desirability of respondents.

For past relationships, the total mean of the BIDR was entered into the regression equation at step 1 of the analysis in order to control for social desirability accounting for any of the variance in the perpetration of any subtype of CBDA. Results revealed that in step 1, social desirability did not account for any of the variance in the CBDA subtypes except for relational aggression (See Table 22). This means that social desirability accounted for a significant proportion of the variance in the perpetration of relational CBDA perpetration in past relationships, $F(1,25) = 4.48, p = .05, R^2=.15$.

As it was with current relationships, relationship length and relationship satisfaction did not significantly predict any of the subtypes of CBDA for past relationships at step 2 of the analysis, including relational CBDA ($F [2,23] = .87, p = .43, R^2 = .21$); emotional/verbal ($F [2,23] = .06, p = .95, R^2 = .09$; see Table 19); dominance/controlling ($F [2,23] = .42, p = .66, R^2 = .04$; see Table 20); monitoring ($F [2,23] = 1.67, p = .21, R^2 = .13$; see Table 21); and stalking ($F [2,23] = .43, p = .66, R^2 = .05$; see Table 23). Adjusted R^2 values of these variables (relational = .12; emotional/verbal = -.03; dominance/controlling = -.09; monitoring = .02; stalking = -.08) indicate that very little to none of the variability in the subtypes of CBDA was predicted by relationship length and relationship satisfaction in past romantic relationships.

Lastly, to control for social desirability accounting for any of the variance in the perpetration of any subtype of CBDA in future romantic relationships, the total mean of the BIDR was entered into the regression equation at step 1. Results revealed that social desirability did not account for any of the variance in the CBDA subtypes except for emotional/verbal aggression. This means that social desirability accounted for a significant proportion of the variance in the perpetration of emotional/verbal CBDA perpetration in future relationships, $F (1,15) = 6.48, p = .02, R^2 = .30$. The adjusted R^2 value of .26 suggests that just under a third of the variance in emotional/verbal CBDA was accounted for by social desirability. Specifically, in future relationships, as social desirability increased, reports of CBDA decreased ($\beta = -.55, p = .02$). However, at step 2 of the regression analysis, results revealed that relationship length and relationship satisfaction did not significantly predict the perpetration of emotional/verbal CBDA in future romantic relationships, $F (2,13) = 2.26, p = .14, R^2 = .48$ (see Table 24). Similarly, relationship length and relationship satisfaction did not significantly predict dominance/controlling ($F [2,13] = .42, p = .66, R^2 = .08$; see Table 25), relational ($F [2,13] = .38,$

$p = .69$, $R^2 = .12$; see Table 27), or stalking ($F [2,13] = 2.92$, $p = .09$, $R^2 = .38$; see Table 28) CBDA in future romantic relationships at step 2 of the regression analysis. Adjusted R^2 values of $-.14$ (dominance/controlling), $-.08$ (relational), and $.24$ (stalking) indicate that very little to none of the variance in these subtypes of CBDA is accounted for by relationship length and relationship satisfaction in future romantic relationships.

Results did reveal, however, that at step 2 of the regression analysis for future romantic relationships, relationship length and relationship satisfaction significantly predicted the perpetration of monitoring CBDA, $F (2,13) = 5.10$, $p = .02$, $R^2 = .48$ (see Table 26). The adjusted R^2 value of $.36$ suggests that just over a third of the variance in monitoring CBDA was accounted for by relationship length and relationship satisfaction. Specifically, in future relationships, as relationship satisfaction was reported to increase, monitoring CBDA perpetration increased ($\beta = .67$, $p = .02$), and as relationship length was predicted to increase, monitoring CBDA perpetration decreased ($\beta = -.80$, $p = .01$). Tests for multicollinearity indicated that tolerance was greater than $.10$ (i.e., $.58$ for relationship satisfaction and $.59$ for relationship length) and the variance inflation factor was less than 10 (i.e., 1.72 for relationship satisfaction and 1.69 for relationship length), suggesting that multicollinearity was not an issue (Field, 2005). This finding suggests that relationship length and relationship satisfaction significantly predicted monitoring CBDA in future romantic relationships after controlling for the social desirability of respondents.

CHAPTER FIVE: DISCUSSION

The purpose of the present study was to add to the literature by providing a more comprehensive look at dating aggression by exploring the use of technology in current adolescent dating relationships in a more robust manner (i.e., by analyzing all types of CBDA). Additionally, the purpose of the study was to explore this type of cyber-based behaviour enacted through technology within relationships using an adolescent sample. The present study attempted to analyze this information by answering four main questions: 1) how often is cyber aggression in general happening and what type is occurring the most in current, past and potential future relationships?; 2) which gender is more likely to perpetrate CBDA in present, past and potential future relationships?; 3) how is CBDA and traditional adolescent dating aggression (TADA) correlated in total and in current, past and potential future relationships?; and 4) does relationship length and relationship satisfaction significantly predict the perpetration of CBDA in total and/or the perpetration of each subtype of CBDA? The results of the present study will be discussed below as they contribute to and/or contradict the extant literature in this new domain of inquiry.

Prevalence of Cyber-Based Dating Aggression

The average amount of CBDA that occurred across all relationship conditions was 22.7%, indicating that about 1 in 5 adolescents reported CBDA occurred (or would occur) in their relationships. This percentage is lower than the 53% of emotional/verbal and monitoring/controlling behaviours that Draucker and Martsof (2010) found in their study using an adolescent sample. Other studies that used a university/college student sample have also reported higher prevalence rates than the current study. For instance, Madlock and Westerman

(2011) and Burke and colleagues (Burke et al., 2011) found that about half of males and females reported using communication technology to monitor their partner. In addition, Bennett et al.'s (2011) study found that 76.5% of female undergraduates and 77.1% of male undergraduates reported being electronically victimized by their partner.

A possible explanation for the lower occurrence of CBDA in the current study may be due to the fact that the previously mentioned studies (i.e., Draucker & Martsof, 2010; Bennett et al., 2011; Burk et al., 2011; Madlock & Westerman, 2011) were not using as precise of a measure as the PATS (Piits & Fritz, 2009). The PATS measures five different types of CBDA (emotional/verbal, dominance/controlling, monitoring, relational, and stalking) across five different types of communication technology (phone, text, e-mail, instant message, and social networking website). Draucker and Martsof (2010) on the other hand used transcribed narratives and only analyzed the subtypes of aggression that were reported by participants within their sample (i.e., emotional/verbal and monitoring/controlling aggression). Likewise, Burke and colleagues (2011) only looked at monitoring and controlling the whereabouts of a romantic partner. Bennett and colleagues (2011) looked at the use of different types of communication technology, albeit in an imprecise way. For instance, one of their items chosen for their study states: "circulated an embarrassing, but true story about me online", whereby "online" could mean through instant messaging or through Facebook. In any case, the present study reveals that CBDA is still occurring, even if it is at a lower rate than other studies sampling from adolescent and university/college age populations.

It was also interesting that the prevalence rates of CBDA for current and past relationships were comparable (i.e., 25% and 28.4% respectively) and that CBDA was much less predicted to occur in future relationships (i.e., 14.8%). However, the fact that participants

predicted that any cyber aggression would occur in their future relationship is noteworthy. In one sense, this finding validates that those participants responding to the survey in reference to a potential future partner were not responding in an overly socially desirable manner (i.e., they were truthful as to whether or not they thought CBDA would occur in their future relationship). Still, the amount of CBDA that adolescents predicted would occur in their future relationships was much less than what seems to actually be occurring in current and past relationships. This finding correlates with past research that adolescents tend to predict their future in an overly positive way, both in educational and occupational achievement (Halfond, et al., 2012; Klaw, 2008) and when experiencing dating and peer aggression (Chapin, et al., 2005). In particular, Chapin and colleagues (Chapin et al., 2005) suggested that this “optimistic bias” (i.e., believing that bad things happen to other people; Weinstein, 1980) increases with age and developmental stages. Optimistic bias only decreases with personal experience, which in turn makes sense that adolescents would be optimistically biased as they lack life experience (Chapin et al., 2005). Therefore, adolescents may perceive their future relationships to be ideal and that little to no CBDA would occur. Again, the prevalence rates in both current and past relationship conditions seem to provide a more realistic percentage of how much CBDA occurs in adolescent relationships. In any case, however, the current study validates the idea that CBDA is a real concern for adolescent romantic relationships and that future research is warranted with particular attention to how adolescents think about their future romantic relationships.

In terms of which type of CBDA adolescents engaged in the most, results revealed that monitoring was the most prevalent subtype across all relationship conditions. In this study, monitoring included keeping track of a partner’s text messages or e-mails, checking up on a partner through a social networking website, or making a partner describe where they are

throughout the day through text messaging. When comparing these results to Draucker and Martsof's (2010) study, some concerning findings emerge. For instance, these authors noted that most monitoring behaviour occurred when one partner spent time with another person, especially that of the opposite sex. Some participants admitted that they felt insecure about their relationship and were concerned about their partner being unfaithful. This monitoring type of behaviour can get extreme, as the authors also found that one participant had installed software onto his computer that allowed him to download all of his partner's correspondence. Moreover, if the partner who was engaging in monitoring behaviour found evidence that they believed proved his/her partner was being unfaithful, a violent episode was often encountered (Draucker & Martsof, 2010). These violent episodes were either verbal or physical, with one encounter involving the throwing of a knife. Therefore, at first glance, monitoring may seem like a less aggressive form of CBDA, but what Draucker and Martsof (2010) have found is that this type of behaviour can get quite intense and serious.

Mean differences between the subtypes of CBDA in each relationship condition (current, past, and future) were also analyzed. Results revealed that adolescents in past relationships reported engaging in significantly more relational CBDA (i.e., starting rumours about their partner or telling others intimate details about their partner) than those in current relationships. It may be that adolescents reported more of this type of aggression in their past relationships because they did not want to indicate or admit that their current relationship had any flaws. For instance, the TADA literature finds that individuals who experience aggression in their relationships are more likely to minimize low-level abusive behaviours and be accepting of romantic relationship aggression (Scott & Strauss, 2007; Ehrensaft & Vivian, 1999; Cauffmann, Feldman, Jensen, & Arnett, 2000). In the present study, it is possible that adolescents who

perpetrated relational CBDA in their current relationships may have minimized the severity of this type of aggression or even denied it as occurring in order to defend the relationship they are in. Those in past relationships may have indicated the most relational CBDA because they would have nothing to defend; the relationship is already terminated.

