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PERCEPTIONS OF SEVERITY AND THE ROLE OF COPING IN UNIVERSITY

STUDENTS' EXPERIENCES WITH ONLINE PARTNER AGGRESSION VICTIMIZATION

by

Mary G. Simmering McDonald

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Windsor, Ontario, Canada

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Perceptions of Severity and the Role of Coping in University Students' Experiences with Online
Partner Aggression Victimization

by

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ABSTRACT

Despite the frequency with which individuals are currently communicating via forms of technology and the unique features of online communication (i.e., lack of verbal and nonverbal cues, ability to send messages with greater frequency, opportunity to make personal information public, etc.), few studies have considered individuals' perceptions of and experiences with online partner aggression victimization. Through quantitative and qualitative methods, the present research investigated university students' ($N = 349$; 82.1% female) experiences of online partner aggression victimization occurring via email, instant messaging, and social networking sites and their perceptions of severity of the aggressive acts. In addition, information was collected about participants' dispositional coping strategies and their psychological and adaptive functioning as well as the indirect effects of coping on associated outcomes. Findings revealed that a large number (82.1%) of participants were victimized by online partner aggression at least once in the past year and that victimization occurred most frequently (71.8%) via instant messaging. Women were found to perceive all categories of online partner aggression as more severe than men. Path analysis indicated that maladaptive coping indirectly affected outcomes for individuals who had experienced online partner aggression such that this method of coping resulted in poorer psychological functioning, but better adaptive functioning. These findings provide support for the seriousness of online partner aggression and the importance of coping style with respect to outcomes. Limitations and clinical implications are discussed.

DEDICATION

This dissertation is dedicated to my father, Stephen Simmering, in most loving memory. Thank you for teaching me the value of hard work, the importance of kindness, and the need to take one step at a time to reach the top of the mountain. You were the single inspiration behind every moment of effort and determination put forth to complete this work. From start to finish, this was all for you Dad.

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I am most grateful to my family members, especially my brothers and my family in Jamaica, for their unconditional love and unwavering belief in my abilities. Thank you to my mother, Anne Simmering, for providing me with endless patience, love, compassion, and support from the beginning and for having pride beyond my understanding. Finally, thank you to my husband Devraj McDonald for sharing this journey with me from beginning to end, for being my biggest supporter, for making me laugh, and for bringing balance to my life. The blessings that have come from your presence in my life are immeasurable.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Perceptions of Severity and the Role of Coping in University Students' Experiences with Online

Partner Aggression Victimization

CHAPTER I: Introduction

Statement of the Problem

Over the past decade, there has been a large increase in individuals' use of technology for

communication purposes and recent research has identified problematic behaviours (i.e.,

cyberbullying) occurring over the Internet (Finn, 2004; Kowalski & Limber, 2007). However,

few studies have considered the extent to which partner aggression is perpetrated via these

methods, even though technological means are primarily used for communication with members

of one's offline social network (i.e., friends, romantic partners). The few studies to date that have

examined online partner aggression have suggested that it is occurring frequently among

university students (Draucker & Martsolf, 2010; Melander, 2010; Piitz & Fritz, 2010). This is

concerning considering that one study found online partner aggression was positively related to

internalizing and externalizing problems (Piitz & Fritz, 2010) and offline forms of partner

aggression have been found to relate to a number of negative consequences (i.e., poorer

psychological functioning and more difficulty at school or work; e.g., Arias & Pape, 1999;

Cascardi & O'Leary, 1992; Riger, Raja, & Camacho, 2002). Thus, obtaining information about

university students' experiences with online partner aggression victimization and their related

outcomes seems beneficial. Also, investigating how individuals may cope with these experiences

and the role coping plays with respect to their outcomes has not been examined previously.

Finally, learning about individuals' perceptions of what constitutes online partner aggression and

the seriousness of the problem is important for potentially understanding what victims actually

go through as opposed to making assumptions based on the aggressive acts themselves.

The present study addressed these gaps in the literature through a multi-method approach by investigating university students' perceptions of and experiences with online partner aggression victimization with respect to frequency, perceived severity of the aggressive acts, and types of aggression. In addition, a main goal of this research was to learn about related coping strategies and outcomes (i.e., psychological and adaptive functioning) and to determine whether coping indirectly affects participants' outcomes. A conceptual overview of this objective is presented in Figure 1 (page 3). Finally, because online partner aggression represents such a new area of research, an objective of the present study was to obtain a more detailed and comprehensive understanding of participants' perceptions of and experiences with online partner aggression, selected coping strategies, and any resulting difficulties through interviews with a subset of participants who had previously been victimized by online partner aggression.

To provide a context for the present study, several literatures are reviewed. The literature review begins with a discussion of the development of use of computer-mediated communication with the increase of Internet popularity. Then, a review of the theoretical history of offline partner aggression and the theoretical basis for the present study follows. Because research specifically examining online partner aggression is so limited, much of the literature review focuses on offline partner aggression. Next, types of partner aggression identified through offline partner aggression research are discussed as well as the frequency and perceived severity of online and offline forms of aggression. The following section reviews the literature investigating gender differences and similarities with respect to experience of online and offline aggression. A brief discussion of partner aggression occurring in same-sex relationships follows, providing a rationale for focusing on heterosexual relationships in the present study. Negative consequences associated with offline partner aggression and other forms of online aggression are then

Figure 1

Model Reflecting Conceptual Overview and Expected Pathways among Main Study Variables

discussed as well as differences in outcomes depending on the type of aggression. A review of perceived relationship quality follows. The next focus of the literature review is a discussion of psychological cyber partner aggression followed by a conceptual overview of the coping research, different types of coping, and the influence of coping on individuals' emotional experience. Factors related to coping, such as perceived locus of control, perceived social support, and gender are discussed next followed by a review of the literature examining coping with intimate partner aggression and the usefulness of selected strategies. Finally, the basis of the present study, research questions, and hypotheses are discussed.

Background and Purpose of the Study

Adolescence is a developmental period characterized by a number of changes that take place across various levels of development, such as biological, cognitive, social, sexual, and educational. Development is thought to be influenced by risk and protective factors existing at the many different levels within one's context, such as individual, family, and community levels (Cummings, Davies, & Campbell, 2000). Social relationships are significant at every period; however, the emphasis and importance of specific types of relationships change across development. For example, although children initially form friendships with same-sex peers, teenagers become more involved with other-sex peers and these relationships become more intimate and important with age (Connolly, Furman, & Konarski, 2000; Grover & Nangle, 2003). Associations in mixed-gender peer groups increase the interest in romantic relationships and set the stage for these relationships to occur (Connolly, Craig, Goldberg, & Pepler, 2004).

A normative task that occurs during adolescence is to begin to venture into dating relationships, which become more likely with age (Collins, 2003). For example, the majority of both male and female adolescents have been on at least one date by the age of 16 years (Grover

& Nangle, 2003). The meaning of dating relationships also changes across adolescence. For example, younger adolescents tend to date for recreation whereas university students are more likely to date for intimacy and companionship (Lerner, 2002). In addition, the degree to which adolescents highlight intimacy in their conceptions of romantic relationships was found to increase with age (Connolly, Craig, Goldberg, & Pepler, 1999). Although romantic relationships can provide many benefits (i.e., companionship), there is also potential for problems (i.e., use of power and aggression) to occur within this new context (Craig & Pepler, 2003). For example, in some cases, adolescents use psychological maltreatment towards their dating partners and express anger verbally (e.g., through swearing, name-calling, and ridiculing; Kasian & Painter, 1992; Wenar & Kerig, 2000). Individuals who are aggressive towards others during childhood (i.e., through bullying) are at greater risk of using the learned power and aggression to engage in dating aggression when they are older (Connolly, Pepler, Craig, & Taradash, 2000). Further, romantic relationships that are perceived to be of poor quality can result in negative outcomes, such as depressive symptoms (La Greca & Harrison, 2005). Teenagers also are inclined to adhere to traditional Western gender roles during adolescence, which encourage boys to be dominant and aggressive and girls to be nurturing, nonaggressive, and emotional (Wenar & Kerig, 2000). Because of this, some individuals may feel as though adherence to these roles is acceptable, which also can contribute to a context through which partner aggression can occur.

The focus of the present study was to examine undergraduate students' experiences with online partner aggression. Although this age group represents the tail-end of the adolescent period, it was selected because of an increased likelihood of having had a romantic relationship, and thus, having experienced problems within this relationship. Further, teenagers have been found to have higher perpetration and victimization rates in higher grades (i.e., Grade 9 and

Grade 11) than lower grades (i.e., Grade 7; Hokoda, Del Campo, & Ulloa, 2012). Romantic

relationships are generally considered more personally significant to university students and

individuals have more independence from their parents relative to younger teenagers. Finally,

forms of computer-mediated communication, such as email, instant messaging, and social

networking sites are popular among older adolescents (i.e., undergraduate students) and

frequently used for communication purposes (e.g., Baym, Zhang, & Lin, 2004; Finn, 2004; Hu,

Wood, Smith, & Westbrook, 2004; Licoppe & Smoreda, 2005).

Computer-Mediated Communication and Social Relationships

With the explosion of Internet use that has occurred over the past decade, it is clear that

interpersonal relationships and ways of communicating have had to adjust as a result. Further,

studies have indicated that there is potential for a number of difficulties to result from Internet

use, such as cyberbullying (e.g., Kowalski & Limber, 2007), email harassment, receiving

unwanted material (e.g., pornography), and cyberstalking (Alexy, Burgess, Baker, & Smoyak,

2005; Finn, 2004). Some of the most common modes of communicating using the Internet

include email, instant messaging (i.e., MSN Messenger) and social networking sites (i.e.,

Facebook; Finn, 2004; Hu et al., 2004). In addition, with portable technological devices, such as

smartphones and tablets, individuals are able to access these forms of computer-mediated

communication on a regular basis. All of these types of computer-mediated communication have

a strong offline component, such that they are primarily used for communication with individuals

with whom users have pre-existing relationships (Licoppe & Smoreda, 2005). These

technological communication forms are also especially popular among university and college

students because they are able to communicate with others at no additional cost despite

geographical distance (Licoppe & Smoreda, 2005).

Statistics Canada (2010) reported that 80.3% of Canadians, including 96.5% of individuals below the age of 34 years, used the Internet for personal, nonbusiness reasons in 2009. In addition, of the individuals using the Internet at home in 2009, 93% used email and 44.8% used instant messaging, suggesting that Internet continues to be used for communication purposes. Similarly, in a study exploring online harassment among American university students, Finn (2004) found that 96.7% and 81.5% of participants used email and instant messaging regularly (i.e., more than once per week). Social networking site usage was not reported; however, one Canadian study that obtained information on undergraduate students' frequency of Facebook usage reported that participants spent an average of 38.93 minutes per day using Facebook (Muise, Christofides, & Desmarais, 2009). In addition, Ellison, Steinfield, and Lampe (2007) reported that 94% of undergraduate university students were members of Facebook. Taken together, these results indicate that university-aged individuals regularly use the Internet and do so primarily for communication purposes with individuals known from the offline world as opposed to meeting or communicating with strangers.

Recognizing how frequently online communication is occurring makes it highly plausible that computer-mediated communication is another mode through which partner aggression may occur. In addition, differences in computer-mediated communication compared to other types of communication (e.g., lack of physical proximity, not witnessing the message recipient's response, opportunity for time to formulate a message) also provide support for the importance of specifically looking at online communication with respect to partner aggression. In other words, we cannot immediately assume that we are exploring the same construct as offline partner aggression and that the experience, perceived severity, frequency, and outcome are the same. This is especially important because variation has been found to exist in offline aggression with

respect to these factors, which further highlights the importance of not lumping all types of partner aggression into the same category (Johnson, 1995). Research has consistently shown that the increase in Internet and media use has impacted relationships; however, there have been mixed findings as to how this has occurred and very little research has considered partner aggression specifically. The present study addressed this gap in the literature by examining psychological partner aggression across three different modes of computer-mediated communication, namely: email, instant messaging, and social networking sites.

Early computer-mediated communication research raised concerns about the effects of Internet use, suggesting that individuals were neglecting their important social relationships and spending less time fostering these relationships as a result of increased time using the Internet and communicating with strangers. This was referred to as the Reduction Hypothesis (Valkenburg & Peter, 2007). These concerns were supported by the HomeNet study, in which Kraut and colleagues (1998) collected information from 169 participants in 73 households who were using the Internet for their first or second year to see whether Internet use, which was primarily for communication purposes, impacted social relationships and psychological functioning. Results indicated that greater Internet use was related to declines in social involvement. More specifically, participants with higher levels of Internet use communicated less with family members, experienced declines in the size of their social networks, and experienced higher rates of loneliness and depression. Based on these findings, Kraut and colleagues (1998) concluded that greater Internet use negatively affects both social relationships and psychological functioning, neither of which was initially associated with subsequent Internet use.

More recent research has lent support to the Stimulation Theory, which suggests that,

because the Internet provides greater opportunities for communication, individuals can improve and increase their existing social relationships and develop new relationships based on common interests as opposed to convenience (Bargh, McKenna, & Fitzsimons, 2002; Blais, Craig, Pepler, & Connolly, 2008). When Kraut and colleagues (2002) revisited the HomeNet study three years later, they observed a change in their findings. Most of the negative effects resulting from increased Internet use had disappeared, which led the researchers to conclude that although Internet use resulted in negative outcomes during the first phase of the study, positive effects were later established. Interestingly, this later research by Kraut and colleagues (2002) also suggested that increased Internet use was associated with positive outcomes in social and psychological functioning, such as increased social network size, face-to-face communication, trust, and positive affect. Thus, whereas the first phase of the HomeNet study indicated that greater Internet use was associated with generally negative outcomes, the second study indicated that greater Internet use was associated with generally positive outcomes.

Other recent studies have demonstrated that Internet use has evolved in such a way that it is now primarily being used for interpersonal communication, particularly for the purposes of enhancing existing relationships. Valkenburg and Peter (2007) conducted research regarding Internet use and communication with 794 preadolescents and adolescents. Their results indicated that greater online communication with existing friends was associated with closer friendships. The frequency of communication also appeared to reflect individuals' offline style. For example, individuals who were identified as socially anxious engaged in less online communication than those who were not. This is important to consider with respect to partner aggression, as the Internet may provide already aggressive individuals with another outlet to express their aggression towards their partners. Socially anxious individuals also perceived the Internet as a

useful medium through which to disclose personal information. For example, in a study on cyberbullying among Turkish adolescents, the majority (59.5%) of participants reported saying things online that they would not say in-person (Aricak et al., 2008). Perhaps this suggests that individuals feel less inhibited when communicating online due to the lack of contextual factors (e.g., recipients' reaction) and relative anonymity. This information is consistent with findings from a study examining Canadian university students' Facebook usage. Results revealed that participants were more inclined to disclose more personal information about themselves on Facebook than they generally would, but also expressed concern about information control and privacy on social networking sites (Christofides, Muise, & Desmarais, 2009). Interestingly, research has demonstrated that certain personality characteristics are related to different features of Facebook usage. For example, shyer individuals were found to spend more time on Facebook and rate attitudes toward Facebook more favourably, although they had fewer online contacts relative to nonshy individuals (Orr et al., 2009). On the other hand, more extraverted individuals are more likely to belong to a significantly higher number of groups on Facebook (Ross et al., 2009). The distinction in findings appears to be related to extraverted individuals' likelihood to use Facebook for communication with offline friends in addition to their real-world interactions versus shyer individuals who may find Facebook communication more comfortable than face-to-face interactions (Orr et al., 2009; Ross et al., 2009).

In a one-year longitudinal study, Blais and colleagues (2008) also examined the impact of Internet use on important relationships; however, they specifically considered adolescent relationships with best friends and romantic partners. Participants completed questionnaires assessing different types of Internet usage (i.e., chat rooms, ICQ instant messaging, and general entertainment) and relationship quality for same-gender best friends and romantic partners. The

sample consisted of 884 (407 males, 477 females) predominately European-Canadian (76%) adolescents between the ages of 14 to 18 years ($M = 15$, $SD = 1$), who participated in the study on both occasions. Results indicated that the purpose (e.g., communication, entertainment) of the Internet activity impacted relationship quality in different ways. Again, Internet use for communication with individuals known to participants in the offline world through activities, such as instant messaging, led to increases in quality for both romantic relationships and best friendships. On the other hand, using the Internet for other purposes, such as general entertainment and communicating with strangers, led to reductions in quality for both romantic relationships and best friendships.

Mesch (2009) conducted research with 1,055 Israeli adolescents (ages 13 to 18 years) to examine preference of communication channels and the role different types of communication play with respect to social relationship development and maintenance. Results indicated that the way in which the relationship developed (i.e., online versus offline) played an important role in communication channel choice. When the relationship developed online, communication was more likely to occur online and over the phone than when relationships were developed face-to-face. When relationships were developed offline, the preferred communication channel was face-to-face. This lends support to the idea that online and offline social networks are separate. In addition, face-to-face communication was more likely when a higher level of closeness was perceived in the relationships whereas phone communication occurred more frequently in relationships characterized by more distance and less duration in the relationship.

Taken together, these results suggest that when the Internet is being used to foster pre-existing relationships and enhance communication within those relationships, the relationships improve, which results in greater relationship satisfaction. Alternatively, when the Internet is

being used in such a way that it takes time away from those relationships, this may result in less relationship satisfaction (Blais et al., 2008). Also, it is likely that the difference in findings from early research to more recent research is related to changes in the Internet and the way it is being used (Kraut et al., 2002). For example, during the first phase of the HomeNet study, Internet usage was new and exciting and therefore more likely to take time away from other offline activities. Further, Kraut and colleagues (2002) suggest that the Internet may have become a more social place as its use and popularity increased greatly and quickly and more individuals gained access. Thus, it is possible that there were not enough early Internet users to maintain and strengthen their social relationships. In addition, with increased use, users may have become better able to navigate the Internet with ease, which was previously more difficult because of delays in typing responses (Kraut et al., 2002; van der Meijden & Veenman, 2005). Currently, more individuals are using the Internet to maintain their existing offline relationships than to form new relationships online (Kraut et al., 2002).

Interestingly, there has been relatively little research into how computer-mediated communication is used within existing romantic relationships and how these particular relationships may be impacted. With online communication, there are differences when compared to offline communications, such as increased opportunities to talk with others, absence of verbal (i.e., intonation) and nonverbal (i.e., body language) cues that assist with communication of a message, and absence of witnessing the recipient's response to one's message. Essentially, in some cases, recipients of online communication may have to put greater effort into interpreting the message, risk interpreting it in the wrong way, or put their own spin on it to some degree.

The impact of computer-mediated communication on romantic relationships also should be

examined with respect to different forms of technology, all of which have their own unique features. For example, although email provides users with the opportunity to formulate and compose their message, instant messaging allows individuals to communicate with one another in real-time (Finn, 2004). On the other hand, social networking sites, such as Facebook, are unique in the sense that users have the ability to engage in both real-time and delayed communication and to make their messages private or public to other members of the website (Boyd & Ellison, 2007). In many ways, the very nature of Facebook is for its members to access other members' information (i.e., addition of new contacts, messages posted from other members). However, without a true understanding of the context of this information, it seems plausible that there is potential for romantic partners to misinterpret or become jealous of this content when the information is public and open to scrutiny. In addition, because connections can be made so easily through Facebook, members may be more likely to reconnect with past romantic partners, which could also create the potential for jealously (Muise et al., 2009). Such information about one's partner would not be so readily available through offline methods of communication, and in most cases, would have to be directly communicated to the individual. This is significant considering that much of the information communicated using social networking sites is public due to its very nature.

Muise and colleagues (2009) explored whether Facebook contributed to feelings of jealousy in a sample of 308 undergraduate students (231 women, 77 men) after controlling for personal factors (i.e., trait jealousy, trust, and self-esteem) and relationship factors (i.e., relationship uncertainty and commitment). Over half of the participants were in an exclusive relationship; however, the majority (74.6%) reported being at least somewhat likely to add previous romantic partners to their contact lists and slightly more (78.9%) reported that their partners had added

previous romantic partners to their contact lists. Time spent using Facebook significantly predicted jealousy over a partner's Facebook usage. Interestingly, women were found to spend significantly more time on Facebook than men, and have higher levels of Facebook jealousy. As such, although computer-mediated communication has potential to increase social connectivity (Valkenburg & Peter, 2007), there is also potential for romantic relationships to suffer as a result. The managing director of Divorce-Online, which is a website offering resources and information to individuals seeking divorces, reported that legal experts in the United Kingdom reviewed paperwork from 5,000 divorces and learned that 20% of these divorces referred to Facebook as a contributor to their marital difficulties, specifically because of easily accessible communication with previous partners ("Facebook Fuelling Divorce", 2009).

In summary, most older adolescents frequently use different types of computer-mediated communication (i.e., email, instant messaging, social networking sites) and have generally incorporated online communication into their relationships. Furthermore, computer-mediated communication is primarily being used to communicate with pre-existing social groups (Valkenburg & Peter, 2007). There appear to be a number of benefits with respect to social relationships, such as increased intimacy, feeling closer to offline friends (e.g., Valkenburg & Peter, 2007), self-disclosure (e.g., Hu et al., 2004), more opportunities to communicate (e.g., Blais et al., 2008), and greater anonymity, which may lead users to feel less concerned about their intimate disclosures being met with disapproval or judgment (Bargh & McKenna, 2004). On the other hand, computer-mediated communication use may impact romantic relationships due to greater availability of information about a partner's interactions with others as well as increased opportunity to reconnect with previous partners, which creates a potential avenue for jealousy and conflict to occur. Thus, computer-mediated communication may open the door for a

new channel through which partner aggression can be perpetrated (Muise et al., 2009). As such, the present study examined psychological partner aggression occurring across different forms of computer-mediated communication, such as email, instant messaging, and social networking sites.