Gender Differences in Cyber-Based Dating Aggression

When examining which gender was more likely to perpetrate CBDA in present, past, and potential future relationships, results revealed that the only significant differences between male and female participants across all relationship conditions were in past relationships. Specifically, it was found that females were more likely to perpetrate the relational subtype of CBDA in past relationships than males. Previous research is consistent with these findings. For instance, Ellis, Crooks, and Wolfe (2008) found that 56% of girls versus 39% of boys reported romantic relational aggression perpetration. Similarly, Goldstein (2010) found that females were more relationally aggressive in dating contexts versus males. Moreover, Goldstein, Chesir-Teran, and McFaul (2008), studied the profiles of relational aggression in young adults' romantic relationships and found that males reported higher levels of victimization, meaning that females were perpetrating romantic relational aggression more than males.

These findings are commensurate with findings of studies comparing gender differences of relational aggression in the context of same-sex friendships. For example, relational aggression is especially more prominent in female friendships (Goldstein, 2010). In fact, past research has found that when females are aggressive, they rely on the relational type of aggression (Osterman, Lagerspetz, Kaukiainen, Landau, Fraczek, & Caprara 1998; Salmivalli & Kaukiainen, 2004). When studies have compared the impact of relational aggression in romantic versus platonic relationships, relational aggression in the context of a dating relationship has

been found to have greater psychological impacts (Ellis et al., 2008; Goldstein, 2010; Goldstein & Tisak, 2004).

What is especially concerning with these findings (i.e., that females perpetrate relational aggression more than males in romantic relationships and that this type of aggression is seen as more harmful when occurring in romantic relationships versus friendships), is that relational aggression in romantic relationships has been found to have a greater impact on females' psychological well being versus that of males'. For instance, Ellis and colleagues (Ellis et al., 2008) found that girls involved in romantic relational dating aggression were at a greater risk than boys for poor psychological and behavioural outcomes, such as increases in delinquent behaviours. Moreover, these authors suggest that relational aggression in dating relationships may create more problems with internalizing distress and externalizing behaviour compared to boys. Similarly, Goldstein and Tisak (2004) found that females tended to associate greater negative impacts with relational aggression than males in that they believed relational aggression would be more hurtful and damaging to their romantic relationship. Lastly, female participants were more likely to react aggressively towards a dating partner who was being relationally aggressive to them (e.g., excluding them) as compared to males.

These findings highlight the importance of studying relational aggression in romantic relationships. The majority of research on relational aggression has focused on peer relationships and the amount of research studying this type of aggression within romantic relationships is relatively limited (Goldstein, 2010). This may be due to the idea that relational aggression is less harmful than such aggression that is physical. However, an abundance of research has shown the negative psychological effects that relational aggression can create (Goldstein, Chesir-Teran, & McFaul, 2008; Leadbeater, Banister, Ellis, & Yeung, 2008; Linder, Crick, & Collins, 2002).

Cyber-Based Dating Aggression and Traditional Adolescent Dating Aggression

When examining the correlations between CBDA and traditional adolescent dating aggression, results revealed several interesting findings. First and foremost, the current study found that there was a strong, positive correlation between total CBDA and total traditional adolescent dating aggression (TADA; i.e., with all relationship conditions combined). This means that as adolescents' reports of CBDA increased, so did their reports of TADA.

Secondly, a number of significant, strong, and positive correlations between these two types of aggression in each relationship condition were shown as well (ranging from $r=.36$ to $r=.76$, with the majority of the correlations above $r=.50$). This indicates that in many relationships, neither traditional nor cyber aggression was likely to occur in isolation. In other words, those adolescents that engaged in different types of CBDA were also likely to engage in different types of TADA. This finding is consistent with past research, which found that different types of TADA (i.e., physical, sexual, and psychological) co-occurred within one relationship (e.g., Bossarte, et al., 2008; Sears, Byers, & Price, 2007; Sears & Byers, 2010). Studies that have analyzed the co-occurrence of different types of TADA in a single romantic relationship are scarce, but the above studies have shown that multiple types of aggression in one relationship is the norm rather than the exception for both boys and girls (Sears & Byers, 2010). What is more concerning are the findings (e.g., Bossarte et al., 2008) that individuals who reported experiencing both psychological and physical aggression in the same relationship rated the highest in suicidal behaviour. Therefore, the findings from the current study and these past studies highlight the need for future research, as CBDA and TADA was found to co-occur in the same relationships as well. With the advent of this new type of cyber-based romantic aggression and with its new methods and means to be aggressive (e.g., the ability to repeatedly contact your

partner at any given moment, or access many different types of media to perpetrate aggression in one single device; Rideout et al., 2010), the psychological and emotional well-being of adolescents may be at increased risk.

A second important finding that was especially concerning was that the majority of correlations between the different types of CBDA and physical aggression in all relationship conditions (with the exception of future relationships) were significant. This finding is consistent with past research that psychological aggression can be a warning sign of future physical aggression to come (Cano, et al., 1998; Kasian & Painter, 1992; Messinger, Davidson, Vaughn, & Rickert, 2011; O'Leary & Slep, 2003). Furthermore, the present study found that emotional/verbal, dominance/controlling, and relational CBDA were positively correlated with the sexual subtype of TADA in current relationships only. The fact that this correlation was found in current relationships was especially worrisome and warrants future research on the predictors of this combination of aggression. For instance, Sears and colleagues (2007) examined the predictors of the co-occurrence of physical, psychological, and sexual traditional aggression. They found that the predictors for boys engagement in psychological, physical, and sexual dating aggression and the predictors for girls engagement in psychological and physical aggression were: being more accepting of dating violence, being fearful of violence between their family members, affiliation with abusive peers, and those who had experienced all three types of aggression in the past. Similar predictors may be significant in the case of CBDA as well and this information would help future researchers in developing prevention programs relevant to adolescents.

It was especially interesting that those participants responding to the survey based on a current or past relationship reported more co-occurrence of CBDA and TADA than those who

responded based on a future relationship. Again, this may be because past research has found that adolescents are particularly biased in predicting their future (Chapin, et al., 2005; Halfond, et al., 2012; Klaw, 2008; Weinstein, 1980). In other words, they may overestimate the positive and underestimate the negative experiences that may occur in their relational futures. The present study supports this idea, as the significant correlations between CBDA and TADA in current and past relationship conditions are more than double those in the future condition. These results should be considered when researching adolescents' beliefs or perceptions of their future; both in dating relationships and in other contexts as well.

An unexpected finding in the current study was the strong, positive correlations found between the dominance/controlling subtype of CBDA and physical TADA and the stalking subtype of CBDA and physical TADA in future relationships. This means that those who had never been in a relationship in the past, but who were responding to items in reference to a potential future relationship, indicated that they would engage in these potentially more serious types of aggression. This finding might be explained by the fact that the particular items participants indicated they would perpetrate were perhaps viewed as less aggressive. For instance, participants indicated that they would throw something at their partner (i.e., physical aggression), but not that they would kick, hit, punch, slap, push, shove, or shake their partner. Throwing an object may be seen as less aggressive and more indirect than if adolescents were to make direct (e.g., skin-to-skin) physical contact with their partner. Similarly, the stalking items indicated that adolescents phoned, texted, emailed, instant messaged or used social networking websites to continually contact their partner when he/she did not want them to. In spite of participants being told that survey items were to be interpreted as intentional aggressive acts, these items may have been perceived less as aggression and more as non-harmful persistence or

“checking-in” behaviours. Additionally, Sears and colleagues (Sears et al., 2006) found that adolescents’ perception of behaviour as being abusive depends on the situation, not the behaviour, and that adolescents believe that specific abusive behaviours are acceptable in relationships. Perhaps those who indicated they would perpetrate these types of aggression in their future relationships believed that they would engage in this behaviour dependent upon a specific acceptable situation (e.g., not allowing their boyfriend or girlfriend to text message others *if* their partner became untrustworthy, or engaging in physical *retaliation*, or persistently trying to get a hold of their partner to reconcile or “talk things out”, etc.).

Results also revealed that some of the strongest, positive correlations were between the same or similar types of CBDA and TADA. For instance, in current, past, and future relationships, as emotional/verbal CBDA increased, so did emotional/verbal TADA. In addition, in past relationships, as relational CBDA increased, so did relational TADA and as dominance/controlling CBDA increased, the threatening subtype of TADA increased as well. The dominance/controlling items on the PATS and threatening items on the CADRI were very similar (e.g., dominance/controlling item on the PATS: “*threatened to hurt your partner through text messaging*”; threatening item on the CADRI: “*I threatened to hit my partner or throw something at my partner*”). In hindsight, these correlations would be expected, as those who engaged in particular types of aggression face-to-face, would similarly engage in these types of aggression through technology. Since past research has not examined the co-occurrence of CBDA and TADA in the same relationship, future research should focus on validating this finding.

Lastly, the correlations between the reasoning subscale of the CADRI and all other types of CBDA were either very weak or negative. This means that those who engaged in reasoning

behaviours within their relationship (e.g., “*I left the room to cool down*” or “*I agreed that I was partly to blame*”) were less likely to engage in any CBDA. The literature would indicate that this was to be expected, as those who engaged in reasoning behaviours may be particularly better at communicating with their partner and controlling their emotions, thus preventing instances of CBDA from occurring. For instance, past studies have examined whether the reasoning subscale of the CADRI was associated with physical violence and found a negative association (Messinger, Davidson, Vaughn, & Rickert, 2011; Messinger, Rickert, Fry, Lessel, Davidson, 2012). In other words, as reasoning behaviours increased, physical violence decreased. Based on these previous findings, it is reasonable to assume that this was the case with CBDA in the current study as well.

Cyber-Based Dating Aggression, Relationship Length, and Relationship Satisfaction

After analyzing the final research question, results revealed that relationship length and relationship satisfaction did not significantly predict the perpetration of any CBDA subtype in current and past romantic relationships. These results are likely not an issue of power, given that most p-values were much higher than .01 or .05 and it is doubtful that adding to the sample would bring these p-values to significance. However, it was found that in future romantic relationships, relationship satisfaction and relationship length significantly predicted the perpetration of monitoring CBDA. Specifically, it was found that as reports of relationship satisfaction increased, so did reports of monitoring CBDA and as relationship length increased, reports of monitoring CBDA decreased.

These findings are both commensurate with and contradictory to past research that examines current and/or past romantic relationships (i.e., a survey of the current literature revealed that there is no research analyzing adolescents’ predictions of future romantic

relationship aggression). In terms of relationship satisfaction, contrary to the findings in the present study, past research has found that low relationship satisfaction is associated with the perpetration of TADA in that, when adolescents are not satisfied with their relationship, dating aggression tends to increase (Capaldi & Crosby, 1997; Cramer, 2003; Schnurr et al., 2010, O’Leary & Slep, 2003).

However, past research exists within the TADA literature that supports the current findings (i.e., that relationship satisfaction increases as adolescents’ reports of aggression—specifically monitoring—increases). For instance, Giordano and colleagues (2010) suggested that regardless of any negative dynamics in a relationship, such as dating aggression, relationships may still contain intimacy and perceived importance, which makes it more difficult for an adolescent to end the relationship. This idea was validated in their study by finding that those who experienced aggression reported more support and more contact with their partner. Therefore, it could be that adolescents in the present sample predicted they would also experience these positive relationship traits (i.e., more support and contact with their partner) and that perpetrating any monitoring CBDA in their future relationship would not affect their relationship satisfaction.

Additionally, Connolly and Josephson (2007) found that controlling behaviours are sometimes interpreted by the recipient as originating from an insecure expression of love, which sometimes leads to an illogical strengthening of commitment to the relationship (Connolly & Josephson, 2007). It is possible that in the current study, adolescents who predicted they would perpetrate monitoring behaviour (e.g., asking where his/her partner had been in a suspicious manner) viewed this behaviour as an act of love. Thus, adolescents may have predicted that engaging in monitoring CBDA would not affect their satisfaction in the relationship. Given this

possibility—that adolescents may have viewed their future monitoring behaviour less as an act of aggression and more as non-harmful persistence or as an act of love—future research should focus on collecting qualitative data from adolescents to determine what they perceive to be an actual act of CBDA. This would refine the definition of CBDA and allow researchers to get a more accurate picture of an adolescent viewpoint of this type of aggression. On the contrary, however, the idea that adolescents may have viewed this behaviour less as an act of aggression also highlights the importance of educating adolescents on healthy and unhealthy romantic relationship behaviours.

Results also revealed that as relationship length increased in future romantic relationships, reports of monitoring CBDA decreased. These findings are contradictory to past research, which has discovered that the longer adolescents are in a relationship, the more at risk they are for verbal and psychological traditional aggression (Capaldi & Crosby, 1997; Capaldi et al., 2003; Giordano et al., 2010; Roberts, Auinger, & Klein, 2006). For instance, Roberts et al. (2006) found that increased length of relationship was associated with verbal abuse, but not physical abuse for both genders. Other researchers have found that shorter relationships are associated with the use of aggression (Messinger, et al., 2012; Roscoe & Callahan, 1985). For instance, very short-term relationships have been found to be associated with symptoms of more problem behaviours within partners and depression (Joyner & Udry, 2000; Zimmer-Gembeck, Siebenbruner, & Collins, 2001).

However, past literature has also found that adolescent relationships that are of moderate length (e.g., several weeks or months) have been found to be useful in preparing for high-quality romantic relationships in early adulthood (Madsen & Collins, 2005). Therefore, in the present study, those adolescents who predicted they would be in a relationship for a longer period of

time may believe that this would allow them to learn more mature social interactions and thus, that they would perpetrate less monitoring CBDA. Similarly, those adolescents who predicted they would be in a longer relationship may also believe that their partnership would involve more trust. For example, as relationship length increases, adolescents may not feel the need to monitor his/her partner anymore. Perhaps they believed their partner would be trustworthy, would check in, and would let it be known where they were and whom they were with, thus decreasing the need to monitor their partner.

In light of these findings, it is important to reiterate that oftentimes adolescents positively predict their future (Chapin, Alas, & Coleman, 2005; Halfond, Corona, & Moon, 2012; Klaw, 2008; Weinstein, 1980). Thus, it is possible that in the current study, adolescents may have had a positively biased view of their future romantic relationships. This was demonstrated when adolescents were asked to predict how long they thought they would be in their future relationship. The mean length of relationship was 13.41 months in future relationships compared to the average 7.15 and 5.78 months in current and past relationships respectively. With that said, it is important to analyze and interpret these findings with caution. These findings also highlight the importance of further researching adolescents' predictions of their future romantic relationships. For instance, it will be helpful in understanding these findings by collecting qualitative data from teens in terms of what they perceived the future situation would be that they would engage in CBDA and whether or not they thought this was appropriate romantic behaviour.

Strengths, Weaknesses, and Suggestions for Future Research

The above results should be interpreted in light of several notable limitations. First and foremost is the fact that these results were based on a small sample size. A larger sample size is

needed for results to be considered representative of and generalizable to adolescents who engage in CBDA. Similarly, the validity of grouping each relationship condition together (e.g., grouping current, past, and future dating relationships) to analyze total correlations and prevalence rates may be compromised by the idea that reporting on a future romantic relationship is very hypothetical in nature and does not have a real referent (i.e., a real boyfriend or girlfriend on which to base these ratings. For instance, the future romantic relationship responses are predictions and the current and past romantic relationship responses are based on actual past or present relationships). However, analyzing each relationship condition separately decreased the power of the sample and thus, the data was analyzed both in total (by grouping all relationship conditions together) and separately (by examining current, past and future relationship conditions individually). Nonetheless, it is also worth noting that in spite of the small sample size, there were some significant findings within the data, which emphasizes the importance of studying CBDA in adolescent romantic relationships.

Secondly, the majority of adolescents in the sample were Caucasian/White and thus, the sample lacks generalization to other ethnic backgrounds. It is important to include adolescents of different origins within a sample because romantic relationships may be experienced differently depending on an individual's ethnicity. For example, it was found in the current study that parents' awareness of adolescent relationships differed based on an individual's ethnic background. For instance, the majority of adolescents who indicated that their parents were *not* aware of their current or past romantic relationship were not Caucasian/White. That is, most adolescents who did not tell their parents about their relationship were Chinese, Asian, Korean, African American or Arabic. All adolescents who responded to the survey based on a future relationship indicated that their parents *would* know about their romantic relationship. The

reasons that these teens did not tell their parents were mostly because they were not allowed to date, or they were allowed to date, but chose not to tell their parents. Therefore, parental awareness of the relationship may differ based on ethnic backgrounds and this highlights the importance of including participants of different ethnicities and exploring the personal aspects of their romantic relationship.

Thirdly, it could be argued that reporting the mean of each subtype of CBDA in current, past, and future romantic relationships was less meaningful than reporting the frequencies. For instance, reporting a mean of 1.19 for emotional/verbal CBDA means that most adolescents indicated that they “never” engaged in CBDA, but this statistic does not give an accurate picture of how many adolescents indicated that they “never”, “rarely”, “sometimes”, or “often” would engage in CBDA. Thus, future analyses should calculate the percentages of CBDA by dichotomizing the variables into each specific Likert scale category. This would give readers a clearer picture of how much CBDA was occurring within the data.

Fourthly, some of the technological methods included in the PATS to perpetrate CBDA (e.g., instant messaging and e-mailing) may not be relevant to the age range of adolescents, as results showed that these means of communication had the lowest rate. Instant messaging is a form of communication that may have been replaced by text messaging and/or private messaging through Facebook. Similarly, e-mail may be a means of communication used mostly for school and/or work purposes. When using similar measures to collect data on technology use, future research should focus on means of communication that are popular with adolescents (e.g., Facebook, Twitter, and text messaging).

Lastly, using technology to perpetrate CBDA allows one to be more courageous, as his/her partner cannot see or hear them. Therefore, it may be argued that using a phone to

perpetrate CBDA does not fall under this type of technology use because his/her voice is still heard. Although in this study, using the phone turned out to be the second highest method of CBDA perpetration, it would be interesting if future research focused on methods of communication where the partner cannot be seen or heard. Furthermore, since multiple means of communication are now available within one's cell phone, (e.g., "smart" phones) it is possible that when adolescents were responding to items that included using a phone, they perceived this as using either Facebook, Twitter, text-messaging or e-mail. Future research should clarify this for adolescents when using such items to collect data.

Despite the limitations, results of the current study contribute to the literature in many ways. Firstly, adolescent use of CBDA has not been studied within the literature as a whole. The single previous study that remotely looked at cyber aggression in romantic couples only looked at emotional/verbal and monitoring/controlling behaviours and this was a retrospective study where adults were interviewed about their previous adolescent experiences (Draucker & Martsof, 2010). Thus, the present study added to the literature by examining prevalence rates for all sub-types of CBDA, thereby providing some insight into how much this type of aggression is occurring. Since monitoring was the subtype of CBDA that adolescents reported engaging in the most, future research should perhaps focus on cyber-based monitoring behaviours in adolescent romantic relationships to get a better understanding of why they occur. If results are concurrent with Draucker and Martsof's (2010) findings in that it may be an issue of insecurity and fear of infidelity, perhaps intervention programs should aim at increasing youth's self-esteem and the ability to build a trusting relationship.