A Theoretical Review of Intimate Partner Aggression

As noted at the outset, one of the problems that can occur in dating relationships is partner aggression, which can take many different forms. For example, research has focused on physical abuse, which includes physical acts of violence, such as punching, kicking, slapping, strangling, etc. against a partner (e.g., Carlson, McNutt, & Choi, 2002; Cascardi & O'Leary, 1992; Garcia-Linares et al., 2005); sexual abuse, which includes forced sexual acts, physical violence during sexual activity, threats when sexual activity is rejected, involvement of children in forced sexual activity or witnessing sexual activity, and unwanted use of pornography (e.g., Garcia-Linares et al., 2005); psychological abuse, which is often used as an overarching term to describe nonviolent acts of abuse, such as verbal aggression (e.g., insults), control (e.g., controlling financial decisions), pursuit and harassment, verbal threats, and economic or emotional blackmail (e.g., Garcia-Linares et al., 2005; Kasian & Painter, 1992; Marshall, 1996); and emotional abuse, which refers to patterns of degradation through which one partner uses tactics to gain or maintain control over another (e.g., Lammers, Ritchie, & Robertson, 2005; Tolman, 1989). More recently, psychological cyber partner aggression (PA) has been identified as an additional form of partner aggression (e.g., Piitz & Fritz, 2010). This is the type of partner aggression on which the present study was focused. In this document, the terms *psychological cyber PA* and *online partner aggression* are used to refer to this form of partner aggression. Thus far, there has been little research in this specific area and the vast majority of online

aggression research has not looked at partner aggression specifically (Melander, 2010). As a result, there is no existing theory that lends itself to the development and occurrence of psychological cyber PA. Therefore, the theoretical models of offline partner aggression were reviewed to provide a basis for this study.

Although there are different perspectives that are strongly-held and supported by research, there appears to be no consistent theoretical framework for partner aggression. Further, the literature reveals a major debate regarding many factors related to partner aggression, with two groups of researchers reporting seemingly opposite findings (Johnson, 2009). The issue first emerged following research put forth by family violence researchers, Straus, Gelles, and Steinmetz (1980). In the late 1970s, they conducted the National Family Violence Survey (NFVS), which was the first family violence survey that collected information from a nationally representative sample of American families. Prior to this, clinical populations had only been considered in research (Johnson, 2009). The survey included responses from 2,146 individual family members. In order to meet eligibility to participate in the study, families had to be comprised of presently cohabiting or married other-sex partners with at least one child living at home (Gelles & Straus, 1988). A second National Family Violence Survey was conducted in 1985, which included a nationally representative sample of 6,002 individual family members who, again, were either married or cohabiting; however, this time they included individuals who had been divorced or separated within the previous two years and single parents of at least one child living at home (Stets & Straus, 1990).

In both cases, the researchers used the Conflict Tactic Scales (CTS; Straus, 1979), which is a self-report measure used to obtain information about violence that occurs within families. More specifically, the CTS examines different individual behaviours that might occur in response to

conflict with another family member and reflects three theoretically-based tactics (i.e., reasoning, verbal aggression, and violence). For each action, respondents are asked for the frequency of the occurrence in the past year, with response choices ranging from *never* to *more than 20 times*. The three tactics were later supported by factor analysis (Straus, 1979). Because versions of this measure were created for both husbands and wives, one of its benefits is that researchers are able to obtain information from perpetrators and victims across both genders. According to Gelles and Straus (2006), the two versions of the CTS have become the most widely used instruments in family violence research.

Straus and colleagues (1980) reported their findings from the NFVS studies in a book entitled, *Behind Closed Doors: Violence in the American Family*. The results suggested that intimate partner violence was initiated at similar levels by both genders at a time when the widely-held belief was that men were the only perpetrators. The only difference, according to them, was that male violence resulted in a higher level of physical injury. The researchers later indicated that they were just as surprised at the findings as the public, and theoretically, intended to demonstrate that family violence is related to problems within the family and society at large (e.g., social norms where violence is tolerated) as opposed to psychopathology existing within the individual (Gelles & Straus, 2006). One of their core assumptions was that when individuals are violent within one family role (e.g., husband/wife), they are also likely to be violent in another family role (e.g., father/mother). Thus, these researchers promoted conducting research on child and spousal abuse together as opposed to considering them separately, which had previously been the case (Gelles & Straus, 2006). However, not surprisingly, the findings were met with a great deal of backlash and a number of concerns (e.g., reduced focus on, and in turn, funding for women's shelters and programs to support survivors of partner abuse). The

argument became especially heated following an article by Steinmetz (1977-78) in which she used the term "husband-battering" and argued that this problem was as severe as violence against female partners (as cited in Johnson, 1999).

The other side of the debate came from feminist researchers who, for years, had heard testimonies from women in shelters who had experienced extreme abuse at the hands of their male partners. In fact, much of the feminist research on partner violence came from shelter populations (Johnson, 1995). Feminist researchers disputed the idea that violence against husbands was as prevalent as violence against wives and criticized the CTS (Straus, 1979), arguing that merely examining acts of aggression without considering additional factors, such as context, individual interpretation, and fear ignores many important features of partner violence and exaggerates gender symmetry (Dobash, Dobash, Wilson, & Daly, 1992). For example, violence occurring in self-defense could possibly be lumped into the category of violence towards husbands, which Dobash and Dobash (1979) argued is likely the case when women are violent towards their male partners. Feminist researchers also expressed grave concern that some researchers (i.e., Steinmetz, 1977-78; Straus et al., 1980) suggested violence against husbands was comparable to violence against wives in terms of the experience and its severity (Dobash et al., 1992; Kurz, 1989).

In a review article examining both family violence and feminist researchers' respective bodies of literature, Kurz (1989) concluded that the feminist perspective provided a more accurate portrayal of how partner abuse truly looks. In this review article, the argument was supported by research such as Dobash and Dobash (1979) who found that women accounted for the large majority (94%) of victims listed in police records in Scotland. Pagelow (1992) also reported that violence against women is a common occurrence and that victims are mostly

women and offenders are mostly men. Kurz acknowledged additional societal factors that

support violence against female partners and create barriers to leaving these relationships, such

as historical acceptance of violence against wives and consideration of wives as property, and

traditional spousal roles where wives are socialized and expected to be dependent on their

husbands, particularly with respect to finances.

Kurz (1989) supported the belief that male dominance is a central feature in violence against

women that absolutely needs to be considered. Finally, Kurz echoed feminist researchers'

concerns that the family violence perspective may result in a reduction of funding and support

for women's issues. Further, failing to acknowledge gender inequality may contribute to society

denying the severity of male violence against women. Pagelow's (1992) review of literature on

violence against women and examination of related myths revealed that a number of societal

institutions, such as the medical field, law enforcement, and legal system have negative

responses to battered women. This report is alarming considering that women often need to rely

on these institutions for their protection and safety. Another risk of taking attention away from

gender inequality and relationship dynamics (i.e., power and control) is that it may result in

greater focus on the individual, which creates the risk for victim blaming (Kurz, 1989).

Researchers adhering to each of these different theoretical frameworks continued to produce

research that consistently supported their findings and yielded seemingly opposite findings from

the other groups. However, Johnson (1995) proposed what he considered a resolution to the

debate by determining that both family violence researchers and feminist researchers were

correct in their positions and that the flaw did not lie in either group's methodology or findings.

Instead, he argued that each group of researchers was tapping into a completely different type of

violence as a result of the populations they were accessing, which were generally

nonoverlapping. While researchers from both perspectives were looking to identify flaws in the other group's research as a way of providing explanations for the difference in their findings, Johnson (1995) developed a theoretical framework that incorporated both perspectives by suggesting that there are different types of partner violence that are distinct, nonoverlapping, and qualitatively different with their own related factors, such as causes, developmental trajectories, and outcomes (Johnson, 2009). This is the model that forms the basis for the present study. Johnson (1995, 2009) argued that the problem leading to the distinction in the research, and ultimately major errors, resulted from partner aggression being addressed as a unitary phenomenon.

Johnson and Ferraro (2000) later conducted research to test his theory, and found support for it. Through ongoing research pioneered by Johnson, major types of intimate partner violence were identified, which were described by Kelly and Johnson (2008), including: *intimate terrorism*, also referred to as *patriarchal terrorism* (Johnson, 1995) and *coercive controlling violence* (Kelly & Johnson, 2008); *situational couple violence*, also referred to as *common couple violence* (Johnson, 1995); *violent resistance*; and *separation-instigated violence*. Johnson (2006) also described a fifth type, *mutual violent control*, in which both partners use violence and control; however, this was not included with the major types because little is known about its related factors. As a result, it will not be discussed here. These four types of partner violence are differentiated in terms of relationship power and control.

Intimate terrorism has received much of its focus from feminist research, is often seen in women's shelters, and has a great deal to do with control. This type of partner violence is thought to result from patriarchal traditions within our society that suggest men have the right to control their female partners (Johnson, 1995). The aggressor is motivated by an intense desire to

control or at least dominate the relationship through a number of tactics, one of which is violence. Other control tactics may include economic subordination, threats, and isolation (Johnson, 2009; Johnson & Ferraro, 2000). Johnson and Ferraro point out the importance of recognizing that intimate terrorism is not simply "severe violence", but that the distinguishing aspect is the motive to maintain long-term control over a partner that results in a pattern of violent and nonviolent behaviours. The *Power and Control Wheel* was developed from themes identified in the testimonies of women living in shelters (Johnson, 2009). It has been used frequently to provide a visual representation of intimate partner violence and emphasizes the general pattern of coercive control that lies at the centre of intimate terrorism. In this representation, there are eight nonviolent control tactics that may be used in addition to the violent acts that occur in intimate terrorism. These include: intimidation; emotional abuse; isolation; minimization, denial, and blaming; using children; using male privilege; economic abuse; and coercion and threats (Pence & Paymar, 1993). The combination of any or all of these tactics with violence is terrorizing because with every control tactic there is the threat of violence. Information regarding the *pattern* of control, which is the underlying component in this type of partner violence, would be entirely missed by simply examining the violent acts in isolation (Johnson, 2009).

The distinctions among types of partner violence suggest that the family violence researchers were tapping into situational couple violence. As noted above, this was originally referred to as common couple violence (Johnson, 1995); however, this was later altered out of concern that the term might minimize its severity. In situational couple violence, the violence occurs within a particular tense and emotional encounter between partners that escalates to the point of violence by one or both partners (Johnson, 1995). According to Johnson (2009), this is

the most common type of intimate partner violence. Whereas intimate terrorism reflects the use of violence for the purpose of asserting control over one's partner, situational couple violence does not reflect a motivation to obtain general control over the relationship, although the individual may use violence to gain control in the specific argument (Johnson, 1995). In fact, the violent acts themselves in isolation may, in some cases, resemble the violent acts that one might observe in intimate terrorism (Johnson, 2009). Often times in situational couple violence, these acts are interpreted as minor and occur infrequently, although in some cases they may become more regular occurrences where one or both partners resort to some form of violence in response to conflict. Again, the distinguishing factor is that these violent acts occur in response to the situational conflict, as opposed to a need to control one's partner in a number of ways (Johnson, 2009). None of these studies appears to have obtained information about the severity of these violent acts from the recipients themselves and instead, labelled violence as "minor" or "severe" based on factors, such as potential for physical injury (e.g., Straus, 1979). From a feminist theoretical perspective, it seems that obtaining information directly from individuals regarding their own experience and interpretation of the violence is important.

Violent resistance describes what many refer to as self-defense, in which case individuals use violence against their violent and controlling partners as a method of protection. In these cases, individuals are reacting against their partner, who demonstrates a pattern of coercive control, in an attempt to stand up for themselves or stop the violence (Kelly & Johnson, 2008). The term violent resistance was selected instead of self-defense due to its legal connotations (Johnson, 2005).

Finally, separation-instigated violence refers to violence that may occur in reaction to the dissolution of a relationship. Specifically, this describes violence that is not ongoing beyond the

separation. In this specific scenario, there is the possibility for intimate terrorism to occur as the previous partner may feel threatened and attempt to gain control over his or her partner (Kelly & Johnson, 2008).

Frequency and Perceived Severity of Partner Aggression

Previous research has examined a number of factors related to different forms of aggression. For example, Waldrop and Resick (2004) completed a review of the offline domestic violence literature and reported on the coping behaviours and related factors among women who had experienced partner violence. They reported that frequency and severity of the aggression are important features that impact coping behaviours. As such, both of these factors were measured with respect to psychological cyber PA in the present study.

Frequency. With respect to frequency of offline aggression and coping behaviours, Spitzberg, Nicastro, and Cousins (1998) found that a greater frequency of victimization is related to more efforts to cope with unwanted pursuit behaviours, although the aggression in this case was not specific to partners. Other research that examined women's use of cognitive strategies (e.g., positive appraisal of the relationship) to cope with physical and emotional partner abuse revealed that neither frequency nor severity of physical abuse was related to their ability to focus on the positive qualities of their relationship, although many participants had frequently experienced severe physical abuse (Herbert, Silver, & Ellard, 1991). On the other hand, women who experienced verbal abuse more frequently seemed less able to appraise their relationships positively. Waldrop and Resick (2004) suggest that the differences with respect to frequency of abuse and coping may reflect different contexts within which the abuse occurred (e.g., whether the individual remained in the relationship).

Previous research also has suggested that frequency of aggression is related to individuals'

outcomes. For example, greater frequency and regularity of bullying victimization have been found to increase one's risk of experiencing related problems (Craig & Pepler, 2003). Frequency of victimization may further depend on the type of abuse being considered. For example, with respect to the different types of partner aggression, Johnson and Ferraro (2000) found that physical violence occurs more frequently in intimate terrorism than situational couple violence. Further, research comparing individuals living in shelters with those who were not, indicated that offline abuse was experienced more frequently by women residing in shelters (Gondolf & Fisher, 1988).

Although offline aggression research has identified frequency as an important variable to consider, few studies have focused specifically on frequency of psychological cyber PA. Findings from one study that did consider frequency of online partner aggression indicated that greater frequency is related to higher levels of internalizing problems, externalizing problems, and total problems (Piitz & Fritz, 2010). An interesting consideration specifically related to aggression occurring through a technological format is that frequency may be more difficult to quantify than in traditional circumstances because the context is different from offline forms of aggression (David-Ferdon & Feldman Hertz, 2007). For example, if an individual receives an aggressive email that he or she repeatedly reads or that others see (e.g., as posted on a social networking site), how many episodes of aggression do these experiences represent (David-Ferdon & Feldman Hertz, 2007)?

Perceptions of severity. There does not appear to be any literature specifically examining the perceived severity of psychological cyber PA given that this is a new area of research. Literature in other areas of aggression suggests that severity is an important factor with respect to coping responses (e.g., Waldrop & Resick, 2004). However, most studies have failed to consider

severity from the participants' perspective; instead severity has been defined based on such factors as potential for physical injury (e.g., Straus, 1979). According to Folkman and Lazarus (1988b), individuals' appraisal of the significance of an event is important in terms of their emotional and coping responses. The more significant an individual perceives an event to be in terms of his or her own well-being, the greater the emotional response will be. Thus, understanding how partner aggression is appraised with respect to severity should be beneficial.

One study that did examine perceived severity examined participants' views of the severity of various offline unwanted pursuit behaviours, which are behaviours that invade another person's sense of physical or symbolic privacy when the individual desires or expects a romantic relationship (Cupach & Spitzberg, 2000). Participants were asked to complete a survey that included 63 items designed to measure unwanted pursuit behaviours. For each item, respondents first indicated whether they had experienced the behaviour. Then, perceived severity was measured by asking participants to report the extent to which they felt, or would feel, annoyed, upset, threatened, and violated for each item on an 11-point Likert scale. Results indicated that severity of the pursuit behaviours existed on a continuum, and that although not all behaviours were seen as threatening, all were considered annoying. For example, violation (e.g., sending offensive photographs, recording conversations) was considered more threatening than pursuit (e.g., showing up before or after work, leaving notes) and hyperintimacy (e.g., inappropriate touching, lying about the relationship).

Gender differences also were reported with female participants perceiving all categories of pursuit behaviours as more upsetting, threatening, and privacy-violating than male participants, although both genders were equally likely to perceive pursuit as annoying. These gender differences highlight the importance of considering individuals' perceptions of the experiences.

Although men and women may be exposed to the same behaviours, they may have different reactions to them based on a number of factors (e.g., patriarchal dynamic in the relationship). Thus, as Johnson (2010) argued, we should not assume the experience is the same for men and women by focusing only on the violent act itself.

Interestingly, results indicated that, for the category of violation, participants who had not experienced such unwanted pursuit perceived the behaviours as more upsetting than individuals who had (Cupach & Spitzberg, 2000). In their study on cyberstalking, Alexy and colleagues (2005) offered the possible explanation that cyberstalking victims may become desensitized to these behaviours, such that they do not recognize them as threatening, and do not engage in coping responses as a result. In Alexy and colleagues' examination of cyberstalking among 756 (414 male; 342 female) American university students, participants were presented with anonymous questionnaires about cyberstalking and a set of scenarios about interactions between two people. The majority of students (approximately 70%) did not identify a scenario representing an actual convicted cyberstalking case as cyberstalking although 70% labeled the scenario as physically threatening. In addition, having experienced cyberstalking personally was actually related to less intense feelings about cyberstalking, and these individuals were less likely to report online victimization than individuals who experienced offline stalking. Results further indicated that riskier stalking acts (e.g., longer stalking period, being threatened, being stalked by a family member) and telling a family member or intimate partner were related to fewer behavioural reactions. Individuals who were stalked for a longer period of time were more likely to label the behaviours as *harassment* as opposed to *stalking*, possibly for the purpose of self-protection or because they may have become desensitized. Again, obtaining information about participants' own perceptions of severity would provide useful insight into this issue.

A similar finding was observed in Spitzberg and Hoobler's (2002) research exploring undergraduate students' coping behaviours in response to being obsessively pursued through cyberstalking. As reported previously, their findings suggested that this type of online aggression was being experienced quite frequently, with approximately 59% of the sample reporting previous experience with some type of unwanted pursuit and close to 20% reporting that the aggressive behaviours occurred in a way that was personally threatening. However, although participants were likely to engage in a number of coping behaviours (e.g., confronting or negotiating with the pursuer) in response to more seemingly benign types of harassment (e.g., excessive communication regarding affections), few coping responses were elicited when aggressive acts were more severe (e.g., making threats). As the authors suggest, it is possible that the victims become unnerved and feel unable to take action, expecting that unwanted pursuit may occur regardless of their actions (Spitzberg & Hoobler, 2002). The authors also noted that individuals may hesitate to access some of the available resources (i.e., online websites geared towards assisting victims of cyberstalking and unwanted cyber-pursuit) because they are delivered via the computer, which is the medium through which these unwanted experiences occurred in the first place. However, because information was not provided regarding how severe participants themselves perceived specific cyberstalking acts to be, it is unclear whether greater perceived severity is linked to coping responses. For example, it is possible that the online harassment that the authors interpreted as *benign* (e.g., redundant messages of unwanted affection) is actually quite distressing for individuals, possibly because they know the individual and have more regular contact with him or her in everyday life. Individuals may also have different interpretations of the severity of a particular behaviour, suggesting that other factors may be more important than the act itself. Obtaining information about how aggressive acts are

perceived directly from the source rather than relying on researchers' expectations of how the experience is viewed seems consistent with Johnson's (1995) theoretical approach to the study of partner aggression. Furthermore, this information may enhance our understanding of different types of partner aggression rather than viewing them all as the same construct.

Other research indicates that individuals have different perceptions of online versus offline aggression such that they may be less likely to recognize severity of online aggression, possibly because of the lack of physical proximity (e.g., Lee, 1998). Failing to recognize the potential impact (i.e., depression, anxiety, reduced adaptive functioning) of online aggression has a number of implications. First, as noted previously, one of the first steps in the coping process is to recognize a situation as personally significant prior to taking action (Folkman & Lazarus, 1988b). Thus, individuals may not initially take action and address the aggression early on even though they are likely still impacted by the aggressive acts. Further, this suggests that the problem must become blatantly severe prior to the individual taking action, at which point the relationship and the individual will have likely been affected and the problem will have become bigger. Waldrop and Resick (2004) argue that changes in the severity of the aggression can impact coping behaviours and result in an increase in more active forms of behavioural coping. However, they note that this is only the case for some active coping strategies (e.g., leaving the relationship) whereas others, such as turning to a friend or family member, are less likely to be viewed as helpful. If individuals experiencing psychological cyber PA are able to get to a place where they attempt to actively cope with the problem (i.e., through seeking help), but potential help sources do not recognize cyber aggression as truly concerning, those to whom they turn may have a negative or dismissive response to the coping behaviours. This provides a possible explanation to Alexy and colleagues' (2005) finding that disclosing this problem to a loved one

(i.e., family member or intimate partner) is related to fewer behavioural reactions. To complicate matters further, when aggressive behaviour occurs within the context of a romantic relationship, others have more difficulty recognizing the problem as severe as they would if a stranger perpetrated the aggression (Lee, 1998). Thus, the severity of the problem may be inappropriately minimized.

Overall, these findings lend support to the importance of obtaining information regarding the frequency of aggression and perceptions of severity. In many cases, severity is based on the potential for injury; however, the psychological impact of verbal or emotional abuse may be greater and should not be discounted (Herbert et al., 1991). Thus, obtaining information about perceptions of severity and related outcomes directly from individuals who have experienced any form of partner aggression is important. The present study sought to obtain information about participants' perceptions of severity with respect to each aggressive act. In addition, I examined whether there were differences in perceptions of severity based on personal experience with psychological cyber PA.

The Influence of Gender

As noted previously, the influence of gender with respect to partner aggression has been largely discussed with inconsistent findings. Family violence researchers have argued that partner aggression rates are gender-balanced (e.g., Straus et al., 1980) and feminist researchers have argued that the large majority of perpetrators of intimate partner aggression are men (e.g., Dobash et al., 1992). However, Johnson's (1995) theoretical framework that differentiates among types of partner aggression based on issues like relationship dynamics and control suggests that gender rates differ depending on the type of aggression. Johnson (1995) suggests that intimate terrorism is perpetuated almost exclusively by men, which is logical considering

that patriarchal traditions and stereotypical gender roles influence the development and maintenance of this type of aggression. On the other hand, Johnson (1995) suggests that situational couple violence is nongendered, and is experienced at similar rates by men and women. In this case, the violence usually results from a scenario that has gotten out of hand, as opposed to a tactic used to maintain control over one's partner.

With respect to online aggression, although there is little research specifically in this area, some online aggression studies suggest that men and women are being victimized at similar rates, with men being victimized online more frequently in some cases. For example, Cupach and Spitzberg (2000) and Finn (2004) found similar gender rates for experiencing obsessive relational intrusion (i.e., the "unwanted pursuit of intimacy through the repeated invasion of a person's sense of physical or symbolic privacy"; Spitzberg & Hoobler, 2002, p. 73) and email harassment. By contrast, Alexy and colleagues (2005) found that men were significantly more likely than women to have been stalked online, although women were more likely to be stalked offline. Interestingly, both Cupach and Spitzberg's and Alexy and colleagues' studies indicated that female participants have stronger reactions to online aggression and interpret the experience as more distressing than male participants. Reactions to the experience were not examined in Finn's study.

Gender differences in online bullying rates have also been examined, with mixed findings. Kowalski and Limber (2007) conducted a study to explore cyber bullying among 3,767 middle-school students in the United States. Their findings indicated that girls engaged in online bullying more frequently than boys. The authors concluded that this finding reflected girls' tendency to use more indirect forms of aggression compared to boys. On the other hand, Aricak and colleagues' (2008) study with teenagers in Istanbul suggested that boys were more likely

than girls to both bully online and be victimized online. With respect to children's experiences with offline bullying, boys and girls have been found to report similar rates of victimization although the form of aggression (i.e., direct versus indirect forms) may differ (Craig & Pepler, 2003).

Although the literature presents some mixed findings, it remains clear that gender is important to consider with respect to different types of aggression. In many ways (i.e., cases of intimate terrorism), factors related to gender may enhance understanding of specific types of violence, particularly with respect to the development of and dynamics surrounding the aggression. Further, because research in the area of online partner aggression is so sparse, examining gender differences may provide greater understanding of the types of partner aggression that are occurring through computer-mediated communication and how both male and female individuals are coping with the experience. The present study's examination of perceptions of severity will provide more detailed information about the specific experiences that male and female individuals have when they are experiencing partner aggression and whether there are differences in their interpretations of the event and its impact. Further, because of additional factors within which the violence is embedded, such as the traditional societal expectation for women to be subordinate, greater likelihood of costs (e.g., financial) for women, and differences in physical size, more information is needed to understand whether these experiences are similar across genders. On the other hand, understanding males' unique experiences as victims of partner aggression is also important considering they may also face challenges (e.g., stigma, lack of understanding, embarrassment) regardless of the violent act or level of physical injury.

Partner Aggression and Same-Sex Relationships

Some of the aggression literature has focused on aggression occurring in same-sex relationships. However, although there appear to be some similarities (e.g., use of power and control as part of the abuse cycle) to aggression occurring in heterosexual relationships, there are also important differences (Johnson & Ferraro, 2000). For example, Renzetti (1992) conducted research on aggression occurring in lesbian relationships. Results indicated that a major threat used as a control tactic was "outing" women to family and friends, which is a unique experience for same-sex couples. This is especially noteworthy considering that most gay, lesbian, and bisexual individuals do not disclose their sexual orientation to family members or friends during adolescence. In addition, only three to four percent identify their sexual orientation as nonheterosexual during this period (Garofalo, Wolf, Wissow, Woods, & Goodman, 1999).

More recent research suggests that gay, lesbian, and bisexual individuals experience online aggression. For example, Finn (2004) found that individuals who identified as gay, lesbian, or bisexual were more likely to experience online harassment than heterosexual individuals. Although these findings highlight a significant area of research that requires further exploration to ensure that there are services specifically designed for this population, there is a major risk in assuming that all aggression within relationships constitutes the same phenomenon and that partner aggression is consistent in heterosexual and same-sex relationships. As such, the present study focused on partner aggression occurring in heterosexual relationships only.

Partner Aggression and its Related Outcomes

As noted previously, a number of negative consequences in different areas of functioning (e.g., psychological, adaptive, physical) have been found to result from both online harassment

and offline intimate partner violence. However, to date, there has been no research examining the consequences of partner aggression occurring over the Internet, which reflects a gap in the literature. Recognizing the increased use of technology for communication purposes, which in some cases includes aggression, suggests that this is another possible mode through which partner aggression can occur. Gaining a better understanding of how individuals are affected by the experience of psychological cyber PA can bring more awareness to this form of partner abuse, which may not have gained recognition as such to this point. In turn, understanding the potential impact of psychological cyber PA can also inform our intervention decisions.

Psychological consequences. Several studies have identified psychological symptoms (i.e., anxiety, depression, fear, low self-esteem, posttraumatic stress disorder) resulting from different types of online and offline aggression (e.g., Alexy et al., 2005; Arias & Pape, 1999; Carlson et al., 2002; Cascardi & O'Leary, 1992; Follingstad, Wright, Lloyd, & Sebastian, 1991; Lammers et al., 2005; Spitzberg & Hoobler, 2002). For example, findings from the National Violence Against Women Survey, that included information from 4,967 married women over the age of 18 years, revealed that women who experienced partner aggression were more likely to demonstrate internalizing problems, such as symptoms of depression and posttraumatic stress disorder (PTSD), than women who did not (Johnson & Leone, 2005). Similarly, in their study conducted with 68 predominately Caucasian American (48%) women currently living in shelters, Arias and Pape (1999) found that higher levels of psychological and physical partner aggression were significantly related to greater PTSD symptomatology. One woman who participated in a qualitative study conducted by Riger and colleagues (2002) described constantly feeling fearful, nervous, and anxious in response to the abuse.

Lammers and colleagues (2005) examined seven women's experiences with emotional abuse

by their male intimate partners using qualitative methods. The women in their study were greatly impacted by the abuse in many ways and reported symptoms of depression, such as feelings of sadness, guilt, shame, inadequacy, hopelessness, and despair, as well as fear, confusion (e.g., when their partners showed both caring and abusive behaviours), and loneliness, which was experienced by all of the participants. Often times, the women's feelings of guilt resulted from continuous criticism by their partners about not living up to their gender role expectations. The majority (approximately 86%) of participants also experienced decreases in their self-esteem, which in some cases, were severe. The authors noted that the youngest participants' self-esteem was more reduced than the other women's, such that younger participants reported not feeling able to dissolve the relationship because they believed they would not be loved by another partner. All of the women also reported feeling angry about how their partners treated them at some point in the relationship. The degree to which they expressed their anger depended on a number of factors, such as their awareness of the abuse, their level of emotional pain, and concerns about their personal safety and about the consequences that may result from expressing their anger.

Follingstad and colleagues (1991) reported similar psychological effects resulting from physical violence occurring within the context of dating relationships. Participants included 495 college students (207 men, 288 women) with a mean age of 20 years, and information was collected from both victims and perpetrators of violence. Interestingly, results indicated that women were more likely to report being victimized (approximately 71% of the victims were women) and perpetrating partner aggression (of the 17% of individuals who admitted to perpetrating violence, approximately 71% were women) than men. However, the type of partner aggression was not specified, thus, some of these instances may reflect self-defense behaviours.

Women experienced significantly greater negative effects from the abuse than men. Similar to effects of emotional partner abuse, physical partner abuse resulted in women experiencing psychological symptoms such as fear, anxiety, anger, a need for self-protection, and emotional pain over the idea that someone could do this to them. Women experienced all effects to a significantly greater degree than males. Overall, perpetrators' responses indicated that they most commonly expected their victims to experience anger, emotional hurt, sadness and depression, guilt, and fear of no longer being loved. This suggests that perpetrators have some insight into the potential impact of their abuse. Again, these results differed by gender with male perpetrators most frequently anticipating effects such as fear, anxiety, sadness, depression, and a need for self-protection whereas female perpetrators most frequently anticipated guilt and feeling that the aggression was justified. However, because this study did not clarify how the abuse was being used and the type of partner violence that was occurring, it is possible that, in some cases, perpetration represented self-defense. This may explain the high number of female perpetrators and their beliefs regarding the effects of their aggression towards their partner.

The association between protective factors and mental health was considered in Carlson and colleagues' (2002) cross-sectional study in which survey data were collected from 557 women between the ages of 18 and 44 years. Approximately 71% of the sample reported experiencing physical and/or emotional abuse by their intimate partners and both depression and anxiety were associated with abuse (childhood, adult abuse, and recent abuse). Women who experienced emotional symptoms, such as anxiety and depression, were less likely to report experiencing protective factors, such as support from partners and others, self-esteem, positive physical health, higher education, financial stability, and employment.

As noted previously, different types of online aggression are related to psychological

consequences. With respect to cyberstalking, according to Alexy and colleagues (2005) the fear that victims experience as a result of the stalking resembles that of offline stalking. Similarly, Spitzberg and Hoobler (2002) found that individuals who were stalked over the Internet frequently experienced heightened fear. There are also negative psychological consequences associated with cyberbullying, such as symptoms of depression (Ybarra, 2004). Another study examining adolescents' experiences with online harassment (e.g., threatening or offensive messages communicated online or posted for others to observe) suggested that more than one third of participants who were harassed over the Internet had one or more symptoms of stress (e.g., avoiding Internet use, feeling jumpy), particularly when the harassment incidents were perceived as more distressing, in which case, 64% of the victims reported experiencing at least one symptom of stress (Wolak, Mitchell, & Finkelhor, 2007). The findings also indicated that the psychological consequences were greater when the harasser was known to the victim, such as a friend or peer at school.

Although the above studies represent only a few examples and none specifically address online partner aggression, taken together, the results indicate that there are psychological consequences as a result of aggression occurring over forms of media that appear to be more significant when the aggressor is known to the victim. As such, examining consequences related to online partner aggression appears warranted and necessary. One aspect of online partner aggression that is important to consider is how the experience differs depending on which particular form of media is used. For example, partner aggression perpetrated over personal forms of media (e.g., email, instant messaging) compared to partner aggression communicated publicly on a social networking site where others have access to both witness and comment on the aggressive messages, may result in differing levels of distress-related outcome (David-

Ferdon & Feldman Hertz, 2007).

Occupational consequences. In addition to the psychological consequences victims of intimate partner aggression frequently experience, other areas of their adaptive functioning are affected at a variety of levels. For example, first-order effects of partner aggression, such as depression, low self-esteem, and physical injuries, can impact individuals' abilities to function at work as well as their relationships with friends and family members (Riger et al., 2002). Individuals who are victimized through intimate partner violence are at increased risk for reduced income, divorce, unemployment, fewer hours in the workplace, difficulty maintaining productivity at the workplace or school, decreased ability to attend work or school, and difficulty obtaining and maintaining stable housing and obtaining their personal possessions once they have left the home (Browne, Salomon, & Bassuk, 1999; Byrne, Resnick, Kilpatrick, Best, & Saunders, 1999; Riger et al., 2002).

More specifically, Browne and colleagues' (1999) investigation of the impact of partner aggression on time spent in the workplace indicated that, although there was no difference in employment status for abused versus nonabused women, individuals who had been abused by their partners during the previous year were less than 50% as likely to work 30 hours per week and less than 20% as likely to work 40 hours per week than those who had not been abused. Because of the many different consequences resulting from partner aggression, individuals often have a great deal of difficulty attending school or work and their productivity in these settings may be affected. For example, women may miss work or school as a result of painful and/or visible physical injuries and psychological consequences, or simply give up efforts to attend because the aggression is so interfering due to partners refusing to provide transportation, destroying important materials needed for work and school, turning off alarm clocks, refusing to

provide promised child-care, and storming the work site (Brandwein, 1999; Lloyd, 1997; Riger et al., 2002). Having negative perceptions of physical health and symptoms of physical health problems can also contribute to difficulties at work or school, such as decreased productivity and increased absences from work or school (Straight, Harper, & Arias, 2003).

On the other hand, in consideration of protective factors for individuals who are victimized by partner aggression, it is also interesting to note that a lack of economic difficulty has been found to act as an important buffer for the effects of emotional partner abuse on women (Carlson et al., 2002). Further, Riger and colleagues (2002) reported that obtaining housing and work is related to increases in self-esteem for women who have been abused by their partners. Women often take actions to protect their financial assets as financial independence plays an important role in their decisions to leave the relationship (Campbell, Rose, Kub, & Nedd, 1998). Thus, although individuals can be impacted in the workplace as a result of partner aggression, work and economical factors can also act as protective factors. Understanding these factors has important implications for treatment.

Substance use. Individuals who experience intimate partner aggression are more likely to engage in drug and alcohol use. For example, findings from Browne and colleagues (1999) indicated that individuals with a recent (i.e., previous 12 months) history of violence were more likely to use drugs and alcohol and report problems with these substances. More specifically, individuals who have experienced intimate partner aggression are at a greater likelihood to more frequently use alcohol, smoke cigarettes, take psychotropic medications, and use illegal drugs (e.g., Clark & Foy, 2000; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Marshall, 1996; Straight et al., 2003). According to Straight and colleagues, substances may be used as a way of coping with the distress and avoiding the painful thoughts associated with psychological and

physical aggression. This was expressed by a participant in Riger and colleagues' (2002) study in which they conducted life narrative interviews with 57 women who had been victimized by physical partner aggression, as she described using alcohol to numb her emotions and "avoid trouble" (p. 93).

Physical health consequences. Partner aggression has been consistently associated with a number of physical health problems, such as physical injuries resulting directly from violence, more frequent hospitalizations/physician visits, more injuries and accidents requiring medical attention, increased days in bed due to illness, chronic pain, psychosomatic symptoms, and gastrointestinal problems (e.g., Browne et al., 1999; Campbell, 2002; Follingstad, Brennan, Hause, Polek, & Rutledge, 1991; Riger et al., 2002; Stets & Straus, 1990). However, physical health consequences do not only occur when physical violence is involved in the aggression as a number of similar physical health problems (i.e., more frequent physician visits, physical limitations, and negative health perceptions) have been found to relate to psychological intimate partner aggression as well (e.g., Marshall, 1996; Straight et al., 1999). Taft, Vogt, Mechanic, and Resick (2007) investigated relations between intimate partner aggression and physical health symptoms as well as the mediating role of PTSD on the experience of health difficulties in a sample of 388 primarily African American (65%) women who were seeking help from shelters and community agencies for partner aggression. Participants provided information on their experience of intimate partner aggression, psychological symptoms (i.e., PTSD, anxiety, depression, anger), and physical health symptoms through self-report measures. Taft and colleagues' results indicated that participants experienced elevated levels of physical health symptoms. For example, participants endorsed an average of 41% of the items on the physical health measure. PTSD symptoms were highly correlated with physical health symptoms and

fully mediated the relations between both physical and psychological aggression and physical health symptoms. Thus, the authors concluded that PTSD symptoms contribute significantly to the detrimental physical health symptoms associated with physical and psychological aggression.

Differences by type of aggression. Much of the previous research on the effects of partner aggression has failed to consider the type of aggression aside from differentiating from physical violence. However, the degree to which individuals are impacted by abuse may depend on the type of partner aggression occurring. Psychological control and manipulation have been found to be more distressing than conflict within romantic relationships, particularly when a long-term pattern develops (Cummings et al., 2000). Although Lammers and colleagues (2005) did not use Johnson's (1995) typology and instead used their own labels to differentiate among types of partner aggression (namely, *dominant controllers*, *silent controllers*, and *manipulating controllers*), the type of control and participants' own perceptions of the abuse appeared to be important factors. For example, women reported feeling more afraid of their partners when their partners were dominant and manipulating and, as a result, engaged in more submissive behaviours as a way of protecting themselves. On the other hand, women whose partners used silent controlling behaviours described feeling most affected by the physical and emotional neglect, which was often used as punishment for not conforming to their gender role expectations. However, one possible cautionary note is that all of these types of partner aggression identified by the authors are partly defined by men's use of control. It is possible that all three categories are characteristic of the pattern of control reflected in Johnson's (1995) intimate terrorism, and as such, the authors may be describing different control tactics as opposed to different types of partner aggression.

Johnson and Leone (2005) also reported differences depending on the type of partner

aggression to which women were subjected. For example, violence was used more frequently and more severe injuries were reported when the aggression was intimate terrorism. Also, victims of intimate terrorism were more likely to experience more posttraumatic stress disorder symptoms, use painkillers, end the abusive relationship, and miss time at work than victims of situational couple violence. Differences have also been reported with respect to protective factors. For example, Carlson and colleagues (2002) found that women who experienced the most severe abuse in their study reported fewer protective factors and had less likelihood of benefiting from protective factors than women with lower abuse scores or nonabused women. The authors suggested that in more severe cases of abuse, protective factors may wear down over time for those who are victimized, particularly with respect to good health, self-esteem, and partner support.

Relationship quality. In most romantic relationships, quality and satisfaction improve with age (McNelles & Connolly, 1999). One study that examined adolescent romantic relationships revealed that romantic stress typically decreases and relationships become more intimate over time (Nieder & Sieffge-Krenke, 2001). However, clearly in cases of intimate partner aggression there is potential for the quality, satisfaction, and stability of the romantic relationship to be affected and perceptions of relationship quality may differ based on a number of factors. In many cases, individuals who have been exposed to partner aggression have conflicting emotions with respect to their romantic relationships. For example, in a qualitative study with women who had been victimized by their partners, some expressed feelings of love for their partners as well as uncertainty about the future of the relationship whereas others reported that they physically remained in the relationship, although they felt emotionally removed (Campbell et al., 1998). Thus, learning about individuals' own perceptions of their relationships directly from them

provides an opportunity to better understand the relationship dynamics as opposed to focusing solely on the aggressive act.

In a Spanish cross-sectional study conducted with 182 women who had been exposed to violence by their male partners, Garcia-Linares and colleagues (2005) collected information about the characteristics of participants' intimate relationships. Women who experienced more severe abuse cited "loneliness" and "friendship" as reasons for becoming involved with their partner significantly more often than women who had not experienced abuse. On the other hand, in cases where the abuse was deemed less severe, women were more likely to cite their "love for him" as reasons for entering the relationship. There also were differences between individuals who had and had not experienced abuse with respect to present feelings toward their partner. For example, the vast majority of women who had not been abused cited a number of positive feelings toward their partners, including love (96.2%), affection (92.3%), and respect (86.5%). On the other hand, women who had been abused by their partners reported feelings such as pity (64-65%), indifference (36%), hate (30-32%), and fear (43-48%). These findings suggest that there are possible differences in abused and nonabused women's perceptions of and feelings toward their romantic partners initially.

Women who participated in the qualitative study conducted by Lammers and colleagues (2005) provided details about their experiences of emotional abuse and their dissatisfaction with the relationship. For example, participants expressed feeling lonely, hopeless, and desperate due to a lack of consideration for their personal needs and desires, poor emotional connections with their partners, an inability to change or improve the relationship, and a lack of support from their partners. One woman described having to hide her participation in any activities she enjoyed because she was not allowed such activities unless all housework was completed. Carlson and

colleagues (2002) also reported that women who experienced abuse by their romantic partners felt less supported by these partners than women who had not.

Consistent with the above findings, in more severe cases of abuse, reflective of intimate terrorism, relationship quality appears to suffer a great deal. Johnson (2009) reported that intimate terrorism is likely to strongly impact the relationship in a negative way and is less likely to improve from marital interventions because the experience may pose a greater threat to the victim. Further, relationships with future partners may also be affected. For example, some individuals may expect to experience violence in future relationships whereas others may feel that, as a result of their experience, they are better able to recognize and end violent relationships (Riger et al., 2002).

On the other hand, according to Johnson (2009), low relationship satisfaction or stability does not always result from partner aggression and there is considerable variation in individuals' perceptions of relationship quality that may depend on a number of factors, such as the type of partner aggression and intentions to dissolve the relationship. For example, one study that examined perceptions of relationship quality and differentiated among types of partner aggression found that although half of the women whose abuse was characterized by intimate terrorism were deeply dissatisfied with their romantic relationships, this was the case for only 13% of women experiencing situational couple violence (Johnson, Conklin, & Menon, 2002). However, Johnson (2009) cautions not to assume that situational couple violence is harmless simply because the impact may be less than that of intimate terrorism, but suggests that different interventions are appropriate for different types of aggression.

Relationship quality is also important to explore when considering the number of individuals who remain in the relationship after partner aggression has occurred. For example, in Johnson

and Leone's (2000) study, the majority (74%) of women who had been victimized by their partners remained in the relationship. Interestingly, when the results were broken down by type of partner aggression, individuals were more likely to leave the relationship more than once when they experienced intimate terrorism (29%) than when they experienced situational couple violence (7%). This is consistent with Waldrop and Resick's (2004) finding that abused women are more likely to actively try to leave the abusive relationship when the violence is high in frequency and severity. Garcia-Linares and colleagues (2005) found that returning to partners after temporarily leaving them was more common for individuals who were victimized by physical abuse (21.3%) than those who were victimized by psychological abuse (14.5%), whereas Arias and Pape (1999) reported that higher levels of psychological abuse were associated with a greater resolve to leave the relationship. In the qualitative study conducted by Lammers and colleagues (2005), the youngest female participants felt unable to leave their relationships—even though their relationships were highly detrimental to their mental health, well-being and self- esteem—because they felt like failures as a result of their partners' constant criticism.

Clearly, there are several contributing factors that make it extremely difficult to leave a relationship after partner aggression has occurred even when the individual wishes to do so; however, when considering the different types of partner aggression, the desire to leave is not always so clear. For example, as described above, many women feel afraid to leave the relationship, feel like failures, or fear that they will never be loved again among a multitude of reasons (Johnson & Ferraro, 2000; Lammers et al., 2005). In a review article, Arriaga and Capezza (2005) identified additional factors that make it difficult to end the relationship, such as believing the partner can be helped or that the violence will not occur again, minimizing the

seriousness of the aggression, blaming the violence on themselves or external circumstances beyond the individual's control, and becoming increasingly isolated from support. In addition, an extremely important consideration is that violence often escalates when women leave the relationship (Campbell et al., 1998; Kurz, 1989). However, when considering that a number of women in Johnson and Leone's (2000) study reported positive aspects of their relationship even after incidents of situational couple violence, it seems that there are also cases where the relationship remains intact because the individuals still perceive quality in their relationship. Another possibility is that when individuals are not prepared to dissolve the relationship, they use cognitive strategies to perceive their relationship more positively as a protective coping method. Herbert and colleagues (1991) noted that women were likely to use cognitive strategies that helped them perceive their romantic relationship more positively when they were not yet prepared to leave.