Secondly, although there were no significant gender differences found for the majority of the subtypes of CBDA, the present study contributes to the literature in finding that there was a

significant gender difference in relational CBDA in past relationships, with females perpetrating this type of CBDA more than males. This finding contributes to the literature because no other study has examined adolescent gender differences in CBDA. Furthermore, this finding shows that, similar to relational aggression in peer relationships, females may also predominantly perpetrate this type of aggression in dating relationships as well. Future research on the development of prevention and intervention programs should perhaps focus more on female perpetration and the effects of relational aggression on the psychological well-being of females versus males (Goldstein, 2010). However, it is worthy to reiterate that although females were found to significantly perpetrate relational aggression in past relationships more than males, there were no gender differences for any other subtypes of CBDA in any other relationship conditions. Therefore, in future research, males should not go unnoticed when considering which gender perpetrates specific types of CBDA the most and whether or not males are psychologically harmed.

Thirdly, the current study was the first to analyze whether traditional face-to-face aggression and CBDA were correlated within adolescent romantic relationships. Many of the findings contribute to the literature by showing that not only do different types of traditional adolescent dating aggression (TADA) co-occur in the same relationship (i.e., psychological, physical, and sexual), but CBDA and TADA tend to co-occur in the same relationship as well. Moreover, the findings contribute to the literature in finding that those who perpetrated one type of CBDA tended to perpetrate the same type of TADA (i.e., those who perpetrated relational CBDA also perpetrated relational TADA). Future research should focus on validating these findings and examining whether the co-occurrence of these two types of aggression have

increased harmful psychological effects on adolescents than if they were to experience one type of aggression within their romantic relationship.

Fourthly, the present study found that relationship length and relationships satisfaction were significant predictors of monitoring CBDA in future romantic relationships. Specifically, as adolescents predicted that monitoring CBDA would occur, they also predicted that their satisfaction in their relationship would increase. In addition, adolescents who predicted they would be in a longer relationship with their future romantic partner also predicted that they would engage in less monitoring CBDA. There are no studies to date that have looked at the relationship between these two variables and CBDA, especially when predicting on future romantic relationships. As such, these findings contribute to the current cyber dating aggression literature. Future studies should perhaps focus on other variables that may predict CBDA as Schnurr and colleagues (Schnurr et al., 2010) have suggested that there are other factors within a relationship (i.e., jealousy and commitment to the relationship) that are commonly linked to traditional dating aggression. This may also be the case for CBDA. Additionally, it will be beneficial to analyze the satisfaction of both sides of the romantic partnership (i.e., those perpetrating the aggression and those victimized) and to investigate the reasons behind the increase or decrease in satisfaction within different subtypes of CBDA.

Additional areas of research that stem from the current study include the focus on text messaging in adolescent romantic relationships (i.e., the form of communication technology that was used the most by adolescents to perpetrate CBDA) and perhaps examining and discussing aggressive text messages qualitatively with adolescents. Adolescents could be asked what exactly was said over text messaging, how they perceived the text message and what their reaction was. Moreover, it would be beneficial to further explore what adolescents believe to be

an official act of CBDA. For instance, in the current study, looking through a partners text messages or social networking websites was considered to be monitoring (i.e., intentionally keeping track of who their partner is conversing with). However, during the completion of the survey, one participant mentioned that she looks through her boyfriend's phone all of the time, but that he did not mind. Thus, what adolescents consider to be an actual act of CBDA needs to be further refined. Likely, the results will depend on whether it was a single or repeated act, the severity of the aggressive act (e.g., the words used), and whether the acts of CBDA are perceived as intentional or not. Lastly, examining individual factors that predict the perpetration of CBDA (e.g., attitude towards dating aggression, the influence of observing other peers who engage in CBDA, and previous experience with aggression) would provide parents, teachers, adolescents, and health care professionals with an idea of the risk factors of CBDA.

Implications and Conclusions

Results revealed that on average, CBDA occurred in about 1 in 5 of adolescent romantic relationships (i.e., 22.7%) and that monitoring was the subtype of CBDA that adolescents engaged in the most. Adolescence is a critical and complicated developmental period where teenagers are using romantic relationships in order to understand and develop their own identity (Glass et al., 2003). After finding that CBDA does occur in adolescent romantic relationships and also the consequences that monitoring CBDA can have on an individual (Draucker & Martsof, 2010), it is imperative that adolescents are educated on what constitutes a healthy relationship. They need to be able to identify CBDA early on within their relationship and adolescents need to be provided with methods to deal with CBDA, should it occur.

Results also revealed that there were no significant gender differences found for the majority of the subtypes of CBDA, but that females were found to perpetrate relational CBDA

more than males in past relationships. The implications of these findings relate to the research showing that relational aggression in romantic relationships have a greater impact on females' psychological well-being versus males (Ellis et al., 2008; Goldstein & Tisak, 2004). These findings are important for parents, teachers, and mental health professionals when working with females who are experiencing relational aggression in their romantic relationships. A focus should be on teaching females healthy ways to communicate their feelings to their romantic partner and to educate adolescents on the possible ramifications on the health and well-being of each partner when engaging in romantic relational aggression.

In addition, the current study found many significant positive correlations between CBDA and traditional adolescent dating aggression (TADA) meaning that CBDA and TADA tended to co-occur in the same relationship. These findings really highlight the idea that one type of aggression is unlikely to occur in isolation within a romantic relationship (Bossarte et al., 2008), thereby potentially causing increased harm on the health and well-being of adolescents. Parents, teachers, and mental health professionals should be aware of the idea that if adolescents are experiencing one type of aggression in their romantic relationships, it is likely that other (potentially more serious) types of aggression are occurring as well.

Lastly, this study found that when adolescents predicted that they would engage in monitoring CBDA in their future relationships, they also predicted that their satisfaction in their relationship would increase. As well, adolescents who predicted they would be in a longer relationship with their future romantic partner also predicted that they would engage in less monitoring CBDA. These findings suggest that some youth are envisioning that they will engage in these types of CBDA even before a relationship has begun. By utilizing qualitative research, researchers may be able to explore why adolescents thought they would engage in this type of

behaviour with their future romantic partner, and thus get a better idea of how to prevent this type of aggression from occurring. Furthermore, since it was found that engaging in monitoring CBDA would not effect the perpetrators satisfaction with their relationship, educational programs should focus on teaching youth the difference between healthy and unhealthy romantic relationship behaviours and the ramifications of engaging in them so that teens can learn create healthy, satisfying relationships.

In short, the purpose of this study was to explore adolescents' use of Cyber-Based Dating Aggression. This study has provided some much needed knowledge into this burgeoning area of research and will build a foundation for future research to come. It also increases the awareness and understanding of this type of aggression not only for teachers and parents, but for adolescents themselves.

APPENDIX A: PARTNER AGGRESSION TECHNOLOGY SCALE:

	During the last year , how often have you done the following things to your current boyfriend or girlfriend?			
	Very Often 3	Sometimes 2	Rarely 1	Never 0
1. Phoned to tell your partner something that would hurt your partner's feelings on purpose.	3	2	1	0
2. Texted your partner things to hurt your partner's feelings on purpose.	3	2	1	0
3. Emailed your partner something to hurt your partner's feelings on purpose.	3	2	1	0
4. Instant messaged your partner something to hurt your partner's feelings on purpose.	3	2	1	0
5. Posted something on your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.) to hurt your partner's feelings on purpose.	3	2	1	0
6. Insulted/swore at your partner on the phone .	3	2	1	0
7. Insulted/swore at your partner through text messaging .	3	2	1	0
8. Insulted/swore at your partner through email .	3	2	1	0
9. Insulted/swore at your partner through instant messaging .	3	2	1	0
10. Insulted/swore at your partner through your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
11. Would not let your partner talk on the phone with other people.	3	2	1	0
12. Would not let your partner text message other people.	3	2	1	0
13. Would not let your partner email other people.	3	2	1	0
14. Would not let your partner talk to other people through instant messaging .	3	2	1	0
15. Would not let your partner communicate with other people on your partner's social networking site (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
16. Told your partner they could not talk to	3	2	1	0

someone of the opposite sex on the phone .				
17. Told your partner they could not text message someone of the opposite sex.	3	2	1	0
18. Told your partner they could not email someone of the opposite sex.	3	2	1	0
19. Told your partner they could not talk to someone of the opposite sex through instant messaging .	3	2	1	0
20. Told your partner they could not communicate with someone of the opposite sex on your partner's social networking site (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
21. Told your partner they could not phone their family.	3	2	1	0
22. Told your partner they could not text message their family.	3	2	1	0
23. Told your partner they could not email their family.	3	2	1	0
24. Told your partner they could not instant message their family.	3	2	1	0
25. Told your partner they could not communicate with their family on your partner's social networking site (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
26. Told your partner they could not talk to someone of the same sex on the phone .	3	2	1	0
27. Told your partner they could not text message someone of the same sex.	3	2	1	0
28. Told your partner they could not email someone of the same sex.	3	2	1	0
29. Told your partner they could not talk to someone of the same sex through instant messaging .	3	2	1	0
30. Told your partner they could not communicate with someone of the same sex on your partner's social networking site (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
31. Threatened to hurt your partner over the phone .	3	2	1	0
32. Threatened to hurt your partner through text messaging .	3	2	1	0

33. Threatened to hurt your partner in an email .	3	2	1	0
34. Threatened to hurt your partner in an instant message .	3	2	1	0
35. Threatened to hurt your partner through your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
36. Made your partner describe where they were throughout the day through phone calls .	3	2	1	0
37. Made your partner describe where they were throughout the day through text messaging .	3	2	1	0
38. Made your partner describe where they were throughout the day through email .	3	2	1	0
39. Made your partner describe where they were throughout the day through instant messaging .	3	2	1	0
40. Made your partner describe where they were through the day through your partner's social networking website (e.g., Facebook, MySpace, blogs).	3	2	1	0
41. Brought up something from the past to hurt your partner during a phone call .	3	2	1	0
42. Brought up something from the past to hurt your partner through text messaging .	3	2	1	0
43. Brought up something from the past to hurt your partner through email .	3	2	1	0
44. Brought up something from the past to hurt your partner through instant messaging .	3	2	1	0
45. Brought up something from the past to hurt your partner through your partner's social networking website (e.g., Facebook, MySpace, blogs).	3	2	1	0
46. Monitored your partner's phone calls .	3	2	1	0
47. Monitored your partner's text messaging .	3	2	1	0
48. Monitored your partner's emails .	3	2	1	0
49. Monitored your partner's instant messaging .	3	2	1	0
50. Monitored your partner's social networking website (e.g. Facebook,	3	2	1	0