Psychological Cyber Partner Aggression (PA)

Research has demonstrated increased rates of a number of forms of online aggression, such as cyberbullying (e.g., Smith et al., 2008), cyber harassment (e.g., Alexy et al., 2005; Wolak et al., 2007), and cyberstalking (e.g., Spitzberg & Hoobler, 2002); however, little attention has been given to intimate partner aggression occurring online. This is an important area to investigate considering that cyber harassment occurs frequently among university-aged students (e.g., Alexy et al., 2005). Previous studies have described online relational aggression (without referring specifically to intimate partner aggression) as repeated direct or indirect threats using technology that causes recipients to experience reasonable concern for their safety (Alexy et al., 2005; Finn, 2004; Melander, 2010). Southworth, Finn, Dawson, Fraser, and Tucker (2007) report that the harassment may involve behaviours, such as monitoring online communication, sending

threatening or insulting messages, disrupting online communication with other individuals (e.g., by sending a virus to his/her email account), and using the victim's online identity to send false messages to others disguised as the victim. More specifically, psychological cyber PA refers to romantic partners' use of computer-mediated communication (i.e., email, instant messaging, and social networking sites) to perpetrate relationship aggression. Five forms of online victimization by a romantic partner were examined in the present study, including control, monitoring, and jealousy (e.g., monitoring a social networking site), isolation/threatening behaviours (e.g., an individual threatening to hurt his/her partner via computer-mediated communication), relational aggression (e.g., starting a rumour about a partner using computer-mediated communication), stalking (e.g., frequently using computer-mediated communication to contact a partner when this was unwanted), and verbal aggression (e.g., insulting or swearing at a partner through computer-mediated communication).

Although online partner aggression is a new area of study, at least three studies have examined this topic with results suggesting this is a fairly regular occurrence among university-aged students, thus providing support for further investigation in this area. Similar to the present study, forms of online victimization (i.e., monitoring, controlling/domineering behaviours, emotional/verbal aggression, stalking, and relational aggression) were examined by Piitz and Fritz (2010) who conducted a study with 200 Canadian university students between the ages of 17 and 23 years. They also explored the relation between online partner aggression and psychological well-being. Psychological cyber partner aggression was measured by the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2008), which was developed by the authors to specifically explore the five forms of psychological partner aggression occurring online across different forms of technology (i.e., telephone, text messaging, email, instant messaging, and

social networking sites). Results indicated that 35 to 82% of participants experienced some form of psychological cyber PA within the previous year, depending on the type. Further, psychological cyber PA was significantly and positively related to traditional offline forms of intimate partner aggression as well as internalizing, externalizing, and total problems, with the exception of stalking (Piitz & Fritz, 2010).

Melander (2010) also provided insight into the experience of psychological cyber PA through a qualitative study where interviews were conducted with five (three female-only and two male-only) focus groups, comprised of approximately eight students each for a total of 39 participants. Melander's study was guided by Johnson's (1995) theoretical framework of partner aggression with results indicating that not only does Johnson's model account for multiple types of aggression (e.g., physical, psychological), but also for different modes through which they can occur (e.g., face-to-face, forms of computer-mediated communication). Participants' reports suggested that Johnson's descriptions of different forms of partner violence also were evident in partner aggression occurring through technology. For example, communicative exchanges using technology (e.g., a girlfriend retrieving text messages on her partner's phone from another woman) frequently acted as precursors for isolated, but escalated, incidents of conflict reflecting situational couple violence. Aggression that was initially perpetrated online also frequently affected offline relationship interactions such that the conflict continued when partners communicated face-to-face. This has important implications considering the potential for both psychological and physical harm resulting from these incidents. Melander also found that aggressive acts occurring as part of an ongoing pattern of the use of control tactics, as is the case with intimate terrorism, were expressed online. For example, participants discussed controlling techniques, such as monitoring cellular phone usage and social networking sites, which include

information that members can make public, as well as using electronic devices to track an individual's physical location. A few respondents also described online scenarios that were reflective of violent resistance, such as using social networking sites to dissolve an aggressive romantic relationship because they could not bring themselves to end the relationship in person.

Some of the discussion in Melander's (2010) focus-group study also referred to the ease with which partner aggression can be perpetrated through the use of technology as an important implication given that newer technological devices are easier and faster to use. As a result, several aggressive messages can be communicated within a short period of time. Also, the sheer ability to access other individuals through several forms of technology throughout the day provides ample opportunity for these exchanges to occur. Prior to the technological age, a possible option would be to "not answer the door" (Melander, 2010, p. 4), whereas, technology provides a number of different ways to reach others at any given time regardless of geographic proximity. In general, it seems that by its very nature, technology provides greater opportunity to track or discover information about a partner that would not be retrieved otherwise, which creates more opportunity for jealousy and conflict to result.

The final theme identified by Melander (2010) related to the ability to make private information public to others. For example, individuals have the ability to post embarrassing or personal information about their partners on public forums, such as social networking sites, in an attempt to degrade them. This seems to add another element to the experience of being victimized by a partner given that there may be a higher level of embarrassment and humiliation. The opportunity is also presented for others to become involved in the argument or conflict and to post additional negative comments. Further, as noted previously, the lack of contextual cues have important implications for online partner aggression. As noted by Melander, there is no

body language, facial expressions, or tone of voice to accompany the aggressive message. Furthermore, the sender is not confronted with the recipient's response immediately, and as a result, has no understanding of the consequences (e.g., crying) or how the message was interpreted. These themes appear to reflect unique aspects of online partner aggression that are different from traditional forms of partner aggression and warrant further investigation.

Draucker and Martsolf (2010) conducted a qualitative study with the purpose of developing a theoretical framework of adolescent dating violence in consideration of computer-mediated communication as a possible milieu for this to occur. Interviews were conducted with 56 predominately female (73%) university students between the ages of 18 and 21 years and data were analyzed through content analysis. Participants experienced a number of aggressive acts by their partners ranging from one occasion of mild verbal abuse by one partner to ongoing severe abuse in different forms (i.e., verbal, sexual, physical) by multiple partners. They also described the use of technology for perpetration of partner aggression, such as monitoring/control behaviours (e.g., being constantly "checked up on" each day) and emotional and verbal abuse (e.g., being called names, receiving threatening messages). Interestingly, participants also reported on their use of computer-mediated communication for seeking help during an episode of violence, limiting their partners' access to them (e.g., by screening their partners' phone calls, not responding to messages) as well as reconnecting with their partner following the aggressive incident. In this study, cellular phones were the most frequently cited form of computer-mediated communication used for interaction with a partner. Just over half (52%) of participants reported that their partners victimized them through monitoring/control behaviours via technological means. The same number (i.e., 52%) reported experiencing emotional or verbal partner aggression through computer-mediated communication. According to the authors, technology

played a significant role in escalating arguments, providing another milieu for monitoring behaviours, and facilitating communication and reconciliation among estranged partners, which resulted in more aggression in many cases. However, due to the qualitative nature of the study, specific relationships between categories of aggression (i.e., monitoring) and coping could not be examined.

The above studies lend support for the existence and seriousness of psychological cyber PA, despite the lack of research in this area. The present study expanded on this research by further obtaining information about the frequency of the occurrence of psychological cyber PA among university students, related outcomes with respect to areas of functioning (e.g., psychological and adaptive), and participants' perceptions of the severity of psychological cyber PA. In addition, this study set out to better understand coping strategies related to psychological cyber PA and whether selected coping strategies have indirect effects on participants' outcomes. Gaining a better understanding of the occurrence of psychological cyber PA, how it is viewed, and associated factors should be beneficial in raising awareness of this new area of research and developing appropriate interventions.

Conceptual Overview of Coping

Given the findings that psychological cyber PA is occurring among university students (Melander, 2010; Piitz & Fritz, 2010), gaining a greater understanding of how they are coping with these experiences and whether their coping strategies are related to outcome is important. Coping has been described by theorists in various ways. For example, some focus on coping styles whereas others focus on responses to specific situations (Beutler, Moos, & Lane, 2003). However, coping is generally thought of as our responses to emotions (i.e., stress) and situations that we perceive as taxing (Folkman & Lazarus, 1988a). According to Folkman and Lazarus

(1980), coping is defined as all purposeful cognitive and behavioural efforts individuals use to reduce, overcome, or tolerate internal or external pressures resulting from a reciprocal relationship between the individual and the environment that is considered overwhelming for the individual's resources. Coping is process-oriented, such that it refers to thoughts and behaviours *across* a specific encounter (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). An important part of the coping process is the individual's appraisal of the environmental event as beneficial or challenging (Folkman & Lazarus, 1988a). Thus, appraisal or perceptions of psychological cyber PA is important given that this may influence the ways in which individuals select coping strategies.

There are two levels of cognitive appraisal. Primary appraisal is the process of determining how much personal relevance the environmental event has, whereas secondary appraisal is the process of considering whether anything can be done to prevent harm or to improve the situation. Cognitive appraisal is a key aspect of the coping process because individuals are more likely to experience psychological distress the more they are affected by the event. Further, the type of coping approach selected depends on what is perceived as being at stake for the individual and what coping options are available (Folkman & Lazarus, 1986; Moos & Holahan, 2003). According to Folkman and Lazarus (1986), there are two important functions of coping. The first function is to address and/or to alter the situation (e.g., through problem solving efforts and behavioural strategies) that is creating distress, which refers to *problem-focused* coping, whereas the second function is to regulate the stressful emotions (e.g., change the subjective appraisal of the situation) as opposed to the situation itself, which refers to *emotion-focused* coping (Folkman & Lazarus, 1986; Sabina & Tindale, 2008). In both cases, individuals are considered active in the coping process as they have some ability to influence the outcome of the stressful event by

influencing the stressor itself or their reactions to the stressor (Moos & Holahan, 2003). Whether the coping efforts are deemed successful depends on the individual's values, goals, and expectations. For example, individuals may feel that an outcome was successful if they coped with the demands as best as they could in consideration of the situation, even if the situation itself was not fully resolved (Folkman et al., 1986). Other studies (e.g., Calvete, Corral, & Estévez, 2008; Carver et al., 1993; Straight et al., 2003) have used terms such as *engagement/approach* coping (e.g., directly addressing the source of stress) and *disengagement/avoidance* coping (e.g., withdrawing from the source of stress itself and the resulting emotions) to describe coping behaviours. Although there are differences in the coping terms that are used, they reflect many similarities and are generally differentiated based on their adaptive and maladaptive functions.

Beutler and colleagues (2003) clarify among different concepts related to coping. *Coping styles* have been categorized in many ways (e.g., approach/avoidant coping, emotion/problem-focused coping), but are generally thought of as adaptive and maladaptive coping behaviours that occur when confronting stressful situations (e.g., novel, problematic, intense) requiring a response or across time. These coping patterns occur with some degree of regularity and predictability and reflect an individual's habitual tendency to respond in a certain way (Asberg, Bowers, Renk, & McKinney, 2008; Beutler et al., 2003; Compas, 1987). *Coping skills* or *processes* refer to individuals' specific cognitive or behavioural strategies that are used to manage a particular encounter and to changes in their strategies over the course of the stressor (Beutler et al., 2003; Compas, 1987; Folkman & Lazarus, 1980). *Coping resources* refer to individual (e.g., interpersonal skills, positive beliefs, problem-solving skills) and environmental (e.g., perceived social support network, material resources) characteristics that facilitate one's

ability to manage the stressful encounter (Compas, 1987; Sabina & Tindale, 2008). Specific coping strategies differ depending on the measure, but reflect a number of similarities and are generally differentiated by their adaptive or maladaptive qualities.

Research suggests that there are differences in individuals' appraisals of events and coping behaviours based on developmental level. For example, older adolescents frequently perceive their problems as more serious and distressing than younger adolescents (Boldero & Fallon, 1995; Fallon & Bowles, 1999). Diehl, Coyle, and Labouvie-Vief (1996) investigated age differences in coping behaviours among a life-span sample of 381 participants. Findings suggested that coping strategies change with age. Compared to adolescents and younger adults, older adults demonstrated more frequent use of cognitive strategies, such as distancing themselves from the stressful event and reframing (e.g., focusing on the positive aspects of the situation) as well as a greater ability to control their impulses (e.g., by withholding their responses to a situation until they were able to address the situation in a more suitable way). On the other hand, adolescents and younger adults were more likely to impulsively respond to the stressor in an outwardly aggressive manner, which was deemed less mature by the authors.

Folkman, Lazarus, Pimley, and Novacek (1987) investigated age differences in coping behaviours across adulthood, with results suggesting there are developmental changes that occur. They examined whether younger (ages 35 to 45 years) and older (ages 65 to 74 years and retired from full-time work) adults differed in their perceptions of daily hassles and coping strategies. Their findings indicated that younger adults were more likely to engage in problem-focused coping (e.g., confrontation, social support seeking, problem solving) than older adults, whereas older adults were more likely to use emotion-focused forms of coping (e.g., distancing, accepting responsibility, and positive reappraisal) than younger adults. Older adults reported fewer hassles

than younger adults. These appraisals may have been neutralized by their use of emotion-focused coping strategies, such as distancing and positive reappraisal. The authors further noted that the coping behaviours were likely suited to the participants' stage of life and reflected a greater likelihood of younger adults appraising their stressors as changeable, thus increasing their use of problem-focused coping.

A number of inventories have been developed to measure coping responses. These measures illustrate different ways that coping is assessed and conceptualized in the literature, although most measures tend to differentiate between adaptive and maladaptive coping behaviours. The Coping Orientation to Problems Experienced (COPE) scale measures individuals' responses to stress and was theoretically derived based primarily on Lazarus and Folkman's (1984) coping concepts (Carver, Scheier, & Weintraub, 1989). The authors note that there are conceptual similarities to previous coping measures, such as the Ways of Coping Questionnaire (Folkman & Lazarus, 1980), which broadly conceptualizes coping as different cognitive and behavioural strategies in the domains of defensive coping, information-seeking, problem-solving, palliation, inhibition of action, direct action, and magical thinking that may be used to manage a specific stressful event. However, Carver and colleagues (1989) report that the COPE distinguishes among several distinct aspects of active coping, provides more specific information about the coping process, and includes items reflecting coping responses that have the potential to interfere with active coping, which differs from previously-developed scales (Carver et al., 1989). The COPE conceptualizes coping as strategies captured by 15 subscales, such as problem-focused coping (active coping, planning, suppression of competing activities, and restraint), emotion-focused coping (positive reinterpretation and growth, acceptance, turning to religion and humour), social support seeking (seeking emotional social support, seeking instrumental social

support), and maladaptive coping (focus on and venting of emotions, denial, behavioural disengagement, mental disengagement, and alcohol-drug disengagement). The COPE's theorised model has been supported through factor analyses (Carver et al., 1989; Moos & Holahan, 2003). Carver and colleagues' (1989) conceptualization of coping was adopted in the present study.

The Influence of Coping on Emotion

Research suggests that coping has the potential to mitigate the negative impact of stressful encounters and plays an important role in psychological adjustment (Calvete et al., 2008; Carver et al., 1989; Moos & Holahan, 2003; Sabina & Tindale, 2008). However, there has been relatively little research examining how individuals cope with intimate partner aggression, with much of the existing literature focusing solely on the type of aggression characterized by intimate terrorism (Johnson & Ferraro, 2000; Waldrop & Resick, 2004). At this time, there does not appear to be any research specifically examining coping behaviours of individuals who have experienced psychological cyber PA. Thus, one of the goals of the present study was to address this gap in the literature and obtain information about how individuals' coping strategies their related outcomes.

Although mediator and moderator variables are often confused, Folkman and Lazarus (1988a) make the distinction between them by describing moderator variables as antecedent conditions (i.e., gender, SES) that interact with other factors to produce an outcome. Thus, a third variable alters the direction and/or strength of the relation between two variables in such a way that the impact varies as a result of the moderator (Holmbeck, 1997). For example, age may moderate the relation between social class and frequency of breast self-examinations because age influences the strength of the relationship between the variables (Baron & Kenny, 1986). On the other hand, mediator variables are described as the mechanisms by which an altered relation

between the antecedent variable and outcome occurs (Folkman & Lazarus, 1988a; Holmbeck, 1997). Research suggests that coping can play a role in influencing an outcome resulting from a stressful encounter. For example, Folkman and Lazarus (1988a, 1988b) describe the process of coping mediating an emotional response to a stressful event through the following illustration: an individual encounters a stressful event, which he or she appraises as personally significant. This event results in an emotional response, with which he or she then copes thus altering the relationship between the individual and the environment or changing the meaning attributed to the stressor, and in turn, altering the emotional response (Folkman & Lazarus, 1988a, 1988b). Other studies have demonstrated the influence of coping with respect to outcome. For example, from research conducted with women battling early-stage breast cancer, Carver and colleagues (1993) found that greater optimism was related to more use of active coping, which in turn, was associated with higher levels of psychological adjustment.

Perceived locus of control. Research suggests that individuals' perceived controllability over the outcome of a situation can impact their experiences of stress and coping behaviours. Locus of control refers to the degree to which an individual perceives that he or she has the ability to alter a situation's outcome through his or her behaviour or personal attributes (i.e., internal locus of control) versus the degree to which an individual perceives the situation's outcome as being dependent on external circumstances (e.g., luck, fate) or as simply being unpredictable (i.e., external locus of control; Nowicki & Strickland, 1973; Rotter, 1966). The less perceived control an individual has over an encounter is related to higher appraisals of stress in response to the encounter than when individuals feel more in control of the outcome, which in turn, impacts the coping strategies selected (Lazarus & Folkman, 1984; Meijer, Sinnema, Bijstra, Mellenbergh, & Wolters, 2002). Pape and Arias (1995) considered control perceptions of women

in violent and nonviolent relationships with results indicating that perceived locus of control had important implications for reducing distress for women in violent relationships (i.e., more perceived control was related to less distress for women who had been abused by their partners, but not for nonabused women). Another study that examined perceptions of control and emotional coping behaviours among patients undergoing heart surgery found that perceived locus of control was related to patients' emotional response pre- and post-surgery (Kugler et al., 1994). Results also indicated that higher internal locus of control was significantly related to lower levels of anxiety and depression while external locus of control was significantly related to higher levels of anxiety and depression.

Perceptions of control also impact the coping strategy utilized. For example, emotion-focused coping is frequently selected as a method of coping when perceptions of control are lower. Thus, because the situation is not seen as changeable, the individual focuses instead on changing his or her appraisal of the situation. On the other hand, problem-focused coping is selected more often when the situation is perceived as changeable (Asberg et al., 2008; Holahan & Moos, 1987; Sabina & Tindale, 2008). For example, teenagers with an internal locus of control were more likely to engage in the adaptive coping strategy of seeking help than those with an external locus of control (Schonert-Reichl & Muller, 1996). Further, an individual's coping flexibility (i.e., his or her ability to select an appropriate strategy for the situation) can influence whether a selected coping strategy is considered adaptive or maladaptive (Cheng, 2009). Individuals who are better able to determine whether stressful situations are actually controllable and select different coping strategies based on this information have higher perceived controllability and psychological well-being for certain problem types (Cheng et al., 2012). These findings are important to consider because the type of coping strategy selected for

specific situations can have implications for the outcome. For example, emotion-focused coping is often found to be correlated with psychological distress (e.g., Holahan, Moos, & Schaefer, 1996), likely due to a mismatch between perceived controllability of the stressful situation and the selected coping strategy. Overall, the research indicates that higher internal locus of control and coping flexibility is related to less stress, particularly in response to potentially distressing scenarios, and is related to more active coping choices. As such, perceived controllability is important to consider when examining coping behaviours.

Perceived social support. Social support refers to emotional, informational, and tangible support from members of an individual's social network who are perceived as being available when support is needed (Malecki & Demaray, 2002; Moos, 1995). Research has demonstrated that when individuals perceive having social support available to them, their functioning is enhanced and negative outcomes may be mitigated. For example, coping efforts can be improved as a result of increased self-esteem and self-confidence, which in turn, can enable better coping with a stressful encounter (Moos & Holahan, 2003). In these cases, there are fewer encounters that exhaust personal resources, effective coping strategies (e.g., approach coping) are more likely to be used, and as a result, less stress and negative outcomes are experienced (Asberg et al., 2008; DeLongis, Folkman, & Lazarus, 1988; Moos & Holahan, 2003). The ways in which support sources respond to the individual and his or her problem are also important to consider. When individuals have positive responses from their social support network, they are more likely to have higher confidence levels and feel more in control over changing their situation (Waldrop & Resick, 2004). On the other hand, when sources of support (e.g., friends, family) respond negatively to the individual through conflict and criticism, it is associated with increased avoidance coping and adjustment is negatively impacted (Moos & Holahan, 2003). More

specifically, a lack of perceived social support is related to low self-esteem and depression (Cheng, 1998; Reinhardt, Boerner, & Horowitz, 2006) as well as more PTSD symptoms among individuals exposed to traumatic situations (King, King, Fairbank, Keane, & Adams, 1998).

In terms of partner aggression specifically, individuals may be less inclined to share their problem with members of their social support network because they feel embarrassed, ashamed, guilty, or fearful of being judged or of the recipient's response (Barnett, 2001). Mitchell and Hodson (1983) conducted a study to examine the coping methods, social support, and psychological health of 60 women who had survived physical abuse by their intimate partners. Participants were recruited from shelters in San Francisco, California. Results indicated that survivors of abuse were often hesitant to turn to others for support out of concern that helpers would feel uncomfortable and because they often perceived the helper's response as negative or not helpful (Mitchell & Hodson, 1983). In turn, if those from whom support is sought do not respond with concern or act dismissive, this may reduce the likelihood that the individual experiencing the aggression will feel entitled to address the problem in an active manner and cope with it in a way that is beneficial. Also, the apparent lack of formal support services available for individuals victimized through forms of computer-mediated communication may also discourage active coping.

In other cases, partner aggression may impact relationships with members of one's social support network (e.g., family members, friends, and future partners) on a number of levels. This is especially concerning since abused women often live with relatives following their stay in a shelter (Riger et al., 2002). Abusive partners may use intimidation tactics against members of the support network while seeking compliance, which in turn, negatively impacts the emotional well-being of the victim (Riger et al., 2002).

Gender. Research has shown that gender is an important variable to consider with respect to coping behaviours, although findings are inconclusive in this area (Asberg et al., 2008). Traditional views of coping suggested that men were more likely than women to directly face and act on their problems (Tamres, Janicki, & Helgeson, 2002). However, while this view is supported by some research (e.g., Folkman & Lazarus, 1980) which has found that male individuals use problem-focused coping more often than female individuals, other studies (e.g., Renk & Creasey, 2003) suggest that male and female individuals use problem-focused coping at similar rates. Renk and Creasey theorize that, whereas men were previously more likely to use problem-focused coping than women, women have started to engage in problem-focused coping more often. Tamres and colleagues conducted a meta-analysis of 50 studies reported between 1990 and 2000 to investigate gender differences with respect to coping. Their findings indicated that, overall, female individuals engaged in most coping responses more often than male individuals, whereas male individuals did not engage in any coping response more frequently than female individuals. More specifically, female individuals used problem-focused coping strategies (i.e., active coping, seeking instrumental social support, and general problem-focused coping), emotion-focused coping strategies (i.e., seeking emotional social support, avoidance, positive reappraisal, rumination, wishful thinking, and positive self-talk), and nonspecific coping strategies (i.e., seeking nonspecific social support and religion) more often than did male individuals. In a longitudinal study conducted with 603 students in Grade 6 to Grade 11, girls in all grades used approach-oriented coping (i.e., information seeking and directly targeting the problem) at higher levels than boys in all grades. In addition, approach-oriented coping was related to fewer symptoms of depression, whereas strategies reflecting avoidance or denial were associated with higher levels of depression (Herman-Stahl, Stemmler, & Petersen, 1995). On the

other hand, Tamres and colleagues reported that boys and girls used denial, isolation, venting, and self-blame at similar rates across four stressors, namely, personal health, relationship, achievement, and others' health.

According to Tamres and colleagues (2002), the largest gender difference was reflected in the use of seeking emotional social support, which was homogenously reported across studies. This coping strategy was used more frequently by female participants for each of the four stressors, which is consistent with other research that has indicated female individuals seek help from members of their social support network more often than do male individuals (Asberg et al., 2008; Horwitz, 1977; Simmering & Sears, 2006). Further, one study found that women perceive their available social support as more adequate than men (Asberg et al., 2008). However, these findings do not necessarily suggest that male individuals do not seek support at all, but instead may reflect the extent to which female individuals engage in this method of coping (Asberg et al., 2008; Simmering & Sears, 2006).

Some of the gender differences may depend on the nature of the problem being faced and be influenced by differences in female and male individuals' appraisals of the problem. For example, Tamres and colleagues (2002) found that women engaged in more coping behaviours in response to personal stressors and stress over others' health than men. Alternatively, men were more likely than women to cope with relationship stressors through avoidance and venting, while women were more likely than men to cope with the same problem using isolation. This is concerning when we consider the importance of a social support network for women experiencing abuse and those attempting to leave the relationship (Riger et al., 2002; Waldrop & Resick, 2004). The way in which men and women appraise the same stressor may also influence gender differences in coping behaviours. For example, in Asberg and colleagues' (2008)

investigation of stress and coping among emerging adults, women reported higher levels of perceived stress than men, although there were no differences in stress appraisals of specific negative events. Results from the above mentioned meta-analysis indicated that female individuals only used certain coping strategies (i.e., active coping, avoidance, positive reappraisal, and self-blame) more often than male individuals in studies in which they perceived the stressor as more severe, which was the case in the majority of studies (Tamres et al., 2002). This speaks to the importance of considering perceived severity of the problem when examining coping behaviours.

Other studies have suggested that gender identity may impact coping behaviours, particularly among adolescents and young adults. For example, adolescent males may withhold their emotions in some cases in order to adhere to the traditional male role (Timlin-Scalera, Ponterotto, Blumberg, & Jackson, 2003). Renk and Creasey (2003) examined relations among gender, gender identity, and coping with 169 older adolescents (ages 17 to 22 years). Gender identity was significantly related to coping, such that participants who were high in masculinity reported greater use of problem-focused strategies compared to those who were low in masculinity while individuals who were high in femininity reported higher levels of emotion-focused coping than those who were low in femininity. The authors noted that male individuals may have greater difficulty expressing emotions and coping through strategies traditionally viewed as feminine. As a result, they may continue to feel reluctant about stepping outside of gender stereotypes and engaging in emotion-focused coping. The issue of gender identity also was raised by Folkman and Lazarus (1980) who found that men cope more frequently by keeping their feelings to themselves, which is consistent with traditional Western societal values that encourage men not to express emotions.

Broderick and Korteland (2002) also considered gender identity in their examination of feminine-identified male and female adolescents with 396 students in fourth to sixth grade. Their findings indicated that feminine-identified individuals of both genders were more likely to ruminate about their problems than masculine-identified individuals. Rumination as a coping strategy was thought to reflect stereotypical feminine behaviour. Responses also indicated that participants perceived coping behaviours considered appropriate for female adolescents (e.g., rumination) as highly inappropriate for male adolescents, which again suggests that adherence to stereotypical gender roles may be more important for male individuals than female individuals with respect to coping behaviours.

Coping with Intimate Partner Aggression

Because there has been no research to date examining coping behaviours of individuals who have been victimized by psychological cyber PA, individuals' coping behaviours with respect to offline partner aggression will be discussed. Typically, stress in romantic relationships decreases as adolescents enter adulthood and become more active in coping with relationship stress, resulting in a developmental progression of the romantic relationship (Neider & Siffge-Krenke, 2001). However, when partner aggression enters the relationship, individuals must decide which coping strategies are most beneficial given the situation. As such, when examining coping strategies in response to intimate partner aggression, focus should be placed not only on how the individuals are coping, but how these strategies are related to their adjustment. This is illustrated in a common misperception that individuals, particularly women, who are exposed to partner aggression, are passive victims. However, research has refuted this misperception and emphasized that contextual factors (e.g., selecting seemingly "passive" responses for the purpose of survival) may influence coping behaviour (Campbell et al., 1998; Mitchell & Hodson, 1983;

Yoshihama, 2002).

Individuals cope with intimate partner aggression in a variety of ways. Examples of problem-focused coping strategies used for coping with partner aggression include seeking help, self-education, problem-solving (e.g., reviewing and selecting possible solutions to alter the source of stress), confronting partners, compromising with partners, and leaving the relationship temporarily or permanently (Campbell et al., 1998; Mitchell & Hodson, 1983; Pape & Arias, 1995; Shannon, Logan, Cole, & Medley, 2006; Yoshihama, 2002). Examples of emotion-focused coping strategies include avoidance, denying the existence of the problem or minimizing the seriousness of the problem, positive appraisal (e.g., focusing on the positive aspects of the relationship), withdrawing from others, venting, and wishful thinking, (Arriaga & Capezza, 2005; Campbell et al., 1998; Herbert et al., 1991; Shannon et al., 2006; Waldrop & Resick, 2004; Yoshihama, 2002).

Although individuals have been found to use both problem-focused and emotion-focused coping strategies, there appear to be mixed findings with respect to which type of coping is used more frequently when experiencing partner aggression. Some studies suggest that problem-focused and emotion-focused coping are equally relied upon when faced with partner aggression (e.g., Arias & Pape, 1999). Similarly, one study with 129 women who had experienced partner aggression revealed that individuals born in the United States were equally likely to use "active" and "passive" coping strategies while individuals born in Japan were almost twice as likely to use passive strategies compared to active strategies (Yoshihama, 2002). On the other hand, in another study with 757 women who had protective orders against male partners, approximately 18% reported that they had used at least one problem-focused strategy while 91% reported having used at least some form of emotion-focused coping, particularly with respect to managing

the immediate emotions resulting from the aggression (Shannon et al., 2006). Further, this study indicated that women who had engaged in problem-focused coping were more likely to also access help-seeking resources than women who had not.

These findings are noteworthy considering that some forms of emotion-focused coping (e.g., avoiding the problem) have been found to relate to more extreme psychological distress (i.e., PTSD) than problem-focused coping (Arriaga & Capezza, 2005; Arias & Pape, 1999; Mitchell & Hodson, 1983) and are less likely to be effective in reducing distress (Lazarus & Folkman, 1986). Further, use of avoidance coping at one point in time has been found to relate to more symptoms of depression ten years later while approach coping has been found to relate to greater well-being (Holahan & Moos, 1991; Holahan, Moos, Holahan, Brennan, and Schutte, 2005). Research conducted with community adults has also revealed a positive relation between using avoidance as a coping strategy and depressive symptoms as well as a positive relation between parents' use of avoidance coping and their children's internalizing problems (Marchand & Hock, 2003). Among 151 female college students who were psychologically abused by male partners, low approach coping was related to more frequent episodes of binge drinking and more negative health perceptions as the abuse increased. Individuals with higher use of approach coping did not demonstrate significant increases in their frequency of binge drinking and negative health perceptions (Straight et al., 2003). Calvete and colleagues (2008) found that those who frequently used disengagement coping had higher levels of anxiety and depression whereas secondary control coping (i.e., positive thinking, reframing, acceptance) was found to be beneficial for women's mental health.

The likelihood of using emotion- versus problem-focused coping strategies may depend on contextual factors, such as remaining in the relationship and culture. For example, greater use of

avoidance coping has been found among victims of ongoing aggression who remain in their intimate relationships, have less available resources, lack social support, and have become isolated from sources of support (Mitchell & Hodson, 1983; Waldrop & Resick, 2004). On the other hand, they may be more likely to engage in problem-focused coping strategies when potential help sources (e.g., family, friends) are responsive (Mitchell & Hodson, 1983; Waldrop & Resick, 2004). However, in some cases, less use of problem-focused coping strategies may reflect a conscious decision for fear of making the situation worse, which is logical, particularly for individuals who remain in the relationship. In these instances, individuals often consider their available options given the situation and deliberately select coping strategies based on fear for their safety (Mitchell & Hodson, 1983; Waldrop & Resick, 2004; Yoshihama, 2002). For example, in a longitudinal, qualitative study conducted with primarily African American (74%) women who had experienced physical and/or sexual intimate partner aggression, participants described an active problem solving strategy of subordinating themselves where they consciously decided to be as nonresponsive to the violence as they could to reduce harm (e.g., avoid making a scene, reduce physical or verbal abuse; Campbell et al., 1998).

Calvete and colleagues (2008) examined whether specific coping responses acted as moderators and/or mediators of the relationship between intimate partner aggression and symptoms of distress (i.e., anxiety, depression). Participants included 298 Spanish women with an average age of 39 years who had experienced partner aggression during the previous year. Nearly half (49.7%) of the women were married. The Response to Stress Questionnaire (RSQ; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000), Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), and the Anxiety scale of the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983; 2002) were used to measure coping

responses, depression and anxiety, respectively (as cited in Calvete et al., 2008). Results revealed

a positive correlation between psychological abuse and both disengagement coping (e.g.,

avoidance, negation, and distraction) and primary control coping strategies (e.g., problem

solving, emotion regulation, and emotional expression), while physical aggression was only

positively related to disengagement coping. According to the authors, these results were possibly

due to participants engaging in greater use of coping strategies because their stress levels were

high (Calvete et al., 2008). Findings also indicated that disengagement coping acted as a

mediator between psychological intimate partner violence and distress (Calvete et al., 2008).

Thus, experiencing psychological abuse increased the likelihood of using disengagement and

primary control coping strategies, and greater use of disengagement coping was related to higher

distress levels (Calvete et al., 2008).

Taken together, these findings suggest that not all coping strategies are beneficial in all

contexts; instead, using particular coping strategies (e.g., disengagement) can sometimes be

maladaptive and increase the resulting anxiety and depression. Thus, in cases of partner

aggression, it is important to consider the context and possible risks and benefits of using

different coping strategies since these cases are certainly complex. This information has

important implications for treatment of individuals victimized by partner violence because

focusing on reducing maladaptive coping strategies in addition to developing adaptive coping

strategies can possibly reduce the negative impact of partner violence (Calvete et al., 2008). On

the other hand, Calvete and colleagues emphasize the importance of understanding the abusive

relationship from the individual's perspective rather than immediately attempting to reduce

disengagement coping strategies as these strategies may reflect attempts to protect children,

attempts to survive in the situation (e.g., avoid potentially triggering violence; repress memories

of the abuse), or a lack of perceived controllability. Similarly, a reduced likelihood of engaging in primary control coping strategies in response to physical aggression may reflect feelings of learned helplessness and an inability to alter the situation given that many of the active coping responses to physical abuse (e.g., talking about the problem with the partner, calling the police, end the violent relationship) may result in further physical harm or the anxiety may be too great to take these steps.

The Present Study and Hypotheses

The present study focused on undergraduate students' experiences with online partner aggression occurring across three forms of computer-mediated communication, namely, email, instant messaging, and social networking sites. I also investigated related outcomes of psychological cyber PA with respect to psychological and adaptive functioning as well as related coping strategies and the direct and indirect effects of coping on participants' outcomes. Raising awareness of the occurrence of psychological cyber PA is important given that individuals are communicating through forms of computer-mediated communication at increasing rates, which may provide another outlet through which psychological partner aggression can occur. In addition, other forms of offline and online aggression have been found to relate to a number of negative outcomes (e.g., depression, anxiety, PTSD, physical health problems, poorer adaptive functioning). Although there has been little research focusing specifically on psychological cyber PA to date, findings from three studies that have investigated psychological cyber PA (i.e., Draucker & Martsolf, 2010; Melander, 2010; Piitz & Fritz, 2010), have suggested that this form of partner aggression is occurring among a number of undergraduate students. The high prevalence emphasizes the importance of gaining awareness into this type of problem so that we can begin to understand associated consequences, how individuals perceive the severity of the

problem, related coping approaches, and whether their selected coping approach plays a role in their psychological and adaptive functioning in positive or negative ways. Increased awareness and understanding of this construct can also assist with developing appropriate intervention strategies.

Research Question One: Frequency and Perceived Severity of Psychological Cyber PA

Because the investigation of psychological cyber PA is such a new area of research, the initial primary aim of the present study was to obtain descriptive information about undergraduate students' descriptions of and experiences with this form of partner aggression to gain a better understanding of this specific construct. Thus, for each form of computer-mediated communication (i.e., email, instant messaging, social networking sites), the purpose was to examine how frequently participants have experienced acts of psychological cyber PA within the past year or whether they have experienced each act prior to the past year and how severe participants perceive each act to be. In addition, using Johnson's (1995) typology as a guiding framework, the prevalence for each type of partner aggression (i.e., intimate terrorism and situational couple violence) was examined.

Hypothesis 1(a). With respect to forms of computer-mediated communication, I hypothesized that there would be a greater frequency of psychological cyber PA occurring via social networking sites than email and instant messaging. This hypothesis was based on previous research, such as Muise and colleagues (2009) who found that increased time on Facebook significantly predicted jealousy over a romantic partner's Facebook usage and discussed how the public nature of Facebook provides greater access to information about a romantic partner's contact with other-sex individuals without a true understanding of the context. As a result, partners may respond to this jealousy by engaging in aggressive acts over their partners' social

networking sites.

Hypothesis 1(b). With respect to perceived severity of psychological cyber PA, I hypothesized that female participants would perceive all categories of psychological cyber PA as more severe than male participants. This was based on Cupach and Spitzberg's (2000) finding that women perceived all categories of pursuit behaviours in their study as more severe than men.

Hypothesis 1(c). With respect to perceived severity of psychological cyber PA, I also hypothesized that greater frequency of psychological cyber PA would be negatively related to perceiving aggressive acts as severe. This was based on previous research that has found that individuals who have experienced forms of aggression, such as unwanted pursuit and cyberstalking, perceived the behaviours as less severe than individuals who had not, possibly because they had become desensitized to these acts (Alexy et al., 2005; Cupach & Spitzberg, 2000).

Hypothesis 1(d). With respect to the prevalence of different types of partner aggression (i.e., intimate terrorism or situational couple violence), I hypothesized that the majority of psychological cyber PA reported by participants would reflect situational couple violence as opposed to intimate terrorism. According to Johnson (1995, 2009), situational couple violence is the most common form of partner aggression and has a greater likelihood of being found in more representative populations.

Hypothesis 1(e). With respect to gender, I hypothesized that there would be similar rates of psychological cyber PA for female and male participants. This hypothesis was based on previous research findings indicating that situational couple violence is experienced at similar rates across genders (Johnson, 1995). Similar gender rates have also been reported for email harassment

(Finn, 2004).

Research Question Two: Relations among Psychological Cyber PA and Coping Categories

The second primary aim of the present study was to investigate categories of coping strategies related to psychological cyber PA. Based on a factor analysis of the COPE measure, three coping categories were considered in the present study, namely, adaptive coping, social support and expressive coping, and maladaptive coping. More specifically, the present study examined the relations between psychological cyber PA and each of the three coping categories. Again, because there have not been any published studies examining which coping strategies are related to psychological cyber PA to date and there have been inconsistencies in the literature in regards to how individuals cope with partner aggression, it seemed beneficial to begin by investigating related coping categories as opposed to looking at specific coping strategies. This should provide a direction that can be explored further in future research.

Hypothesis 2. I hypothesized that psychological cyber PA would be related to greater levels of coping (i.e., adaptive coping, social support and expressive coping, and maladaptive coping). This hypothesis was based on previous research suggesting that individuals are likely to engage in some coping effort following their experience of partner aggression. For example, studies investigating coping strategies selected by victims of psychological partner aggression have found higher levels of psychological aggression to be related to greater use of types of adaptive coping (i.e., problem solving, emotion regulation, and support seeking) and maladaptive coping (i.e., avoidance coping), particularly for individuals who remain in their romantic relationships following the aggression (Calvete et al., 2008; Mitchell & Hodson, 1983; Waldrop & Resick, 2004).

Research Question Three: Relations among Psychological Cyber PA and Outcomes

The third primary aim of this research was to examine associated outcomes of psychological cyber PA. More specifically, the present study examined psychological functioning, which includes self-esteem, internalizing problems (i.e., anxiety and depression), and externalizing problems (i.e., inattention and rule breaking) as well as adaptive functioning, which includes occupational functioning (i.e., missed days at work) and social functioning (i.e., how often they see family and friends).

Hypothesis 3(a). I hypothesized that psychological cyber PA would be positively related to poor psychological functioning, including low self-esteem, internalizing problems, externalizing problems, and total problems, such that individuals who experience psychological cyber PA would be more likely to have poorer psychological functioning. This hypothesis was based on previous research that has indicated partner aggression is associated with a number of negative psychological consequences, including symptoms of depression, anxiety, PTSD, and low self-esteem (e.g., Arias & Pape, 1999; Carlson et al., 2002; Cascardi & O'Leary, 1992; Johnson & Leone, 2005). In addition, in the only study that has specifically investigated psychological cyber PA and possible outcomes, Piitz and Fritz (2010) found significant positive relations between psychological cyber PA and internalizing, externalizing, and total problems.

Hypothesis 3(b). I hypothesized that psychological cyber PA would be positively related to poor adaptive functioning, such that participants who experience higher levels of psychological cyber PA would be more likely to have poorer adaptive functioning with respect to work, education, and social relationships. Previous research has found that individuals who have experienced intimate partner aggression are more likely to miss days at work and school and have difficulty with productivity once they are there than those who have not (Browne et al.,

1999; Byrne et al., 1999; Riger et al., 2002).

Research Question Four: Relations among Coping Categories and Outcomes

The fourth primary aim of this research was to examine whether coping strategies were related to specific outcomes. Thus, the present study investigated whether adaptive coping, social support and expressive coping, and maladaptive coping strategies were related to poor psychological and adaptive functioning.

Hypotheses 4(a) and 4(b). I hypothesized that greater use of adaptive coping and social support and expressive coping categories would both be related to better psychological functioning (i.e., low self-esteem and more internalizing problems and externalizing problems) and better adaptive functioning (i.e., occupational problems and social relationship problems). This hypothesis was based on research indicating that coping strategies directed at targeting the problem and the resulting emotions are related to greater well-being and are perceived as being more effective than other forms of coping (e.g., Holahan & Moos, 1991; Holahan et al., 2005; Yoshihama, 2002).

Hypothesis 4(c). Based on research by Calvete and colleagues (2008) which demonstrated that disengagement coping was associated with higher levels of psychological distress (i.e., symptoms of anxiety and depression), I hypothesized that greater use of maladaptive coping would be related to poorer psychological functioning (i.e., low self-esteem, internalizing problems, and externalizing problems) and poorer adaptive functioning (i.e., occupational problems and social relationship problems). Other studies have also reported that maladaptive coping strategies are related to higher levels of psychological distress (e.g., Holahan et al., 2005; Marchand & Hock, 2003).

Research Question Five: Direct and Indirect Effects of Coping on Relations among

Psychological Cyber PA and Related Outcomes

The fifth primary aim of the present study was to examine the direct and indirect effects of coping on the relations among psychological cyber PA and associated outcomes. Thus, this study set out to investigate whether there are differences in the relations among psychological cyber PA and both poor psychological functioning and poor adaptive functioning based on use of adaptive coping, social support and expressive coping, and maladaptive coping strategies. This research question incorporates the information presented previously in Research Questions Two to Four into an overall model. Figure 2 (page 75) depicts the hypothesized path model, which visually represents the hypothesized pathways among psychological cyber PA, coping categories, and outcome variables. This is discussed in more detail in the Analyses section.

Hypothesis 5(a). It was hypothesized that higher levels of psychological cyber PA would be related to greater use of adaptive coping and this coping category would be related to better psychological functioning and better adaptive functioning.

Hypothesis 5(b). It was hypothesized that higher levels of psychological cyber PA would be related to greater use of social support and expressive coping and that this coping category would be related to better psychological functioning and better adaptive functioning.

Hypothesis 5(c). It was hypothesized that higher levels of psychological cyber PA would be related to greater use of maladaptive coping and that this coping category would be related to poorer psychological functioning and poorer adaptive functioning.