MySpace, blogs).				
51. Got angry at your partner for talking to a particular person on the phone .	3	2	1	0
52. Got angry at your partner for talking to a particular person through text messaging .	3	2	1	0
53. Got angry at your partner for talking to a particular person through email .	3	2	1	0
54. Got angry at your partner for talking to a particular person through instant messaging .	3	2	1	0
55. Got angry at your partner for talking to a particular person on your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
56. Phoned others to start rumors about your partner.	3	2	1	0
57. Text messaged others to start rumors about your partner.	3	2	1	0
58. Emailed others to start rumors about your partner.	3	2	1	0
59. Instant messaged others to start rumors about your partner.	3	2	1	0
60. Contacted others through a social networking website (e.g., Facebook, MySpace, blogs, etc.) to start rumors about your partner.	3	2	1	0
61. Told others intimate details about your partner on the phone .	3	2	1	0
62. Told others intimate details about your partner through text messaging .	3	2	1	0
63. Told others intimate details about your partner through email .	3	2	1	0
64. Told others intimate details about your partner through instant messaging .	3	2	1	0
65. Told others intimate details about your partner through a social networking website (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
66. Phoned your partner all of the time when your partner did not want you to.	3	2	1	0
67. Text messaged your partner all of the time when your partner did not want you to.	3	2	1	0
68. Emailed your partner all of the time when your partner did not want you to.	3	2	1	0

69. Instant messaged your partner all of the time when your partner did not want you to.	3	2	1	0
70. Contacted your partner on your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.) when your partner did not want you to.	3	2	1	0
71. Phoned your partner and threatened to break-up with them.	3	2	1	0
72. Text messaged your partner and threatened to break-up with them.	3	2	1	0
73. Emailed your partner and threatened to break-up with them.	3	2	1	0
74. Instant messaged your partner and threatened to break-up with them.	3	2	1	0
75. Contacted your partner on their social networking website (e.g. Facebook, MySpace, blogs, etc.) and threatened to break-up with them.	3	2	1	0
76. Phoned your partner to blame your partner for bad things that you did.	3	2	1	0
77. Text messaged your partner to blame your partner for bad things that you did.	3	2	1	0
78. Emailed your partner to blame your partner for bad things that you did.	3	2	1	0
79. Instant messaged your partner to blame your partner for bad things that you did.	3	2	1	0
80. Contacted your partner on their social networking website (e.g. Facebook, MySpace, blogs, etc.) to blame your partner for bad things that you did.	3	2	1	0
81. Phoned your partner to accuse them of flirting with another guy/girl.	3	2	1	0
82. Text messaged your partner to accuse them of flirting with another guy/girl.	3	2	1	0
83. Emailed your partner to accuse them of flirting with another guy/girl.	3	2	1	0
84. Instant messaged your partner to accuse them of flirting with another guy/girl.	3	2	1	0
85. Contacted your partner on their social networking website (e.g. Facebook, MySpace, blogs, etc.) to accuse them of flirting with another guy/girl.	3	2	1	0

86. Phoned your partner to say things that would scare or frighten them.	3	2	1	0
87. Text messaged your partner to say things that would scare or frighten them.	3	2	1	0
88. Emailed your partner to say things that would scare or frighten them.	3	2	1	0
89. Instant messaged your partner to say things that would scare or frighten them.	3	2	1	0
90. Contacted your partner on their social networking website (e.g. Facebook, MySpace, blogs, etc.) to say things that would scare or frighten them.	3	2	1	0
91. Phoned your partner to say something that would make them feel jealous.	3	2	1	0
92. Text messaged your partner to say something that would make them feel jealous.	3	2	1	0
93. Emailed your partner to say something that would make them feel jealous.	3	2	1	0
94. Instant messaged your partner to say something that would make them feel jealous.	3	2	1	0
95. Contacted your partner on their social networking website (e.g. Facebook, MySpace, blogs, etc.) to say something that would make them feel jealous.	3	2	1	0
96. Treated your partner like an inferior over the phone .	3	2	1	0
97. Treated your partner like an inferior through text messaging .	3	2	1	0
98. Treated your partner like an inferior through email .	3	2	1	0
99. Treated your partner like an inferior through instant messaging .	3	2	1	0
100. Treated your partner like an inferior through your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
101. Checked up on your partner by calling your partner on the phone .	3	2	1	0
102. Checked up on your partner through text messaging .	3	2	1	0
103. Checked up on your partner through email .	3	2	1	0

104. Checked up on your partner through instant messaging .	3	2	1	0
105. Checked up on your partner through your partner's social networking website (e.g. Facebook, MySpace, blogs, etc.).	3	2	1	0
106. Said things to your partner on the phone just to make your partner angry.	3	2	1	0
107. Text messaged things to your partner just to make your partner angry.	3	2	1	0
108. Emailed things to your partner just to make your partner angry.	3	2	1	0
109. Instant messaged things to your partner just to make your partner angry.	3	2	1	0
110. Posted things on a social networking website (e.g., Facebook, MySpace, blogs, etc.) just to make your partner angry.	3	2	1	0
111. Phoned your partner and threatened to hurt yourself if your partner left.	3	2	1	0
112. Text messaged your partner and threatened to hurt yourself if your partner left.	3	2	1	0
113. Emailed your partner and threatened to hurt yourself if your partner left.	3	2	1	0
114. Instant messaged your partner and threatened to hurt yourself if your partner left.	3	2	1	0
115. Contacted your partner on their social networking website (e.g., Facebook, MySpace, blogs, etc.) and threatened to hurt yourself if your partner left.	3	2	1	0
116. Said things to your partner's friends on the phone to turn them against your partner.	3	2	1	0
117. Text messaged things to your partner's friends to turn them against your partner.	3	2	1	0
118. Emailed things to your partner's friends to turn them against your partner.	3	2	1	0
119. Instant messaged things to your partner's friends to turn them against your partner.	3	2	1	0

120. Said things on a social networking website (e.g. Facebook, MySpace, blogs, etc.) to turn your partner's friends against your partner.	3	2	1	0
121. Phoned your partner to ask where they had been or who they had been with in a suspicious manner.	3	2	1	0
122. Text messaged your partner to ask where they had been or who they had been with in a suspicious manner.	3	2	1	0
123. Emailed your partner to ask where they had been or who they had been with in a suspicious manner.	3	2	1	0
124. Instant messaged your partner to ask where they had been or who they had been with in a suspicious manner.	3	2	1	0
125. Asked your partner where they had been or who they had been with in a suspicious manner through a social networking website (e.g., Facebook, MySpace, blogs, etc.)	3	2	1	0
126. Phoned your partner to accuse them of having an affair with another guy/girl.	3	2	1	0
127. Accused your partner of having an affair with another guy/girl through text messaging .	3	2	1	0
128. Accused your partner of having an affair with another guy/girl through email .	3	2	1	0
129. Accused your partner of having an affair with another guy/girl through instant messaging .	3	2	1	0
130. Contacted your partner on their social networking website (e.g. Facebook, MySpace, blogs, etc.) and accused them of having an affair with another guy/girl.	3	2	1	0

APPENDIX B: CONFLICT IN ADOLESCENT DATING RELATIONSHIPS

INVENTORY

The following questions ask you about things that may have happened to you with your current boyfriend or girlfriend while you were having an argument. Circle the answer that is your best estimate of how often these things have happened with your current boyfriend or girlfriend during the past year. Please remember that all answers are confidential.

During a conflict or argument with my boyfriend or girlfriend in the past year:

	Never 0	Rarely (1-2 times) 1	Sometimes (3-5 times) 2	Often (6 or + times) 3
1. I gave reasons for my side of the argument.	0	1	2	3
2. I touched my partner sexually when my partner did not want me to.	0	1	2	3
3. I tried to turn my partner's friends against my partner.	0	1	2	3
4. I did something to make my partner feel jealous.	0	1	2	3
5. I destroyed or threatened to destroy something my partner valued.	0	1	2	3
6. I told my partner that I was partly to blame.	0	1	2	3
7. I brought up something bad that my partner had done in the past.	0	1	2	3
8. I threw something at my partner.	0	1	2	3
9. I said things just to make my partner angry.	0	1	2	3
10. I gave reasons why I thought my partner was wrong.	0	1	2	3

11. I agreed that my partner was partly right.	0	1	2	3
12. I spoke to my partner in a hostile or mean tone of voice.	0	1	2	3
13. I forced my partner to have sex when my partner didn't want to.	0	1	2	3
14. I offered a solution that I thought would make us both happy.	0	1	2	3
15. I threatened my partner in an attempt to have sex with him/her.	0	1	2	3
16. I put off talking until we calmed down.	0	1	2	3
17. I insulted my partner with put-downs.	0	1	2	3
18. I discussed the issue calmly.	0	1	2	3
19. I kissed my partner when my partner didn't want me to.	0	1	2	3
20. I said things to my partner's friends about my partner to turn them against my partner.	0	1	2	3
21. I ridiculed or made fun of my partner in front of others.	0	1	2	3
22. I told my partner how upset I was.	0	1	2	3
23. I kept track of who my partner was with and where my partner was.	0	1	2	3
24. I blamed my partner for the problem.	0	1	2	3
25. I kicked, hit or punched my partner.	0	1	2	3
26. I left the room to cool down.	0	1	2	3
27. I gave in, just to avoid conflict.	0	1	2	3
28. I accused my partner of flirting with another person.	0	1	2	3

29. I deliberately tried to frighten my partner.	0	1	2	3
30. I slapped my partner or pulled my partner's hair.	0	1	2	3
31. I threatened to hurt my partner.	0	1	2	3
32. I threatened to end the relationship.	0	1	2	3
33. I threatened to hit my partner or throw something at my partner.	0	1	2	3
34. I pushed, shoved, or shook my partner.	0	1	2	3
35. I spread rumors about my partner.	0	1	2	3

APPENDIX C: RELATIONSHIP ASSESSMENT SCALE

Please indicate the letter for each item that best answers that item for you.