Research Question Six: Participants' Qualitative Accounts of Psychological Cyber PA

The sixth primary aim of the present study was to explore participants' qualitative responses descriptively as a way of learning more about their actual experiences with incidents of psychological cyber PA, how they coped with these incidents, and some of the difficulties they

Figure 2

Hypothesized Model Representing Direct and Indirect Effects of Coping Categories among

Psychological Cyber Partner Aggression and Outcomes

Note. CMJ = Control, Monitoring, Jealousy; I/T = Isolation/Threatening; RA = Relational Aggression; S = Stalking; VA = Verbal Aggression. PCPA = Psychological Cyber Partner Aggression. AdaptCope = Adaptive Coping; SocSup/ExpCope = Social Support and Expressive Coping; MaladCope = Maladaptive Coping. Int = Internalizing Problems; Ext = Externalizing Problems; ↓SE = Low Self-Esteem. Poor Psych = Poor Psychological Functioning. Occ Func = Occupational Functioning; Soc Func = Social Functioning. Poor Adapt = Poor Adaptive Functioning.

faced as a result. The purpose was to obtain a deeper understanding of the constructs being investigated through this information. Thus, these data were coded for recurring themes or key concepts.

Hypothesis 6. Based on qualitative studies examining psychological cyber PA (i.e., Draucker & Martsolf, 2010; Melander, 2010), I expected that the codes from the qualitative questions would reflect previously-established categories for forms of psychological cyber PA (i.e., control, monitoring, and jealousy behaviours; isolation/threatening behaviours; relational aggression; stalking; and verbal aggression), as measured by the PATS (Piitz & Fritz, 2008). Also, I predicted that the other main study variables would reflect theoretically-established categories for coping categories (i.e., adaptive coping, social support and expressive coping, and maladaptive coping) as measured by the COPE (Carver et al., 1989) and outcomes (i.e., psychological functioning and adaptive functioning), as measured by the Adult Self-Report (ASR; Achenbach & Rescorla, 2003). The qualitative data were expected to provide greater depth and context to increase understanding of the quantitative findings.

CHAPTER II: Methodology

Participants

For the present study, participants were recruited from the undergraduate psychology participant pool at a university in Southwestern Ontario, Canada. A total of 414 undergraduate students in current romantic relationships completed the survey. However, 65 of these individuals were over the age limit ($n = 40$), were not currently in romantic relationships ($n = 19$), or had mostly incomplete data ($n = 6$); therefore, their responses were excluded from the analyses. The final sample was comprised of 349 predominately female (82.1%) participants ranging in age from 17 to 24 ($M = 20.77$, $SD = 1.74$) years. According to Kline (2005), a sample size of more than 200 participants is considered good for achieving large effects in structural equation modeling. The majority of individuals identified as White/Caucasian (69.3%), followed by Black/African (7.8%), and Chinese (6.4%). Most participants attended university full-time (90.5%) and lived in their parents' home (53.9%). With respect to romantic relationships, 91.9% of participants were in an exclusive relationship (dating exclusively, engaged, or married) and the majority (92.2%) had met their partners offline. In terms of sexual orientation, most participants identified as heterosexual (96.6%), while 2.6% considered themselves bisexual, and .9% indicated that they were not sure. A large number (40.9%) of individuals in the present study reported having felt upset by a romantic partner's behaviour through computer-mediated communication. According to these individuals, over half (55.0%) experienced difficulties in response to the experience. Further demographic information is presented in Table 1 (page 78).

Of the individuals who completed the online survey, 12 participants (6 males, 6 females) between the ages of 18 and 24 years ($M = 20.82$, $SD = 1.83$) who had experienced at least one act of online partner aggression within the past year, completed semi-structured interviews. With

Table 1

Demographic Characteristics (N = 349)

	n	*%*	*Mean (SD)*
Gender			
Female participants	286	82.1	
Male participants	62	17.9	
Age			20.77(1.74)
Year of study			
First	48	13.8	
Second	102	29.2	
Third	96	27.5	
Fourth	98	28.1	
Fifth	5	1.4	
Ethnicity			
White	239	69.3	
Chinese	22	6.4	
South Asian	16	4.6	
Black	27	7.8	
Filipino	4	1.2	
Latin American	2	0.6	
Southeast Asian	3	0.9	
Arab	15	4.3	
West Asian	1	0.3	
Japanese	0	0.0	
Korean	0	0.0	
Aboriginal	0	0.0	
Multiracial	12	3.5	
Other	4	1.2	
Time with Partner			
Less than 6 months	95	27.3	
6 months – 1 year	66	19.0	
1 year to 2 years	64	18.4	
Over 2 years	123	35.3	
CMC Accounts of Self and Partner			
Email account self	344	99.4	
Email account partner	342	97.7	
IM account self	300	86.5	
IM account partner	293	83.7	
SNS account self	321	92.2	
SNS account partner	306	88.4	

Note. CMC = computer-mediated communication. IM = instant messaging. SNS = social networking sites.

respect to ethnicity, the majority of participants identified as White/Caucasian ($n = 9$; 75%) and Black/African ($n = 3$; 25%). All but one participant, who was married, reported that they were dating a romantic partner exclusively. Nine participants met their romantic partners offline whereas three participants reportedly met their romantic partners online.

Measures

The materials for the present study were posted in an online format and included 12 questionnaires reflecting demographic information, psychological cyber PA, perceived severity for each aggressive act of psychological cyber PA, perceptions of partners' use of control tactics, relationship conflict, offline psychological partner aggression, psychological functioning, adaptive functioning, coping, social desirability, and potential control variables of perceived social support and perceived locus of control, which are theoretically related to coping. The order of the measures was randomized to prevent order effects. Five qualitative questions also were included in the online battery to obtain information about participants' experiences with online partner aggression. However, responses from these five questions were not analyzed in the present study because more extensive qualitative data were collected via semi-structured interviews with individuals who had previously experienced online partner aggression. The semi-structured interviews were comprised of 10 qualitative questions (see Appendix A) to obtain information about participants' perceptions of and experiences with psychological cyber PA.

Demographic information. Participants provided demographic information, such as their age, gender, sexual orientation, ethnicity, religious affiliation, year in university, student status (i.e., part-time or full-time), major, current living arrangements (i.e., residence), and with whom they are living. I also collected information specific to romantic relationships (e.g., whether participants met their romantic partners online or offline) and commitment to and satisfaction

with their current romantic relationship. Finally, participants were asked questions related to their computer-mediated communication usage (e.g., time spent per day on email, instant messaging, and social networking sites). See Appendix B for this measure.

Psychological cyber partner aggression. Information was collected about participants' experiences with psychological cyber PA using two modified versions of the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2008). Information about both frequency and perceived severity was obtained for each aggressive act across the three forms of computer-mediated communication (email, instant messaging, and social networking sites).

Frequency. A modified version of the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2008) was used to assess the frequency of psychological cyber PA victimization. This measure was selected as it is the only questionnaire, to date, specific to partner aggression occurring across different forms of computer-mediated communication. In addition, the measure obtains information reflecting different forms of partner aggression (e.g., monitoring, controlling/domineering, emotional/verbal aggression, stalking, and relational aggression). This measure was modified by removing items reflecting partner aggression occurring via the telephone and text messaging, since the present study focused specifically on partner aggression occurring via email, instant messaging, and social networking sites. In addition, two items, which include: "Would not let me talk to other people through my **social networking website** (e.g., Facebook, MySpace, blogs, etc.)" and "Made me describe where I was throughout the day through my **social networking website** (e.g., Facebook, MySpace, blogs, etc.)" were added because only email and instant messaging were referenced for these particular items in the original measure. The modified measure consists of 42 items reflecting psychological cyber PA. The response format, which ranges from 3 (*very often*) to 0 (*never*) with an additional response

option of, "*Not in last year, but has happened in the past*", provided information about the frequency of occurrence for each aggressive act.

To assess the factor structure of the PATS measure, a principal components analysis with Oblique rotation was conducted. Five principal components emerged (see Table 2, page 82): control, monitoring, and jealousy; isolation/threatening behaviours; relational aggression; stalking; and verbal aggression. Three items, "Made me describe where I was throughout the day through email", "Made me describe where I was throughout the day through instant messaging", and "Made me describe where I was throughout the day through my **social networking website** (e.g., Facebook, MySpace, blogs, etc.)" were moved to Factor 1 and one item, "Posted something on my **social networking website** (e.g., Facebook, MySpace, blogs, etc.) to hurt my feelings on purpose" was moved to Factor 5 because they fit better with these factors theoretically. Because the PATS was only used in one prior study, no previous psychometric properties were available. In the present study, all subscales showed good reliability with Cronbach's alphas ranging from .82 to .93 and correlated with measures of relationship conflict and offline partner aggression (see Table 3, page 84).

Perceived severity. An additional modified version of the PATS (Piitz & Fritz, 2008) was used to measure perceived severity. For each aggressive act identified in the 42 items, respondents were asked to indicate the extent to which they felt or would feel: annoyed, upset, threatened, and violated on an 11-point Likert scale with the anchors: 0 (*not at all*), 5 (*moderately*), and 10 (*extremely*). These response options were used by Cupach and Spitzberg (2000) to measure perceived severity for each item on their scale assessing obsessive relational intrusion. The final measure consisted of 42 items with each one measuring the four areas of severity. Thus, data were collected regarding participants' perceptions of severity for each

Table 2

Factor Loadings for Principal Components Analysis with Oblique Rotation of the Partner Aggression Technology Scale

PATS Items	PATS Subscales				
	CMJ	Iso/Threat	Rel Agg	Stalk	Verb Agg
Would not let me **email** other people	**.66**	.34		-.48	.43
Would not let me talk to other people through **IM**	**.79**	.30			.47
Would not let me talk to other people through my **SNS**	**.86**	.33			.42
Told me I could not **email** someone of the opposite sex	**.68**			**-.56**	.42
Told me I could not talk to someone of the opposite sex through **IM**	**.74**			-.46	.44
Told me I could not communicate with someone of the opposite sex on my **SNS**	**.87**				.36
Made me describe where I was throughout the day through **email**	.47	.36		**-.69**	.42
Made me describe where I was throughout the day through **IM**	.49			**-.55**	.48
Made me describe where I was throughout the day through **SNS**	.45			-.34	.30
Monitored my **emails**	**.60**	.39	.35	-.43	.42
Monitored my **IM**	**.73**	.34	.30		**.53**
Monitored my **SNS**	**.72**		.41		.42
Got angry at me for talking to a particular person through **email**	**.68**			**-.57**	.48
Got angry at me for talking to a particular person through **IM**	**.71**			-.50	**.52**
Got angry at me for talking to a particular person through **SNS**	**.71**				.43
Told me I could not **email** my family		**.79**			
Told me I could not **IM** my family		**.86**			
Told me I could not communicate with my family on my **SNS**		**.84**	.34		
Told me I could not **email** someone of the same sex		**.75**	.35	-.32	
Told me I could not **IM** someone of the same sex	.37	**.78**			
Told me I could not communicate with someone of the same sex on my **SNS**	.43	**.70**	.39		

	CMJ	Iso/Threat	Rel Agg	Stalk	Verb Agg
Threatened to hurt me in an **email**		**.71**	.44		.40
Threatened to hurt me in an **IM**		**.56**	**.51**		.50
Threatened to hurt me through my **SNS**	.31	**.69**	**.62**		.39
Emailed others to start rumors about me	.39	**.57**	**.71**	-.32	
IM'ed others to start rumors about me		.45	**.80**	-.31	
Contacted others through a **SNS** to start rumors about me		.32	**.83**		
Told others through **email** intimate details about me		.37	**.78**		.33
Told others through **IM** intimate details about me			**.73**		.38
Told others through **SNS** intimate details about me		.37	**.77**		.31
Emailed me all of the time when I did not want them to	.38	.40	.39	**-.76**	.40
IM'ed me all of the time when I did not want them to	.34		.49	**-.64**	.37
Contacted me on my **SNS** when I did not want them to			.48	**-.52**	.38
Emailed me something to hurt my feelings on purpose	.42				**.70**
IM'ed me something to hurt my feelings on purpose	.39				**.79**
Posted something on my **SNS** to hurt my feelings on purpose	**.52**	.37			**.51**
Insulted/swore at me through **email**	.34	.41	.34	-.35	**.74**
Insulted/swore at me through **IM**	.36				**.78**
Insulted/swore at me through my **SNS**	.35		.41		**.62**
Brought up something from the past to hurt me though **email**	.38			-.43	**.68**
Brought up something from the past to hurt me though **IM**	.42				**.76**
Brought up something from the past to hurt me though **SNS**	.48			.36	**.57**

Note. Items are grouped according to factor structure. PATS = Partner Aggression Technology Scale (Piitz & Fritz, 2008). CMJ = Control, Monitoring, Jealousy; Iso/Threat = Isolation/Threatening; Rel Agg = Relational Aggression; Stalk = Stalking; Verb Agg = Verbal Aggression. IM = Instant Messaging. SNS = Social Networking Site. Factor loadings > .50 are boldface.

Table 3

Psychometric Properties of the Main Study Variables

Variable	N	M(SD)	%	α
PATS				
Control/Monitoring/Jealousy	326	.56 (.81)	68.7	.93
Isolation/Threatening Behaviours	334	.14 (.49)	17.1	.90
Relational Aggression	339	.27 (.72)	23.0	.89
Stalking	339	.48 (.91)	33.6	.82
Verbal Aggression	333	.74 (.91)	66.1	.87
Email	334	.39 (.65)	56.0	.89
Instant Messaging	330	.54 (.68)	71.8	.88
Social Networking Sites	336	.41 (.59)	64.7	.86
CADRI				
Threatening	329	.15 (.36)	24.9	.76
Relational Aggression	328	.09 (.28)	12.5	.67
Physical Aggression	331	.14 (.36)	20.8	.80
Sexual Aggression	331	.28 (.42)	45.0	.64
Verbal Emotional Aggression	321	.81 (.60)	93.1	.87
PMI				
Control	312	1.32 (.44)	67.0	.86
Jealousy	327	1.59 (.56)	85.0	.70
COPE				
Positive Reinterpretation/Growth	317	2.93 (.66)		
Mental Disengagement	317	2.42 (.63)		
Focus on and Venting of Emotions	313	2.52 (.74)		
Instrumental Social Support	314	2.76 (.79)		
Active Coping	311	2.68 (.63)		
Denial	313	1.56 (.60)		
Religious Coping	317	2.06 (1.02)		
Humour	316	2.20 (.80)		
Behavioural Disengagement	312	1.62 (.59)		
Restraint	316	2.32 (.60)		
Emotional Social Support	313	2.72 (.88)		
Substance Use	315	1.38 (.65)		
Acceptance	317	2.65 (.65)		
Suppression of Competing Activities	315	2.08 (.53)		
Planning	314	2.85 (.71)		
Adaptive Coping	289	2.67 (.51)		.84
Social Support/Expressive Coping	298	2.67 (.44)		.80
Maladaptive Coping	290	1.74 (.44)		.68
Adult Self Report				
Internalizing Problems	321	56.49 (11.98)		.94
Externalizing Problems	321	53.13 (10.49)		.92
Occupational Functioning	217	89.88 (29.90)		.83

Social Functioning	332	94.97 (20.79)	.75
Rosenberg Self-Esteem Scale			
Low Self-Esteem	325	19.15 (5.62)	.91

Note. PATS = Partner Aggression Technology Scale (Piitz & Fritz, 2008). CADRI = Conflict in Adolescent Dating Relationships Inventory (Wolfe et al., 2001). COPE = Coping Orientation to Problems Experienced (Carver et al., 1989).

specific aggressive act and then averaged across the different types of partner aggression (i.e.,

control, monitoring, and jealousy; isolation/threatening behaviours; relational aggression;

stalking; and verbal aggression) and forms of computer-mediated communication (i.e., email,

instant messaging, and social networking sites). Again, because the PATS is a new measure and

had not previously been used as a measure of perceived severity, there was no information

regarding psychometric properties prior to the present study. In the present study, reliability was

high for all subscales with Cronbach's alphas ranging from .90 to .98 (see Table 4, page 87).

Type of partner aggression. Using Johnson's (1995) typology as a guiding framework, the

present study assessed romantic partners' use of nonviolent coercive control tactics in order to

differentiate between intimate terrorism and situational couple violence using the 24-item

Revised Controlling Behaviours Scale (CBS-R, Graham-Kevan & Archer, 2005). Items

reflecting behaviours used to obtain control over a partner are divided into five subscales, which

reflect economic abuse (e.g., "Made it difficult to work or study"), coercion and threats (e.g.,

"Threaten to disclose damaging or embarrassing information"), intimidation (e.g., "Try to make

you do things you didn't want to do"), emotional abuse (e.g., "Call you unpleasant names"), and

isolation (e.g., "Check up on your movements"). Response options range from 0 (*never*) to 4

(*always*). For each item, participants are asked to indicate how frequently they engaged in the

aggressive act towards their partners and how frequently their partners engaged in the aggressive

act towards them. Because the present study specifically examined victimization, items assessing

victimization were examined only. Subscale scores are obtained by summing the responses to the

items that make up each of the subscales and a total control score is obtained by summing the

subscale scores. Higher scores indicate greater use of control tactics toward one's partner. The

Table 4

Descriptive Statistics for Perceived Severity Ratings for Psychological Cyber Partner Aggression Behaviours

| | Perceived Severity Ratings | | | | | | | | | |
| | Annoying | | Upsetting | | Threatening | | Violating | | Total | |
Psych Cyber PA Subscales	*Mean (SD)*	α	*Mean (SD)*	α	*Mean (SD)*	α	*Mean (SD)*	α	*Mean (SD)*	α
Control/Monitoring/Jealousy		.97		.97		.98		.97		.93
Total	8.01 (2.53)		7.09 (2.81)		5.64 (3.21)		6.32 (3.13)		6.76 (2.69)	
Female participants	8.33 (.18)		7.53 (.20)		6.16 (.23)		6.85 (.23)		7.21 (.19)	
Male participants	6.37 (.42)		5.50 (.46)		4.13 (.53)		4.71 (.51)		5.17 (.44)	
Isolation/Threatening		.96		.97		.96		.97		.94
Total	8.21 (2.61)		8.10 (2.73)		6.89 (3.18)		6.80 (3.36)		7.48 (2.77)	
Female participants	8.48 (.19)		8.52 (.19)		7.41 (.23)		7.45 (.24)		7.97 (.20)	
Male participants	6.85 (.44)		6.88 (.44)		5.49 (.52)		5.36 (.54)		6.15 (.45)	
Relational Aggression		.98		.98		.98		.97		.94
Total	8.48 (2.73)		8.42 (2.85)		7.15 (3.36)		7.97 (3.13)		7.99 (2.82)	
Female participants	8.75 (.20)		8.78 (.20)		7.68 (.24)		8.39 (.22)		8.40 (.20)	
Male participants	7.55 (.46)		7.39 (.46)		6.17 (.55)		7.07 (.51)		7.04 (.47)	
Stalking		.96		.96		.97		.97		.90
Total	7.41 (3.15)		5.42 (3.43)		4.09 (3.52)		4.23 (3.58)		5.27 (3.01)	
Female participants	7.74 (.23)		5.72 (.26)		4.61 (.26)		4.72 (.27)		5.70 (.23)	
Male participants	6.11 (.53)		5.09 (.59)		3.17 (.60)		3.42 (.62)		4.45 (.52)	
Verbal Aggression		.96		.96		.96		.95		.90
Total	7.56 (2.49)		7.80 (2.47)		5.31 (3.05)		5.88 (3.03)		6.72 (2.39)	
Female participants	7.90 (.19)		8.21 (.18)		5.71 (.23)		6.29 (.22)		7.03 (.18)	
Male participants	6.29 (.43)		6.52 (.40)		4.29 (.52)		4.88 (.51)		5.50 (.41)	

Note. All ratings were made on a scale ranging from 0 (*not at all*), 5 (*moderately*), and 10 (*extremely*). Psych Cyber PA = Psychological Cyber Partner Aggression.

total coercive control score was used in the present study.

To determine whether the total coercive control score reflected intimate terrorism (i.e., high control) or situational couple violence (i.e., low control), Graham-Kevan and Archer (2003) conducted a *K*-means cluster analysis with a two-cluster solution. As recommended by Johnson (2008), a similar analysis was conducted in the present study to determine how best to dichotomize the groups according to Johnson's typology. Euclidean distance was used to measure dissimilarity and cluster membership (i.e., high or low) was identified for each participant. Good discriminant validity and internal consistency reliability ($\alpha = .87$) were reported for the total coercive control scale in a study conducted with undergraduate students (Graham-Kevan & Archer, 2005). Similarly, the Cronbach's alpha for the total coercive control scale was .92 in the present study.

Measures of offline partner aggression. Because the PATS (Piitz & Fritz, 2008) was only recently developed, two additional questionnaires assessing offline partner aggression were included in the present study. The Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001) was used to assess abusive behaviours that can occur in romantic relationships and are considered appropriate for an adolescent age group. The CADRI is comprised of 70 items reflecting acts of aggression (e.g., physical, verbal, sexual, relational, and threatening) with 35 items assessing victimization and 35 parallel items assessing perpetration of partner aggression. The response format ranges from 0 (*never*) to 5 (*often; 6 or + times*). In the present study, the terms "boyfriend" and "girlfriend" were changed to "partner" to include relationships other than dating. For example, the statement: "During a conflict or argument with my boyfriend or girlfriend in the past year:" was changed to "During a conflict or argument with my partner in the past year:". Wolfe and colleagues (2001) reported a Cronbach's alpha of .83

for the total abuse score and good test-retest reliability and construct validity. In the present study, Cronbach's alphas for subscale scores ranged from .64 (Sexual Aggression) to .87 (Verbal Emotional Aggression; see Table 3, page 84).

Kasian and Painter's (1992) factor analyzed version of the Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989) was used to assess offline psychological partner aggression. Because men were included in Kasian and Painter's sample, they refer to the scale as the Psychological Maltreatment Inventory (PMI). The PMI is comprised of 18 pairs of items assessing both victimization and perpetration. Twelve pairs of items assess controlling behaviours (e.g., "My partner tried to keep me from seeing or talking to my family"; "I tried to keep my partner from seeing or talking to his/her family") and six pairs of items assess jealousy behaviours (e.g., "My partner was jealous of other women/men"; "I was jealous of other women/men"). The response format ranges from 1 (*never*) to 5 (*almost always*). This version of the PMWI has been used in previous research (e.g., O'Leary, Slep, & O'Leary, 2007). Kasian and Painter reported Cronbach's alphas of .83 and .82 for controlling behaviours and jealousy behaviours, respectively. Cronbach's alphas of .86 (controlling behaviours) and .70 (jealousy behaviours) were found in the present study (see Table 3, page 84).

Psychological functioning. Psychological functioning was investigated by examining participants' ratings of self-esteem, internalizing and externalizing problems, and total problems. These areas were examined using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) and the Adult Self-Report (ASR; Achenbach & Rescorla, 2003), both of which are described below.

Self-esteem. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), which is comprised of 10 statements measuring global self-esteem (e.g., "On

the whole, I am satisfied with myself"). For each statement, participants are asked to indicate the degree to which they agree or disagree on a 4-point Likert scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Higher scores reflect greater levels of self-esteem. The RSES has been widely used and is reported to be reliable and valid, with studies reporting Cronbach's alphas ranging from .72 to .88 (Gray-Little Williams, & Hancock, 1997; Robins, Hendin, & Trzesniewski, 2001). In addition, the RSES has been used in both coping (e.g., DeLongis et al., 1988) and computer-mediated communication research (e.g., Ellison et al., 2007; Muise et al., 2009). In the present study, the Cronbach's alpha for the RSES total score was .91.

     Internalizing and externalizing problems. Internalizing and externalizing problems were measured using the Adult Self-Report (ASR; Achenbach & Rescorla, 2003). The ASR consists of 126 items related to internalizing and externalizing problems. A total score can also be obtained with higher scores reflecting higher problem levels. For each item, participants are asked to rate the extent to which the statement describes them using the response format 0 (*not true*), 1 (*somewhat true or sometimes true*), and 2 (*very true or often true*). Some items also include an area where participants can provide further details about their experiences, such as, "Can't get my mind off certain thoughts; obsessions (describe)." Ratings reflect participants' experiences over the previous six months (Rescorla & Achenbach, 2004). Internalizing problems reflect problems within the self and are based on scores from subscales which include, anxiety/depression (e.g., "I am unhappy, sad, or depressed"), withdrawal (e.g., "I would rather be alone than with others"), and somatic complaints (e.g., "I feel tired without good reason"). Externalizing problems reflect conflicts with other people and social mores and are based on scores from subscales, which include, aggressive behaviour (e.g., "I get in many fights"), rule-breaking behaviour (e.g., "I am impulsive or act without thinking"), and intrusive behaviour

(e.g., "I try to get a lot of attention"). With respect to reliability data, Rescorla and Achenbach report Cronbach's alphas of .93, .89, and .97 and test-retest reliabilities over one-week intervals of .89, .91, and .94 for internalizing, externalizing, and total problems, respectively. Good reliability also was found in the present study with Cronbach's alphas of .94 and .92 for internalizing problems and externalizing problems, respectively.

Adaptive functioning. The areas of adaptive functioning that were examined in the present study are occupational functioning (e.g., ability to function at work and at school) and social functioning. These areas were assessed using the ASR (Achenbach & Rescorla, 2003) on scales for friends and family (e.g., "How well do you get along with your close friends"), spouse/partner (e.g., "My spouse or partner and I enjoy similar activities"), job (e.g., "My job is too stressful for me"), and education (e.g., "I have trouble finishing assignments"). An overall adaptive functioning score also was calculated by averaging the *t*-scores of all the adaptive functioning scales (Achenbach & Rescorla, 2003). For this measure, the response format for most of the items is 0 (*not true*), 1 (*somewhat true or sometimes true*), and 2 (*very true or often true*) and participants have the opportunity to provide more detailed information about their experiences through three open-ended items (e.g., "Please describe your concerns or worries about family, work, education, or other things"). On this measure, lower scores indicate poorer adaptive functioning in these areas. Please see above description of psychometric properties for the full-scale version of the ASR as described by Rescorla and Achenbach (2004). Cronbach's alphas of .83 and .75 were found in the present study for occupational functioning and social functioning, respectively.

Coping. Participants' dispositional coping strategies were measured using the 60-item Coping Orientation to Problems Experienced (COPE; Carver et al., 1989) scale, which assesses

how well individuals respond to stressful situations and which coping responses they typically use. Response options range from 1 (*I usually don't do this at all*) to 4 (*I usually do this a lot*). The COPE measures coping responses across 15 subscales, which include four items per subscale and consist of: positive reinterpretation and growth (e.g., "I try to grow as a person as a result of the experience"); mental disengagement (e.g., "I daydream about things other than this"); focus on and venting of emotions (e.g., "I get upset, and am really aware of it"); use of instrumental social support (e.g., "I try to get advice from someone about what to do"); active coping (e.g., "I concentrate my efforts on doing something about it"); denial (e.g., "I refuse to believe that it has happened"); religious coping (e.g., "I seek God's help"); humour (e.g., "I make jokes about it"); behavioural disengagement (e.g., "I just give up trying to reach my goal"); restraint (e.g., "I force myself to wait for the right time to do something"); use of emotional social support (e.g., "I get sympathy and understanding from someone"); substance use (e.g., "I use alcohol or drugs to help me get through it"); acceptance (e.g., "I accept the reality of the fact that it happened"); suppression of competing activities (e.g., "I put aside other activities in order to concentrate on this"); and planning (e.g., "I think hard about what steps to take"; Carver et al., 1989). Carver and colleagues (1989) reported Cronbach's alphas of .45 (mental disengagement) to .92 (religious coping) across subscales and good convergent and discriminant validity.

In previous studies, these coping responses have been grouped into theory-based categories through factor analysis (i.e., problem-focused coping, adaptive emotion-focused coping, and maladaptive emotion-focused coping; Moos & Holahan, 2003). Similarly, I used factor analysis in the present study to determine whether the data fit into similar theory-based groupings. This approach of obtaining more general information regarding coping strategies rather than examining each individual subscale seemed beneficial because the present study examines a new

area of research. Average scores were calculated for the item responses in each of the subscales. Next, a principal components analysis with Oblique rotation was conducted using the subscales to assess the COPE's factor structure. Three principal components emerged (see Table 5, page 94) reflecting adaptive coping (e.g., planning, active coping, positive reinterpretation and growth, humour, acceptance, suppression of competing activities, restraint), social support and expressive coping (e.g., seeking support for emotional reasons, focus on and venting of emotions, seeking support for instrumental reasons), and maladaptive coping (e.g., behavioural disengagement, denial, substance use, mental disengagement). One subscale (i.e., religious coping) did not load highly on any of the three emerging factors. Thus, this subscale was removed. Cronbach's alphas ranged from .68 to .84 for the three coping categories (see Table 3, page 84).

Social desirability. The Marlowe-Crowne Social Desirability Scale (SDS) Short-Form C (MCSDS Form C; Reynolds, 1982) is a 13-item scale that was used to assess participants' tendencies to provide socially desirable responses. The shortened version was based on the 33-item original version, developed by Crowne and Marlowe (1960). Both versions have been extensively used (Fischer & Fick, 1993; Reynolds, 1982). Items reflect either highly culturally desirable behaviours that are typically performed infrequently by most people or culturally undesirable behaviours that are typically common. The response format is *true* or *false* with higher scores indicating a greater likelihood of presenting oneself in a socially desirable manner after negatively keyed items are reversed. The items in the shortened version were based on a factor analysis of 608 university students' responses to the Marlowe-Crowne Social Desirability Scale. Fischer and Fick reported an alpha coefficient of .89 for the MCSDS Form C. In addition, Form C was found to highly correlate with the original 33-item scale (Fischer & Fick, 1983;

Table 5

Factor Loadings for Principal Components Analysis of the COPE

	Coping Factors		
		Soc Supp/Express	
COPE Subscales	Adapt Coping	Coping	Malad Coping
Planning	**.79**	-.17	-.27
Active Coping	**.77**	-.13	-.19
Pos Reinterp/Growth	**.77**		-.35
Acceptance	**.66**	-.20	
Restraint	**.65**		.23
Suppressing Competing Activities	**.62**		.21
Humour	**.54**	.28	.24
Seeking Emotional Support	.13	**-.83**	
Focus and Venting of Emots		**-.80**	.23
Seeking Instrumental Support	.36	**-.71**	
Behavioural Disengagement			**.85**
Denial		.10	**.81**
Substance Use		-.12	**.64**
Mental Disengagement	.22		**.49**
Did Not Load on Specific Factor			
Religious Coping	.27		.13

Note. Items are grouped according to factor structure. COPE = Coping Orientation to Problems Experienced (Carver et al., 1989). Pos Reinterp/Growth = Positive Reinterpretation and Growth. Adapt Coping = Adaptive Coping; Soc Supp/Express Coping = Social Support and Expressive Coping; Malad Coping = Maladaptive Coping. Factor loadings > .45 are boldface.

Reynolds, 1982). A Cronbach's alpha of .73 was found for the total social desirability score in the present study.

Control measures. Perceived social support and locus of control have both been found to be theoretically related to coping strategies (e.g., Moos & Holahan, 2003; Pape & Arias, 1995). As such, questionnaires designed to assess these possible control variables were included in the present study.

Perceived social support. Perceived social support was measured using the Perceived Social Support Scale (PSS; Procidano & Heller, 1983), which is a 40-item scale measuring the degree to which participants perceive they have available support, information, and help from family members and friends. The PSS is comprised of two 20-item subscales with items assessing perceived family support (PSS-Fa; e.g., "My family gives me the moral support I need") and perceived support from friends (PSS-Fr; e.g., "I rely on my friends for emotional support"). Response options include *yes*, *no*, and *I don't know* with higher scores indicating greater perceived social support. Scores are determined by calculating one point when individuals respond *yes* to an item and then summing the points to obtain scores for each of the subscales. Procidano and Heller reported good internal consistency for both the PSS-Fa ($\alpha = .90$) and PSS-Fr ($\alpha = .88$) in an undergraduate student population. Similarly, Lyons, Perrotta, and Hancher-Kvam (1988) reported Cronbach's alphas ranging from .89 to .92 for the PSS-Fa and .84 to .92 for the PSS-Fr across diverse populations. In addition, Procidano and Heller reported good test-retest reliability ($r = .83$) over a one-month period. Cronbach's alphas were .88 for both the PSS-Fr and PSS-Fa scales in the present study.

Perceived locus of control. Perceived locus of control was assessed using the 21-item revised version of the Nowicki-Strickland Locus of Control Scale (Nowicki & Strickland, 1973).

Participants are asked to indicate whether they agree with statements (e.g., "Do you feel that when you do something wrong there's very little you can do to make it right?") assessing their generalized locus of control. The response format is *yes* or *no*, with higher scores indicating greater external (as opposed to internal) orientation of control. The measure was revised to reflect use with university-age participants by changing the word "kids" to "people" (Nowicki & Strickland, 1973). Nowicki and Strickland reported a split-half reliability of $r = .81$ with Grade 12 students for the full-length version of the measure. They also reported test-retest reliabilities of .63, .66, and .71 for third, seventh, and tenth graders, respectively, across six weeks. This measure has also been used previously in research with undergraduate students (e.g., Rotsztein, 2003). A Cronbach's alpha of .81 was found in the present study, suggesting good reliability.

Qualitative items. Researchers (e.g., Gelo, Braakmann, & Benetka, 2008) have argued that integrating quantitative and qualitative approaches provides greater depth to studies and accounts for some of the limitations of each approach. As such, semi-structured interviews comprised of ten qualitative questions were conducted to provide information about participants' personal ideas about what constitutes psychological cyber PA and their specific experiences with psychological cyber PA (see Appendix A). Only participants whose questionnaire responses indicated that they had experienced at least one act of online partner aggression were invited to participate in the interview. The qualitative questions were created in an attempt to mirror the variables of psychological cyber PA, coping behaviours, and outcomes examined through questionnaire data while obtaining more specific information regarding participants' perceptions and experiences as well as contextual factors around the aggression. The qualitative items also were reviewed and discussed with members of a partner aggression research group. Previous research on dating violence (e.g., Melander, 2010; Sears, Byers, Whelan, & Saint Pierre, 2006)

has started with an introductory question prior to asking about participants' specific experiences with partner aggression. Using a similar approach, participants in the current study were initially asked to describe behaviours that they would classify as online partner aggression and how much of a problem they perceived psychological cyber PA to be. They also were asked to describe a situation in which their partners' use of computer-mediated communication was upsetting to them. Participants were then asked to describe how they coped with the situation; whether they perceived their coping strategies as helpful; and any outcomes that resulted from the situation (e.g., change in their relationship status, impact on their use of technology, and any difficulties resulting from the situation). Thus, efforts were made to create qualitative questions that reflected the quantitative variables, but did so in a way that provided greater detail and depth regarding participants' experiences.

This qualitative piece was centered in the complementarity paradigm, which seeks to elaborate, enhance, illustrate, and clarify one method's results (i.e., quantitative) with that of another (i.e., qualitative; Bryman, 2006; Greene, Caracelli, & Graham, 1989). In an examination of 232 articles that integrated quantitative and qualitative methods, Bryman reported that complementarity was most frequently cited as the rationale for including both methods and is the most commonly used approach.

Procedure

As an initial step, I requested and received permission to conduct the present study from the Research Ethics Board (REB) and the coordinator of the University of Windsor Psychology Participant Pool. Following receipt of approvals, an advertisement for the present study was posted on the University of Windsor Psychology Participant Pool website inviting individuals to sign up for the online study (see Appendix C). The advertisement provided information about the

study, the study's URL, and instructions for participation.

Individuals who wished to participate were able to access the study's URL. Upon doing so, they were presented with the Information Letter/Consent Form (see Appendix D) informing them about the study and allowing them to consent to or decline participation by clicking on the "I agree" or "I do not wish to participate" buttons, respectively. Individuals who did not wish to participate also were able to close their web browsers. The Information Letter/Consent Form included an option for printing so that participants could keep this information for their records. A generic User ID and password required to access the survey were posted on the Information Letter/Consent Form. Participants were provided with a User ID and password in order to help monitor use of the surveys and ensure that the study could only be accessed by those who were invited to participate. The login information was the same for each participant to ensure anonymity. In addition, any personal information that was required to assign participation points was removed from the data and stored separately to ensure anonymity. Once participants clicked "I agree", they were prompted to enter the User ID and password provided by the researchers at which point they were taken to the questionnaires. The questionnaires were presented in randomized order to prevent order effects. Upon completion, participants submitted their online data by clicking on a "Submit" button at which point they were lead to a page thanking them for their participation and summarizing the research. Information about available community resources and instructions for web safety (e.g., clearing Internet browsers) also was included on this page, which participants were able to print and keep for their records. The online surveys were expected to take approximately 90 minutes. Individuals recruited from the University of Windsor Psychology Participant Pool received one and a half credit points for completion of questionnaires. As noted previously, personal information was stored separately from their data.

Following completion and submission of the questionnaires, participants whose responses suggested that they had experienced at least one act of online partner aggression (as specified by their online partner aggression total score) were presented with a pop-up page following the completion of their survey asking whether they consented to being recontacted for participation in an additional portion of the study (see Appendix E). Eligible participants were contacted immediately following completion of their questionnaires so that data collection could be completed in a timely manner. Those who consented to being recontacted were invited to participate in a face-to-face semi-structured interview and were awarded one point for participation. However, although the target number (i.e., six) of female participants was obtained through this methodology, due to difficulty obtaining the target number (i.e., six) of male participants for the qualitative portion of the study, following REB approval, a separate advertisement for the qualitative portion of the study was posted on the Psychology Participant Pool website. In order to be eligible for participation, individuals had to have completed the questionnaire portion of the study. In addition, a screening question (e.g., "have you experienced a situation when you felt upset by something a partner did over email, instant messaging, or social networking sites, such as Facebook, MySpace, blogs, etc.?") was added as part of participation eligibility for the Psychology Participant Pool to ensure participants had previous experience with psychological cyber PA. Qualitative and quantitative data were linked through unique codes created using participants' reported house number, birthday month, and birthday year so they would not be identified.

Interviews were conducted by trained research assistants and were audiotaped for transcription and content analysis. Training involved reviewing the procedure with research assistants during face-to-face meetings and practising the interview process through role plays

and group coding of one transcript. Research assistants also were provided with detailed written descriptions of the procedure for their reference. Following each interview, the audiotapes were reviewed by the primary researcher so that feedback could be provided to research assistants if needed. Prior to beginning the interviews, the Consent Form and Audio Consent Form (see Appendix F and Appendix G) were reviewed and participants were informed that, after beginning the interview, they could withdraw at any time without penalty (i.e., they would receive their participation point, research summary, and list of local resources). In addition, they were provided with the researchers' (one of whom is a registered clinical psychologist) names and contact information and invited to contact them at any time with questions or concerns. Participants were offered breaks as needed during the interview and were verbally informed that they could discontinue participation at any time without penalty and that results were confidential. They also were informed that they did not have to answer any questions they did not feel comfortable answering. Following completion of the interview, they were asked about possible questions or concerns and given an opportunity to discuss any negative feelings that may have resulted from the discussion.

CHAPTER III: Results

Description of Analyses

Research question one: frequency and perceived severity of psychological cyber PA. For information regarding the frequency and perceived severity of psychological cyber PA, descriptive statistics (i.e., means, standard deviations, and frequency counts) were conducted for male, female, and total participants. In addition, perceived relationship quality, perceived severity, and psychological and adaptive functioning were considered with respect to previous experience with psychological cyber PA through ANOVAs. Pearson correlations were used to assess the relation between frequency of psychological cyber PA and participants' perceptions of severity and t-tests, ANOVAs, MANOVA, and chi-square analyses were conducted as appropriate in order to make comparisons.

Research questions two, three, and four: relations among psychological cyber PA, coping categories, and outcomes. Pearson correlations were used to assess: 1) relations between participants' experiences of psychological cyber PA and each of the three coping categories (i.e., adaptive coping, social support and expressive coping, and maladaptive coping); 2) relations between participants' experiences of psychological cyber PA and each measure of psychological functioning (i.e., low self-esteem, internalizing problems, and externalizing problems); 3) relations between participants' experiences of psychological cyber PA and each measure of adaptive functioning (i.e., occupational functioning and social functioning); and 4) relations among coping categories (i.e., adaptive coping, social support and expressive coping, and maladaptive coping) and each measure of psychological functioning (i.e., low self-esteem, internalizing problems, and externalizing problems) and adaptive functioning (i.e., occupational functioning and social functioning).

Research question five: direct and indirect effects of coping on relations among psychological cyber PA and related outcomes. A two-step approach to structural equation modeling (SEM) was used to test the fifth primary aim of the present study. Figure 2 (page 75) provides an illustration of the path model, which represents the hypothesized relations among psychological cyber PA, coping, and outcome variables. Selection criteria included a Comparative Fit Index (CFI) greater than .95 and a Root Mean Square Error of Approximation (RMSEA) of .08 or less. Perceived locus of control and perceived social support were included as control variables in two additional variations of the model to be maintained in further analyses if they improved the fit of the model.

Research question six: participants' qualitative accounts of psychological cyber PA. The qualitative data were explored descriptively through coding and thematic analysis to elaborate, enhance, illustrate, and clarify the results obtained from the self-report measures. Although it was expected that participants' responses would fall within theoretically-established categories (i.e., variables included in the path analysis), responses that did not clearly fit into these categories or for which there were no theoretically-established categories were reviewed and labels were applied based on participants' content. This process reflected efforts to avoid missing surprising findings and idiosyncratic responses and allowed for gradually reaching higher levels of abstraction (Gelo et al., 2008; Kazdin, 2003).

A coding manual was created with codes reflecting theoretically-established categories for descriptions of and experiences with psychological cyber PA (i.e., control, monitoring, and jealousy; isolation/threatening behaviours; relational aggression; stalking; and verbal aggression), perceived severity (i.e., annoying, upsetting, threatening, or violating), coping (i.e., adaptive coping; social support and expressive coping; and maladaptive coping), and outcomes

(i.e., impact on psychological functioning and adaptive functioning). In addition, "other" categories were included for responses that did not fall into the previously-established categories to ensure additional themes were not missed. Because participants' responses reflected multiple categories in some cases (i.e., they reported experiencing more than one form of psychological cyber PA or coping through use of more than one coping strategy), each category was coded along a dimension so that participants could obtain scores for all categories. These scores were obtained according to the anchors 0 (*did not mention*) and 1 (*mentioned behaviour reflective of X category*). As noted above, for the remaining categories that did not have previously-established categories, responses were reviewed and labels were identified based on content.

Similar to the approach used by Reviere and colleagues (2007), the qualitative data were examined by three independent raters. The raters began analysis by reviewing the transcripts and then removing all responses specific to the variable being examined (e.g., coping responses) to assist with ease of coding. Interrater reliability was calculated for each variable including categories of psychological cyber PA (i.e., control, monitoring, and jealousy; isolation/threatening behaviours; relational aggression; stalking; and verbal aggression); perceived severity (i.e., annoying, upsetting, threatening, or violating); coping (i.e., adaptive coping; social support and expressive coping; and maladaptive coping); and outcomes (i.e., poor psychological and adaptive functioning) to ensure correspondence of the extracted responses. Landis and Koch (1977) suggest that a Kappa level of .61 to .80 represents a substantial strength of agreement between raters. Thus, in the present study, the interrater reliability calculated among the three independent raters required a minimum Kappa level of .70 (for categorical variables) and intra-class correlations of .70 (for continuous variables) to ensure agreement between raters. The average Kappa rating was .66 (Kappas ranged from .30 to 1.0) and the

average intra-class correlation rating was .65 (intra-class correlations ranged from .31 to 1.0) following initial analyses. Because agreement ratings were highly variable and in many cases very low, consensus coding was used to obtain 100% agreement across all variables prior to analyses.