How well does your current partner meet your needs?

A B C D E
Poorly Average Extremely well

In general, how satisfied are you with your current relationship?

A B C D E
Unsatisfied Average Extremely satisfied

How good is your relationship with your current partner compared to most?

A B C D E
Poor Average Excellent

How often do you wish you hadn't gotten in this current relationship?

A B C D E
Never Average Very often

To what extent has your current relationship met your original expectations?

A B C D E
Hardly at all Average Completely

How much do you love your current partner?

A B C D E
Not much Average Very much

How many problems are there in your current relationship?

A B C D E
Very few Average Very many

APPENDIX D: BALANCED INVENTORY OF DESIRABLE RESPONDING

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1	2	3	4	5	6	7
NOT TRUE			SOME- WHAT TRUE			VERY TRUE

- | | |
|-------|--|
| _____ | 1. My first impressions of people usually turn out to be right. |
| _____ | 2. It would be hard for me to break any of my bad habits. |
| _____ | 3. I don't care to know what other people really think of me. |
| _____ | 4. I have not always been honest with myself. |
| _____ | 5. I always know why I like things. |
| _____ | 6. When my emotions are aroused, it biases my thinking. |
| _____ | 7. Once I've made up my mind, other people can seldom change my opinion. |
| _____ | 8. I am not a safe driver when I exceed the speed limit. |
| _____ | 9. I am fully in control of my own fate. |
| _____ | 10. It's hard for me to shut off a disturbing thought. |
| _____ | 11. I never regret my decisions. |
| _____ | 12. I sometimes lose out on things because I can't make up my mind soon enough. |
| _____ | 13. The reason I vote is because I can't make a difference. |
| _____ | 14. My parents were not always fair when they punished me. |
| _____ | 15. I am a completely rational person. |
| _____ | 16. I rarely appreciate criticism. |
| _____ | 17. I am very confident of my judgments. |
| _____ | 18. I have sometimes doubted my ability as a lover. |
| _____ | 19. It's alright with me if some people happened to dislike me. |
| _____ | 20. I don't always know the reasons why I do the things I do. |
| _____ | 21. I sometimes tell lies if I have to. |
| _____ | 22. I never cover up my mistakes. |
| _____ | 23. There have been occasions when I have taken advantage of someone. |
| _____ | 24. I never swear. |
| _____ | 25. I sometimes try to get even rather than forgive and forget. |
| _____ | 26. I always obey laws, even if I'm unlikely to get caught. |
| _____ | 27. I have said something bad about a friend behind his or her back. |
| _____ | 28. When I hear people talking privately, I avoid listening. |
| _____ | 29. I have received too much change from a salesperson without telling him or her. |
| _____ | 30. I always declare everything at customs. |
| _____ | 31. When I was young I sometimes stole things. |
| _____ | 32. I have never dropped litter on the street. |
| _____ | 33. I sometimes drive faster than the speed limit. |

- _____ 34. I never read sexy books or magazines.
- _____ 35. I have done things that I don't tell other people about.
- _____ 36. I never take things that don't belong to me.
- _____ 37. I have taken sick-leave from work or school even though I wasn't really sick.
- _____ 38. I have never damaged a library book or store merchandise without reporting it.
- _____ 39. I have some pretty awful habits.
- _____ 40. I don't gossip about other people's business.

APPENDIX E: PARENT CONSENT FORM

Name of Researcher, Faculty, Department, Telephone & Email:

Miss Valerie D. Attewell | Faculty of Education | Educational Studies in Psychology | 598 228 7730 vdattewe@ucalgary.ca

Supervisor:

Dr. Kelly Dean Schwartz | Faculty of Education | Educational Studies in Psychology | 403 220 3669 | kdschwar@ucalgary.ca

Title of Project:

Exploring Cyber-Based Dating Behaviour in Adolescent Relationships

This consent form, a copy of which has been given to you, is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The University of Calgary Conjoint Faculties Research Ethics Board and the Calgary Board of Education has approved this research study.

Purpose of the Study:

The present study will investigate how teenagers use or would expect to use various forms of technology in their current, past or future dating relationships both positively and negatively. Exploration into this growing area of study will build a foundation for future research to come. It will increase awareness and understanding of this understudied topic and aide in the development of educational and prevention programs relevant to adolescents.

This study is not part of the established curriculum. Participation, non-participation or withdrawal will have no impact whatsoever on your child's school grades or on their continuing relationship with their school.

The following provides you with details of the study, the type of information that will be collected for the purposes of the study, and the ways in which this information will be used.

What Will My Child Be Asked To Do?

Your child will be asked to read and sign an assent form on the day of data collection. It will be clearly stated in the assent form that their participation is completely voluntary and that they are able to withdraw from the study at any time without penalty. Your child will then complete an online survey that includes questions pertaining to their past, present or potential future romantic relationships and how they use technology in relation to one another. The online survey is being administered by SurveyMonkey©, an American software company. As such, your child's responses are subject to U.S. laws, including the USA Patriot Act. The risks associated with participation are minimal, however, and similar to those associated with many e-mail programs, such as Hotmail© and social utilities spaces, such as Facebook© and MySpace©.

It is estimated that the online survey will take approximately 45-50 minutes of his/her CALM class time to complete. At the completion of the survey, the primary researcher will debrief all

student participants and explain the purpose of the study as well as how the information collected will be used. During this time, your child will receive an Explanation of Study form with a list of resources in the Calgary, Alberta area if any distress were to arise during and/or after completion of the online survey.

The information collected will be used by the primary researcher as part of her thesis requirement, and for the generation of reports, research publications, or presentations. All information collected will remain confidential. That is, all survey responses and any identifiable information, such as the type of school your child currently attends and his/her grade, will not be displayed and your child shall remain anonymous. However, please note that absolute confidentiality cannot be guaranteed in a classroom setting as others present may recognize your child's participation in this study, if not their actual contributions. Furthermore, in order to protect the confidentiality of your child, you will not be permitted to see any of your child's survey responses. If at any time you or your child chooses to exercise his or her right to withdrawal from the study, all data collected up to the point of withdrawal will be discarded.

What Type of Personal Information Will Be Collected?

Information regarding your child's age, grade, ethnicity, and type of school he/she currently attends will be collected for the purpose of the study. Again, any identifying information, such as the name of the school your child attends or his/her current grade, will not be displayed and your child shall remain anonymous when utilized in the generation of reports, research publications, or presentations.

Are there Risks or Benefits if My Child Participates?

Your child could experience some mild distress when answering questions about past or present negative cyber-based communication they have engaged in with their romantic partner. However, they are not obliged to answer any questions that they do not want to answer. In addition, they will be given a list of community resources at the end of the study if any distress were to arise during or after participating in the study.

Your child will not directly benefit from participating in this study. Information obtained from this study will add to our general knowledge about cyber-based dating aggression. Such information could be used to help develop prevention and treatment programs aimed at promoting healthy romantic relationships. In addition, some people report that they learn something about themselves in the process.

What Happens to the Information My Child Provides?

Information gained from this study will be removed of all identifiable characteristics and remain anonymous. The results will be retained by the primary researcher and will be kept in a locked cabinet at the University of Calgary, only accessible to the primary researcher and her supervisor. The data generated from this study will be used by the primary researcher in the creation of her Master's thesis, research publications, and presentations. Furthermore, after a period of seven years, all data collected by the primary researcher will be destroyed. A copy of the final research report will be made available to school(s)/school districts upon request.

Questions/Concerns:

If you have any further questions or want clarification regarding this research and/or your child’s participation, please contact:

Primary Researcher

Miss Valerie D. Attewell

Educational Studies in Psychology – Faculty of Education

(587) 228 7730 – vdattewe@ucalgary.ca

Or

Supervisor

Dr. Kelly Dean Schwartz

Educational Studies in Psychology – Faculty of Education

(403) 220 3669 – kdschwar@ucalgary.ca

If you have any concerns about the way you’ve been treated as a participant, please contact the Senior Ethics Resource Officer, Research Services Office, University of Calgary at (403) 220-3782; email rburrows@ucalgary.ca.

A copy of this consent form has been given to you to keep for your records and reference. The investigator has kept a copy of the consent form.

Please remove this page and have your son/daughter return this signature page to the CALM teacher.

Signatures (written consent)

Your signature on this form indicates that you 1) understand to your satisfaction the information provided to you about your child’s participation in this research project, and 2) agree for your child to participate as a research subject.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

Child’s Name: (please print) _____

Parent/Guardian’s Name: (please print) _____

Parent/Guardian’s Signature: _____ Date: _____

Researcher’s Name: (please print) _____

Researcher’s Signature: _____ Date: _____

APPENDIX F: PARTICIPANT ASSENT FORM

Name of Researcher, Faculty, Department, Telephone & Email:

Miss Valerie D. Attewell | Faculty of Education | Educational Studies in Psychology | 587 228 7730 | vdattewe@ucalgary.ca

Supervisor:

Dr. Kelly Dean Schwartz | Faculty of Education | Educational Studies in Psychology | 403 220 3669 | kdschwar@ucalgary.ca

Title of Project:

Exploring Cyber-Based Dating Aggression in Adolescent Relationships

This assent form is only part of the process of informed assent. Informed assent is when a minor (e.g., someone under the age of 18) agrees to participate in a research study. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information. The University of Calgary Conjoint Faculties Research Ethics Board has approved this research study.

Purpose of the Study:

The present study will investigate how teenagers use or would expect to use different forms of communication technology (e.g., Facebook, texting), both positively and negatively, in their current, past or future dating relationships. Looking into this growing area of study will increase the awareness and understanding of this understudied topic and will help to develop educational and prevention programs for teenagers.

What Will I Be Asked To Do?

You will be asked to read and sign an assent form, which indicates that you are agreeing to participate in the study. Your participation in this study is completely voluntary and you are free to stop participating at any time without penalty. If at any time you decide that you do not want to participate in the study, all of the information that you have provided up to that point will be discarded. If you chose to provide assent, you will be asked to complete an online survey, which includes a series of questions, and will take approximately 40 minutes to complete. The online survey is being administered by SurveyMonkey®, which is an American software company. As such, your responses are subjected to U.S. laws, including the USA Patriot Act. However, the risks associated with participation are minimal and similar to those associated with many e-mail programs, such as Hotmail® and social utilities spaces, such as Facebook® and MySpace®. Following the completion of the survey, the primary researcher will provide you with the purpose of the study and what the collected information that you provided will be used for. This study is not part of the established curriculum at your school. In other words, *participation, non-participation or withdrawal will have no impact whatsoever on your school grades or on your continuing relationship with your school.*

What Type of Personal Information Will Be Collected?

Information about your age, grade, ethnicity, and type of school you currently attend will be

collected for the purpose of this study. Any information that may reveal your identity, such as your age or current grade, will not be displayed and you will remain anonymous. Furthermore, your parents, guardians, and/or teachers will not be able to see any of your survey responses. However, please note that absolute confidentiality cannot be guaranteed in a computer laboratory setting as others around you may recognize your participation in this study, if not your actual contributions.

Are there Risks or Benefits if I Participate?

You may experience some mild distress when answering questions about past negative cyber-based communication in a relationship. However, you do not have to answer any questions that you do not feel comfortable answering. In addition, you will be given a list of community resources at the end of the study that you may contact if you experience any distress during or after participation.

You will not directly benefit from participating in this study. Information gathered from this study will add to the public's general knowledge about cyber-based dating aggression. Such information could be used to develop specific programs that help teens learn about healthy romantic relationships. In addition, some people report that they learn something about themselves in the process.

What Happens to the Information I Provide?

The information you provide will be removed of all identifiable characteristics and remain anonymous. The primary researcher will keep the results in a locked cabinet at the University of Calgary, which will only be accessible to herself and her supervisor. The information collected from this study will be used in the creation of the primary research's Master's thesis, research publication, and presentations. Furthermore, after a period of seven years, all data collected by the primary researcher will be destroyed.

By giving your assent to participate, this indicates that you

- 1) Understand to your satisfaction the information provided to you about your participation in this research project,
- 2) Agree to participate as a research subject, and
- 3) Understand that the results generated from this study will be used for a Master's thesis.

In no way does this waive your legal rights, nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

APPENDIX G: EXPLANATION OF STUDY PAGE

Explanation of Study

Thank you for participating in the study **Exploring Cyber-Based Aggression in Adolescent Relationships**. Your participation is greatly appreciated. By participating in this study, you are providing information on Cyber-Based Dating Aggression (CBDA).

What is CBDA?

CBDA is any emotional or verbal aggression (e.g., swearing at your partner), domineering or controlling behaviors (e.g., telling your partner who they can and cannot talk to), monitoring (e.g., wanting to know where your partner is all of the time), relational aggression (e.g., spreading rumours about your partner) and stalking (e.g., continually contacting your partner when they do not want you to) enacted through phone, text, e-mail, instant message, or social networking website (e.g., Facebook). We hope this study will tell us how much CBDA is occurring in adolescent romantic relationships, whether females use CBDA more than males, what type of communication technology is used most often, and the potential risk factors (e.g., how long you have been dating, how happy you are in the relationship) regarding online dating aggression. All of the information gathered will be used for a Master's thesis project at the University of Calgary.

What do we know about CBDA and why does it matter?

Past research has continually shown that there are some teens who take part in what's called "traditional aggression" (e.g., face-to-face aggression) in their dating relationships. Some research (e.g., Connolly & Josephson, 2007) has tried to find out if teens demonstrated aggression using technology in their current or past relationship, and if teens see themselves as possibly engaging in this type of behaviour in their potential future relationships. As past research has found that CBDA occurs in 83% of university-aged dating relationships (Attewell & Fritz, 2010), it is expected that teens participation in CBDA perpetration will be quite high as well. In addition, we also think males and females might use CBDA differently. For instance, based on past research with college/university samples (e.g. Burke et al., 2011), it is expected that females will be more likely to use CBDA against their boyfriends. We also expect that teens who are relationally aggressive in their dating relationship (e.g., engaged in face to face verbal aggression towards their partner) are also more likely to use technology to be aggressive (e.g., engaged in verbal aggression over Facebook). Lastly, we expect that those teens who have been in their dating relationships longer may engage in less CBDA. CBDA has not been studied very much and this study will fill a gap in the literature by providing much needed information on this growing area of study. Furthermore, this study will increase our understanding and awareness of this type of aggression, lending support for the development and implementation of educational and prevention programs relevant to teens.

If after participating in this study you feel like you need to talk to someone about any aggression you might be experiencing in a past or current dating relationship, please inform the researcher, your classroom teacher, or a counsellor at your school. There are also resources on the next page with professionals who can help you if you feel threatened or scared in your dating relationship.

If you have any questions or concerns regarding this research, please contact Valerie Attewell at vdattewe@ucalgary.ca or Dr. Kelly Dean Schwartz at kdschwar@ucalgary.ca. If you feel any

negative emotions related to participation in this study, please contact someone from one of the following resources that are attached, or tell Valerie Attewell or Dr. Kelly Dean Schwartz so they can direct you to an appropriate resource.

Youth Information

Sometimes when youth have questions or problems they may not know who to talk to or where to get help. We have included a list of services that are available to youth in your area. If you, a friend, or a family member have questions, would like someone to talk to, or need help with a problem, one of these resources may be able to help.

- **School based personnel, guidance counsellor, and/or teachers**

- **Distress Centre**
(403) 266-1605

- **Kids Help Phone**
1-800-668-6868

- **Teen Central**
www.teencentral.net

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Table 1.

Descriptive Results for Dating Relationship Items

Variable	Current Relationship		Past Relationship		Future Relationship	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Hours per week spent with each other.	5-6	1.09	5-6	1.15	5-6	1.09
Length of relationship (Months)	7.15	5.78	5.11	5.05	13.41	13.30
	Yes	No	Yes	No	Yes	No
Dating anyone else at the same time?	0%	100%	2.9%	97.1%	0%	100%
Are Parents aware of the relationship?	87.9%	12.1%	77.1%	22.9%	100%	0%

Note. The language of each item was changed according to current, past or future relationship

conditions. *M*=Mean. *SD*=Standard Deviation.

Table 2.

Means, Standard Deviations, and Reliability of the PATS (Current, Past, and Future Relationships)

PATS Subscale	Current (N=33)			Past (N=34)			Future (N=18)		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Emotional/Verbal	1.19	.32	.95	1.24	.28	.93	1.18	.15	.80
Dominance/Control	1.12	.21	.93	1.10	.25	.96	1.05	.08	.81
Monitoring	1.40	.46	.90	1.35	.39	.90	1.41	.30	.83
Relational	1.04	.08	.66	1.18	.27	.86	1.10	.16	.77
Stalking	1.13	.27	.74	1.26	.50	.87	1.24	.44	.68
Total CBDA	1.18	.20	.97	1.23	.27	.97	1.20	.16	.90

Note. PATS=Partner Aggression Technology Scale. Current, Past, and Future=Types of relationship participants were in. CBDA=Cyber-Based Dating Aggression. Total CBDA=the total Cyber-Based Dating Aggression for each relationship condition. *M*=Mean. *SD*=Standard Deviation. α =Cronbach's Alpha.

Table 3.

Means, Standard Deviations, and Reliability of the Types of Technology Used by Adolescents in their Romantic Relationships.

PATs Technology Type	Current (N=33)			Past (N=34)			Future (N=18)		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Phone	1.18	.26	.90	1.25	.29	.88	1.25	.20	.81
Text	1.31	.37	.92	1.36	.33	.88	1.30	.22	.79
Email	1.09	.22	.92	1.07	.18	.89	1.06	.11	.69
Instant Message	1.14	.26	.89	1.12	.23	.89	1.09	.12	.75
Social Networking Website	1.16	.26	.90	1.19	.22	.83	1.14	.15	.74

Note. PATs=Partner Aggression Technology Scale. Current, Past, and Future=

Types of relationship participants were in. CBDA=Cyber-Based Dating Aggression.

M=Mean. *SD*=Standard Deviation. α =Cronbach's Alpha.

Table 4.

Means, Standard Deviations, and Reliability of the CADRI.

CADRI Subscale	Current (N=33)			Past (N=34)			Future (N=18)		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Reasoning	2.54	.73	.89	2.33	.57	.83	2.77	.46	.78
Relational	1.02	.08	.39	1.20	.37	.66	1.02	.08	**
Threatening	1.06	.15	.88	1.09	.24	.71	1.11	.17	.81
Emotional/Verbal	1.36	.52	**	1.44	.37	.65	1.38	.33	*
Sexual	1.09	.26	.64	1.13	.27	.42	1.00	.00	*
Physical	1.04	.09	*	1.03	.12	.76	1.01	.06	*
Total TADA	1.35	.22	.90	1.37	.20	.84	1.38	.11	.78

Note. CADRI=Conflict in Adolescent Dating Relationships Inventory. TADA=Traditional

Adolescent Dating Aggression.Total TADA= The total Traditional Adolescent Dating

Aggression for each relationship condition. *M*=Mean. *SD*=Standard Deviation. α =Cronbach's

Alpha. *=Each of the variables had zero variance and thus, too many items were deleted from the

scale. **=Majority of the items within the scale were constant. Remaining items were almost

constant and thus a negative reliability statistic was produced.

Table 5.

Means, Standard Deviations, and Reliability of the RAS.

RAS	Current (N=33)			Past (N=34)			Future (N=18)		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Total Satisfaction	4.17	.84	.86	3.13	.90	.82	3.77	.55	.67

Note. RAS=Relationship Assessment Scale. Total Satisfaction = the total relationship satisfaction for each relationship condition. *M*=Mean. *SD*=Standard Deviation.

α =Cronbach's Alpha.

Table 6.

Means, Standard Deviations, and Reliability of the BIDR.

BIDR	<i>M</i>	<i>SD</i>	α
SDR	11.24	4.96	.59
SDE	5.09	3.01	.55
IM	6.14	3.41	.64

Note. BIDR=Balanced Inventory of Desirable Responding.

SDR=Overall Social Desirability Response. SDE = Self

Deceptive Enhancement. IM = Impression Management.

M=Mean. *SD*=Standard Deviation. α =Cronbach's Alpha.

Table 7.

One-Way ANOVA Results Between Gender and CBDA Subscales in Current Relationships.

Subscale	Source	SS	Df	MS	F	p
Emotional/Verbal	Between	.30	1	.30	3.08	.09
	Within	3.06	31	.10		
	Total	3.36	32			
Dominance/Controlling	Between	.01	1	.01	.10	.75
	Within	1.47	31	.05		
	Total	1.47	32			
Monitoring	Between	.04	1	.04	.19	.67
	Within	6.86	31	.22		
	Total	6.90	32			
Relational	Between	.00	1	.00	.43	.52
	Within	.22	31	.01		
	Total	.22	32			
Stalking	Between	.00	1	.00	.02	.89
	Within	2.30	31	.07		
	Total	2.31	32			

Note. CBDA=Cyber-Based Dating Aggression. *SS*=Sums of Squares. *Df*=Degrees of Freedom.

MS= Mean Square.

Table 8.

One-Way ANOVA Results Between Gender and CBDA Subscales in Past Relationships.

Subscale	Source	SS	Df	MS	F	p
Emotional/Verbal	Between	.06	1	.06	.74	.40
	Within	2.49	32	.08		
	Total	2.54	33			
Dominance/Controlling	Between	.02	1	.02	.34	.56
	Within	2.08	32	.06		
	Total	2.12	33			
Monitoring	Between	.00	1	.00	.00	.96
	Within	4.96	32	.16		
	Total	4.96	33			
Relational	Between	.34	1	.34	5.05 (<i>W</i> =7.03)	.03* (<i>Wsig</i> =.02*)
	Within	2.15	32	.07		
	Total	2.49	33			
Stalking	Between	.28	1	.28	1.12	.30
	Within	7.86	32	.25		
	Total	8.14	33			

Note. CBDA=Cyber-Based Dating Aggression. *SS*=Sums of Squares. *Df*=Degrees of Freedom.

MS= Mean Square. *= $p < .05$. *W*=Welch statistic. *Wsig*=Welch significance.

Table 9.

One-Way ANOVA Results Between Gender and CBDA Subscales in Future Relationships.

Subscale	Source	SS	Df	MS	F	p
Emotional/Verbal	Between	.04	1	.04	1.81	.10
	Within	.33	16	.02		
	Total	.36	17			
Dominance/Controlling	Between	.01	1	.01	.99	.34
	Within	.10	16	.01		
	Total	.11	17			
Monitoring	Between	.01	1	.01	.07	.79
	Within	1.54	16	.10		
	Total	1.55	17			
Relational	Between	.00	1	.00	.04	.84
	Within	.42	16	.03		
	Total	.42	17			
Stalking	Between	.54	1	.54	3.18	.09
	Within	2.71	16	.17		
	Total	3.24	17			

Note. CBDA=Cyber-Based Dating Aggression. *SS*=Sums of Squares. *Df*=Degrees of Freedom.

MS= Mean Square.

Table 10.

Pearson Correlations Between Total Cyber-Based Dating Aggression and Total Traditional Adolescent Dating Aggression.

	Total TADA	<i>N</i>
Total CBDA	.503**	85

Note. CBDA= Cyber-Based Dating Aggression. TADA=Traditional

Adolescent Dating Aggression. **Correlation is significant at the 0.01 level.

Table 11.

Pearson Correlations Between Cyber-Based Dating Aggression and Traditional Adolescent Dating Aggression- Current Relationships.

CBDA	TADA					
	Reasoning	Relational	Threatening	Emotional/Verbal	Sexual	Physical
Emotional/Verbal	.18	.15	.50**	.68**	.59**	.59**
Dominance/Controlling	.04	-.07	.53**	.55**	.40*	.40*
Monitoring	-.09	.29	.138	.24	.00	.35*
Relational	.20	.05	.21	.43*	.63**	.40*
Stalking	-.10	.07	-.07	.01	.12	.24

Note. CBDA= Cyber-Based Dating Aggression. TADA=Traditional Adolescent Dating

Aggression. **Correlation is significant at the 0.01 level. *Correlation is significant at the 0.05

level.

Table 12.

Pearson Correlations Between Cyber-Based Dating Aggression and Traditional Adolescent Dating Aggression- Past Relationships.

CBDA	TADA					
	Reasoning	Relational	Threatening	Emotional/Verbal	Sexual	Physical
Emotional/Verbal	.20	.40*	.28	.59**	.20	.52**
Dominance/Controlling	.12	.05	.15	.31	.24	.09
Monitoring	.04	.14	.03	.45**	.12	.36*
Relational	.28	.73**	.42	.46**	.05	.76**
Stalking	.14	.48**	.62**	.52**	.27	.68**

Note. CBDA= Cyber-Based Dating Aggression. TADA=Traditional Adolescent Dating

Aggression. **Correlation is significant at the 0.01 level. *Correlation is significant at the 0.05

level.

Table 13.

Pearson Correlations Between Cyber-Based Dating Aggression and Traditional Adolescent Dating Aggression- Future Relationships.

CBDA	TADA					
	Reasoning	Relational	Threatening	Emotional/Verbal	Sexual	Physical
Emotional/Verbal	.03	.17	.02	.66**	. ^a	.21
Dominance/Controlling	-.55*	-.16	.29	.21	. ^a	.62**
Monitoring	-.35	-.16	.61**	.07	. ^a	.05
Relational	-.20	.11	.37	.25	. ^a	.24
Stalking	-.52*	.09	-.10	.23	. ^a	.66**

Note. CBDA= Cyber-Based Dating Aggression. TADA=Traditional Adolescent Dating

Aggression. **Correlation is significant at the 0.01 level. *Correlation is significant at the 0.05

level. ^a= Cannot be computed because this variable is constant.

Table 14.
Multiple Regression of Emotional/Verbal CBDA in Current Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	.21	.01	1.09	.29	.05
Block 2					
Relationship Satisfaction	-.30	.07	-1.55	.14	.19
Length of Relationship	.22	.01	1.15	.26	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 15.
Multiple Regression of Dominance/Control CBDA in Current Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	.15	.01	.75	.46	.05
Block 2					
Relationship Satisfaction	-.33	.04	-1.67	.12	.16
Length of Relationship	.08	.01	.42	.68	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 16.
Multiple Regression of Monitoring CBDA in Current Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	.01	.02	.05	.96	.00
Block 2					
Relationship Satisfaction	-.14	.12	-.66	.52	.03
Length of Relationship	.07	.02	.34	.74	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 17.
Multiple Regression of Relational CBDA in Current Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	.10	.00	.48	.64	.01
Block 2					
Relationship Satisfaction	-.15	.02	-.74	.47	.09
Length of Relationship	.21	.00	1.05	.31	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 18.
 Multiple Regression of Stalking CBDA in Current
 Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.05	.01	-.25	.81	.00
Block 2					
Relationship Satisfaction	-.02	.07	-.10	.92	.01
Length of Relationship	.07	.01	.31	.76	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 19.
 Multiple Regression of Emotional/Verbal CBDA in Past
 Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.29	.01	-1.45	.16	.08
Block 2					
Relationship Satisfaction	-.02	.07	-.09	.93	.09
Length of Relationship	-.05	.01	-.24	.81	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 20.
Multiple Regression of Dominance/Controlling CBDA in Past Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.04	.01	-.18	.86	.00
Block 2					
Relationship Satisfaction	-.19	.07	-.83	.41	.04
Length of Relationship	.01	.01	.05	.96	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 21.
Multiple Regression of Monitoring CBDA in Past Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.10	.02	-.53	.60	.01
Block 2					
Relationship Satisfaction	.39	.10	1.76	.09	.13
Length of Relationship	-.28	.02	-1.27	.22	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 22.
 Multiple Regression of Relational CBDA in Past
 Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.41	.01	-2.21	.04	.15
Block 2					
Relationship Satisfaction	.26	.05	1.31	.20	.21
Length of Relationship	-.16	.01	-.76	.46	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 23.
 Multiple Regression of Stalking CBDA in Past
 Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.12	.02	-.59	.56	.01
Block 2					
Relationship Satisfaction	.21	.11	.92	.37	.05
Length of Relationship	-.11	.02	-.49	.63	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 24.
Multiple Regression of Emotional/Verbal CBDA in Future Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.40	.01	-1.86	.09	.30
Block 2					
Relationship Satisfaction	.51	.07	1.95	.07	.48
Length of Relationship	-.49	.00	-1.89	.08	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 25.
Multiple Regression of Dominance/Control CBDA in Future Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	.22	.00	.77	.46	.02
Block 2					
Relationship Satisfaction	.32	.05	.92	.37	.09
Length of Relationship	-.20	.00	-.59	.56	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 26.
Multiple Regression of Monitoring CBDA in Future Relationships.

Variable	β	SE	t-value	p	R²
Block 1					
BIDR	-.05	.01	-.24	.81	.08
Block 2					
Relationship Satisfaction	.67	.14	2.56	.02	.48
Length of Relationship	-.80	.00	-3.09	.01	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 27.
 Multiple Regression of Relational CBDA in Future
 Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	-.20	.01	-.73	.48	.07
Block 2					
Relationship Satisfaction	.27	.10	.79	.44	.12
Length of Relationship	-.07	.00	-.21	.84	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.

Table 28.
 Multiple Regression of Stalking CBDA in Future
 Relationships.

Variable	β	SE	t-value	p	R ²
Block 1					
BIDR	.51	.01	2.21	.05	.10
Block 2					
Relationship Satisfaction	.60	.23	2.10	.06	.38
Length of Relationship	-.64	.01	-2.26	.04	

Note. CBDA=Cyber-Based Dating Aggression. BIDR=Balanced Inventory of Desirable Responding.