Preliminary Analyses

Prior to conducting analyses, data were screened for missing data, appropriate range of variables (i.e., through examination of minimum and maximum values), and fit with statistical assumptions of structural equation modeling (SEM). To examine missing data, a Missing Values Analysis was conducted and all variables were found to be missing completely at random (MCAR), Little's MCAR $\chi^2 = 1686.42$, $p = .082$. Research suggests that there are a number of approaches for managing missing data when data are MCAR and statistical programs for SEM, such as Analysis of Moment Structures (AMOS) program account for missing data (e.g., Tabachnick & Fidell, 2001). Thus, for the sake of maintaining the integrity of the dataset and avoiding new issues introduced by methods used to manage missing data (i.e., underestimation of error variances), analyses were initially conducted with the unchanged dataset. Main analyses also were conducted using an additional dataset where missing values were imputed using Expectation Maximization (EM), which creates a dataset with averaged values from five different datasets with slightly different values. However, because results were consistent across datasets the original was used for the present study as recommended by Tabachnick and Fidell (2001).

Normality was investigated for all variables by examining skewness and kurtosis values. All variables were normally distributed except for aggression variables (as measured by the PATS; Piitz & Fritz, 2008), which were positively skewed and differed moderately from normality.

Transformation was used to address this issue given that SEM is sensitive to violations of normality (i.e., Kline, 2011, MacDonald & Ho, 2002). Because the PATS has a minimum value of zero, one unit was added to all cases prior to conducting the transformation. The method of transformation was determined by an increasing level of severity (i.e., the least dramatic approach was selected first) so that the least extreme transformation resulting in improved distribution could be used. Initially, square root and natural logarithmic transformations were conducted; however, normality was not corrected following either transformation, therefore, a logarithmic ten transformation was used and normality was achieved. Such an approach to transformation has been used in previous partner aggression research (i.e., O'Leary, Slep, & O'Leary, 2007).

Univariate outliers were identified using histograms and z-scores greater than 3.29 and multivariate outliers were identified by Mahalanobis Distance with $p < .001$. Outliers were identified on aggression variables as expected given that high scores on aggression are unlikely to be representative of the population. For cases of univariate outliers, the data were retained after examination for possible patterns of responding. In order to determine how multivariate outliers were deviant, a stepwise regression was conducted using a dummy variable. Significant predictors were identified on the COPE scale (i.e., religious coping) and PATS measure (i.e., total score). However, upon examination of the data, these scores appeared to be a legitimate part of the sample, and were therefore, retained. As such, three multivariate outliers were transformed by changing the score to one unit smaller or larger. A similar approach has been used by O'Leary, Slep, and O'Leary (2007) and was recommended by Tabachnick and Fidell (2001).

Main Analyses

Description of the Variables

Relationship quality. In terms of their current romantic relationships, participants reported on their level of commitment, likelihood of ending the relationship, and perceived satisfaction on 10-point Likert scales. Overall, participants reported a high level of commitment ($M = 6.79$, $SD = 1.83$) and satisfaction ($M = 6.39$, $SD = 1.73$) in their romantic relationships and a low likelihood of ending the relationship ($M = 1.91$, $SD = 2.48$). One-way ANOVA results revealed similar levels of reported commitment to the relationship for individuals who had experienced at least one act of online partner aggression ($M = 7.11$, $SD = 1.83$) compared to individuals who had not ($M = 6.72$, $SD = 1.88$), $F(1,342) = 2.36$, $p = .13$. Similarly, participants who had not experienced psychological cyber PA victimization did not differ in their reported likelihood of ending the relationship ($M = 1.66$, $SD = 2.49$) from those who had ($M = 1.98$, $SD = 2.49$), $F(1, 343) = .81$, $p = .37$. However, one-way ANOVA results revealed that ratings of satisfaction were significantly different based on previous experience with online partner aggression victimization, $F(1,341) = 10.29$, $p = .001$. Individuals who did not report online partner aggression victimization reported higher ratings of satisfaction ($M = 7.02$, $SD = 1.34$) than those who did ($M = 6.24$, $SD = 1.78$). Length of romantic relationships was positively associated with commitment to, $r(346) = .33$, $p = .001$, and satisfaction with the relationship, $r(345) = .23$, $p = .001$, and negatively associated with likelihood of leaving the relationship, $r(347) = .32$, $p = .001$. In addition, greater frequency of psychological cyber PA was significantly related to lower levels of perceived satisfaction, $r(291) = -.28$, $p < .001$ and commitment to the relationship $r(290) = -.15$, $p = .010$. Greater frequency of psychological cyber PA was related to a higher likelihood of ending the relationship, $r(292) = .13$, $p = .030$, but only at the $p < .05$, suggesting a trend in this direction.

Social desirability. Participants provided information about their likelihood to respond in a socially desirable manner. The mean social desirability score was 19.49 ($SD = 3.06$) for the quantitative sample and 19.33 ($SD = 3.63$) for the qualitative subsample (possible scores range from 13 to 26 with higher scores indicating more social desirability). These findings suggest that participants in the sample tended not to respond in a direction reflecting either low or high social desirability. However, a small subset (i.e., 10.4%) of the sample responded in a highly socially desirable manner, with scores of at least 1.5 standard deviations above the mean.

Bivariate correlations were conducted among social desirability scores and psychological cyber PA, coping categories, psychological functioning, and adaptive functioning to determine whether participants' responses may reflect social desirability (see Table 6, page 108). Significant negative correlations were revealed between social desirability and the psychological cyber PA total score and two of its subscale scores (i.e., stalking and verbal aggression). In addition, social desirability was related to two of the three coping categories (i.e., adaptive coping and maladaptive coping) as well as low self-esteem and internalizing and externalizing problems. With respect to adaptive functioning, only one of the four correlations was significant (i.e., education) at $p < .05$. As a result of the significant relations, social desirability was controlled for in correlations among psychological cyber PA, coping categories, and psychological functioning (i.e., self-esteem, internalizing problems, and externalizing problems) and was accounted for in the SEM analysis.

Perceived locus of control. Previous studies (i.e., Meijer et al., 2002; Schonert-Reichl & Muller, 1996) have identified perceived locus of control as an important factor in one's experience of stress and coping behaviours. Thus, because having an internal locus of control (i.e., the tendency to perceive having control over problems) versus an external locus of control

Table 6

Bivariate Correlations among Main Variables and Control Variables

	Perceived Locus of Control	Perceived Social Support	Social Desirability
Control/Monitoring/Jealousy	-.14*	-.04	-.06
Isolation/Threatening	-.17**	-.07	.01
Relational Aggression	-.17**	-.08	-.06
Stalking	-.19**	-.04	-.14*
Verbal Aggression	-.16**	-.05	-.13*
Psychological Cyber PA Total	-.29***	-.08	-.20**
Adaptive Coping	.21*	.31***	.19**
Social Support/Expressive Coping	.05	.30***	-.12
Maladaptive Coping	-.49***	-.16*	-.31***
Internalizing Problems	-.39***	-.40***	-.41***
Externalizing Problems	-.38***	-.34***	-.55***
Low Self-Esteem	-.44***	-.30***	-.32***
Occupational Functioning	.25***	.23**	.23**
Social Functioning	.01	.07	.05

Note. *$p < .05$. **$p < .01$. ***$p < .001$.

(i.e., the tendency to perceive problems as existing outside of one's control) may have impacted participants' selected coping strategies, perceived locus of control was examined. The mean perceived locus of control rating was 14.17 (of a possible 21, with higher scores reflecting greater internal locus of control), which suggested that participants in the sample tended to have a more internal than external perceived locus of control. Bivariate correlations (see Table 6, page 108) revealed that perceived locus of control was significantly negatively related to online partner aggression, internalizing problems, externalizing problems, low self-esteem, and maladaptive coping. In addition, perceived locus of control was significantly positively related to both occupational functioning and adaptive coping. Perceived locus of control was therefore considered as a control in the main analyses based on these results.

Perceived social support. Perceptions of social support have also been found to relate to individuals' levels of functioning and coping efforts (i.e., Asberg et al., 2008; Moos & Holahan, 2003). Therefore, information about participants' perceived social support from friends and family members was collected. In the present study, the average rating for perceptions of support from friends was 32.39 (of a possible 42, with higher scores identifying greater perceptions of social support), suggesting that participants tended to view their friends as sources of social support. Similarly, the mean score for perceptions of social support from family members was 32.33 (of a possible 42), again suggesting that participants tended to view their family members as sources of social support. Bivariate correlations (see Table 6, page 108) revealed significant positive relations between perceived social support and adaptive functioning, adaptive coping, and social support and expressive coping at $p < .01$. Greater perceived social support was significantly associated with lower levels of internalizing problems, externalizing problems, and

low self-esteem. Based on these findings, perceived social support was considered as a control variable in the main analyses.

Psychological functioning. Information about participants' psychological functioning was derived from their reports of self-esteem, internalizing problems (i.e., anxiety and depression), externalizing problems (i.e., inattention and rule breaking), and total problems. In regards to self-esteem, the average score was 19.15 (SD = 5.62) of a possible score between 10 and 40 (higher scores reflect *lower* levels of self-esteem), suggesting that participants generally had fairly high levels of self-esteem. One-way ANOVA results revealed significantly higher reported self-esteem (as indicated by lower scores) for those who had not experienced at least one act of psychological cyber PA (M = 16.77, SD = 5.68) compared to those who had (M = 19.60, SD = 5.50), $F(1, 320)$ = 12.15, p = .001.

Internalizing problems, externalizing problems, and total problems scores were presented as *T*-scores (out of a possible score of 100), with higher scores reflecting greater problems. Scores at or above T = 75 suggest a clinically significant problem level while scores ranging from T = 65 to 74 suggest an At-Risk area of concern. Overall, participants' mean scores for internalizing problems (M = 56.49, SD = 11.98), externalizing problems (M = 53.13, SD = 10.49), and total problems (M = 54.25, SD = 10.87) were in the Normal range. One-way ANOVA results by previous experience with psychological cyber PA revealed that participants who had experienced online partner aggression reported significantly higher levels of externalizing problems (M = 53.88, SD = 10.19) than those who had not (M = 49.29, SD = 11.05), $F(1,316)$ = 9.32, p = .002. On the other hand, participants reported similar ratings of internalizing problems regardless of whether they had experienced online partner aggression (M = 53.71, SD = 11.84) or had not (M =

57.00, $SD = 11.93$), $F(1, 318) = 3.61$, $p = .058$. All mean scores fell in the Normal range regardless of previous experience with psychological cyber PA.

When participants' scores were examined by range (i.e., Normal, At-Risk, or Clinically Elevated), overall, 10.3% of the scores fell in the At-Risk range and 10.3% fell in the Clinically Elevated range for internalizing problems, 16.2% were At-Risk and 0.6% were Clinically Elevated for externalizing problems, and 10.3% were At-Risk and 4.4% were in the Clinical range for total problems. When the data file was split based on previous experience with online partner aggression, for internalizing problems, 8.6% of participants who had not experienced psychological cyber PA were At-Risk and 5.2% were Clinically Elevated compared to 10.8% of At-Risk and 11.2% of Clinically Elevated scores from participants who had experienced psychological cyber PA. In terms of externalizing problems, of participants who had not experienced psychological cyber PA, 8.6% were At-Risk and 0% were Clinically Elevated compared to 17.7% of At-Risk and 0.8% of Clinically Elevated participants who had. With respect to total problems, 6.9% of participants who had not experienced psychological cyber PA were At-Risk and 3.4% were Clinically Elevated compared to 11.2% At-Risk and 4.2% of Clinically Elevated participants who had. However, crosstab analyses did not reveal significant differences in ranges based on previous experience with psychological cyber PA for internalizing problems, $\chi^2(2, N = 318) = 2.29$, $p = .318$, externalizing problems, $\chi^2(2, N = 318) = 3.43$, $p = .180$, or total problems $\chi^2(2, N = 318) = 1.04$, $p = .594$.

Adaptive functioning. Previous research has suggested that individuals who have experienced online partner aggression often have greater difficulty with respect to work and school (i.e., missed days, less productivity; Browne et al., 1999; Byrne et al., 1999; Riger et al., 2002). Thus, in the present study, participants provided information about their occupational

functioning (i.e., at school and at work) and their social functioning (i.e., how often they see family and friends). Scores were presented as *T*-scores (out of a possible score of 100), with higher scores indicating better adaptive functioning in the different areas. In addition, a total adaptive functioning score was conducted by averaging scores from the four areas. Overall, the mean score for adaptive functioning was 45.86 (*SD* = 11.94) with little variability across the four areas, suggesting that participants reported average levels of adaptive functioning. One-way ANOVA results by previous experience with psychological cyber PA did not reveal significant differences between scores of participants who had experienced online partner aggression (*M* = 47.32, *SD* = 11.76) and those who had not (*M* = 45.64, *SD* = 12.05), $F(1, 206) = .53, p = .466$. Descriptive statistics for psychological and adaptive functioning are presented in Table 3 (page 84).

Research Question One: Frequency and Perceived Severity of Psychological Cyber PA

  Frequency of psychological cyber PA. A large number (82.1%) of participants reported experiencing at least one act of online partner aggression victimization within the last year. With respect to the different forms of computer-mediated communication, participants experienced at least one act of online partner aggression most frequently via instant messaging (71.8%), followed by social networking sites (64.7%), and email (56%). This was inconsistent with Hypothesis 1(a), which predicted that the greatest frequency of psychological cyber PA would occur via social networking sites. As described previously, a factor analysis of the PATS measure, which assessed psychological cyber PA, revealed five categories of psychological cyber PA including control, monitoring, and jealousy; isolation/threatening behaviours; relational aggression; stalking; and verbal aggression. The majority of participants (68.7%) reported having experienced at least one act of psychological cyber PA reflecting control,

monitoring, and jealousy behaviours. Findings also suggested a large number had experienced at least one act of verbal aggression (66.1%), followed by stalking (33.6%), relational aggression (23.0%), and isolation/threatening behaviours (17.1%). Means, standard deviations, and prevalence rates of psychological cyber PA are presented in Table 3 (page 84).

Type of aggression. In order to determine whether the type of victimization reflected intimate terrorism or situational couple violence, a *K*-means cluster analysis with a two-cluster (i.e., high control versus low control) solution was conducted on the Controlling Behaviors Scale. As predicted by Hypothesis 1(d), the majority (83.4%) of victimization in the present study reflected situational couple violence.

When online partner aggression was examined by gender, chi-square analyses did not reveal significant differences between male and female participants who experienced online partner aggression, overall, $\chi^2(1, N = 345) = .174$, $p = .677$, or by type of computer-mediated communication, namely, email, $\chi^2(1, N = 347) = 3.20$, $p = .074$, instant messaging, $\chi^2(1, N = 347) = 1.19$, $p = .275$, and social networking sites, $\chi^2(1, N = 347) = .761$, $p = .383$. Similarly, a one-way MANOVA by gender using the five psychological cyber PA subscales and total score as dependent variables did not reveal significant gender differences for all forms of psychological cyber PA. These findings are consistent with Hypothesis 1(e), which predicted that psychological cyber PA would be experienced by male and female participants at similar rates.

Offline partner aggression. Most of the participants (80.3%) in the present study who experienced online partner aggression also experienced at least one act of offline aggression by their intimate partners as opposed to 17.7% who experienced only one form (i.e., either online or offline) and 2.0% who did not report experiencing any aggression. With respect to offline partner aggression, the vast majority (95.4%) of participants reported being victimized by at least one

form. The most frequently reported form of offline partner aggression was emotional abuse, which was experienced by 93.1% of participants. Close to half (45.0%) also reported experiencing at least one act of sexual abuse, whereas approximately one in four (24.9%) and one in five (20.8%) reported victimization by threatening behaviours and physical abuse, respectively. Victimization through relational aggression, which was reported by 12.5%, was experienced by the fewest participants. Several individuals also reported having experienced emotional control (66.7%) and jealousy behaviours (85.0%). Means, standard deviations, and prevalence rates of offline partner aggression are presented in Table 3 (page 84).

Relationship between online and offline forms of partner aggression. Given that the PATS (Piitz & Fritz, 2008) measure was only recently developed, bivariate correlations were conducted between scores on the PATS, measuring online partner aggression, and measures of offline partner aggression. All of the subscales (i.e., control, monitoring, and jealousy, isolation/threatening behaviours, relational aggression, stalking, and verbal aggression) were positively and significantly associated with one another as well as the total online partner aggression score at $p < .001$. Please refer to Table 7 (page 115) for results. Similarly, higher psychological cyber PA total scores were associated with higher scores on all of the subscales (i.e., physical, verbal, sexual, relational, and threatening victimization behaviours) on the CADRI (Wolfe et al., 2001). With respect to correlations among the subscales of both measures, the majority were positively and significantly related, with the exception of nonsignificant relations between relational abuse and isolation/threatening behaviours and relational abuse and verbal aggression as well as sexual abuse and isolation/threatening behaviours and sexual abuse and relational aggression. Higher scores on the PMI (Kasian & Painter, 1992) Control Victimization subscale and the PMI total score were significantly associated with a higher PATS total score

Table 7

Bivariate Correlations among Online and Offline Forms of Partner Aggression

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PATS														
1CMJ	–													
2I/T	.50***	–												
3RA	.34***	.62***	–											
4S	.50***	.48***	.49***	–										
5VA	.64***	.49***	.46***	.50***	–									
CADRI														
6Threat	.23***	.20***	.17**	.14*	.22***	.22***	–							
7Rel	.12*	.07	.17**	.21***	.08	.15*	.40***	–						
8Phys	.31***	.15**	.15**	.17**	.20***	.22***	.42***	.34***	–					
9Sex	.13*	.05	.06	.14**	.13*	.21***	.36***	.36***	.45***	–				
10Verb	.37***	.13**	.20***	.18***	.31***	.43***	.31***	.39***	.48***	.44***	–			
PMI														
11Cont	.31***	.07**	.20***	.19***	.22***	.40***	.62***	.42***	.36***	.31***	.71***	.62***	–	
12Jeal	.38***	.14*	.18***	.17***	.22***	.35***	.39***	.39***	.34***	.23***	.64***	.54***	.70***	–

Note. Variables 1 – 5 = Psychological cyber partner aggression subscales (CMJ = Control, Monitoring, Jealousy; I/T = Isolation/Threatening; RA = Relational Aggression; S = Stalking; VA = Verbal Aggression) as measured by the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2008). Variables 6 – 10 = offline partner aggression subscales (Threat = Threatening Behaviour; Rel = Relational Aggression; Phys = Physical Aggression; Sex = Sexual Aggression; Verb = Verbal Emotional Aggression) as measured by the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). Variables 11 – 12 = offline partner aggression subscales (Cont = Control; Jeal = Jealousy) as measured by the Psychological Maltreatment Inventory (PMI; Kasian & Painter, 1992).

p < .05. **p* < .01. ****p* < .001.

and higher scores on all PATS subscales with the exception of isolation/threatening behaviours. Higher scores on the PMI Jealousy Victimization subscale were significantly associated with a higher PATS total score and higher scores on all PATS subscales. These findings suggest that individuals who have experienced online partner aggression are also likely to have experienced offline partner aggression.

Perceived severity. The analyses for perceived severity in the present study were conducted in a similar manner as Cupach and Spitzberg (2000). In the present study, the four categories of perceived severity (i.e., annoyed, upset, threatened, and violated) were assessed for each psychological cyber PA subscale (i.e., control, monitoring, and jealousy, isolation/threatening behaviours, relational aggression, stalking, and verbal aggression). Average ratings for perceived severity across the different subscales are presented in Table 4 (page 87). The majority of psychological cyber PA subtypes were perceived as severe (i.e., means greater than 7 on a 10-point scale). Surprisingly, participants' perceptions of the degree to which stalking behaviours were upsetting, threatening, and violating were among the lowest scores (i.e., total score means lower than 5.5 on the 10-point scale). Further, the total score for stalking behaviours was significantly lower than total scores for control, monitoring, and jealousy, $t(277) = 9.28$, $p < .001$, isolation/threatening behaviours, $t(297) = 13.77 = p < .001$, relational aggression, $t(311) = 17.02$, $p < .001$, and verbal aggression, $t(288) = 10.38$, $p < .001$.

A one-way MANOVA was conducted to assess gender differences in total perceived severity scores for each of the psychological cyber PA subscales. MANOVA results revealed a significant main effect for gender for perceived severity of control, monitoring, and jealousy, $F(1, 213) = 18.25$, $p < .001$, partial $\eta^2 = .08$, isolation/threatening behaviours, $F(1, 213) = 13.85$, $p < .001$, partial $\eta^2 = .06$, relational aggression, $F(1, 213) = 7.15$, $p = .008$, partial $\eta^2 = .03$,

stalking, $F(1, 213) = 4.94$, $p = .027$, partial $\eta^2 = .02$, and verbal aggression, $F(1, 213) = 11.58$, $p = .001$, partial $\eta^2 = .05$. Although the effect sizes were generally small, these results suggest that female participants perceived all categories of psychological cyber PA as more severe than male participants (see Table 4, page 87), which was consistent with Hypothesis 1(b).

Bivariate correlations were conducted in order to assess whether greater frequency of psychological cyber PA was related to perceptions of severity. In the present study, psychological cyber PA victimization was expected to be negatively related to perceived severity [Hypothesis 1(c)] based on previous research suggesting that individuals become desensitized to aggressive acts and thus perceive such acts as less severe (Alexy et al., 2005; Cupach & Spitzberg, 2000). However, contrary to prediction, psychological cyber PA subscale and total scores were not significantly related to perceived severity for any of the psychological cyber PA categories. In order to determine whether there were differences in perceptions of severity based on whether participants had previously experienced at least one act of online partner aggression, a univariate ANOVA by previous experience with psychological cyber PA was conducted. These results also were nonsignificant, $F(1, 212) = 1.24$, $p = .266$, suggesting that participants had similar perceptions of severity regardless of whether they had previously experienced online partner aggression.

Research Question Two: Relations among Psychological Cyber PA and Coping Categories

Bivariate correlations were conducted to investigate relations between coping categories and online partner aggression. Contrary to Hypothesis 2, online partner aggression was not significantly related to adaptive coping or social support and expressive coping (see Table 8, page 118). As predicted by Hypothesis 2, higher levels of psychological cyber PA were related to greater use of maladaptive coping, $r(251) = .20$, $p = .002$. However, when social desirability

Table 8

Bivariate Correlations among Main Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1CMJ	–													
2I/T	.50***	–												
3RA	.34***	.62***	–											
4S	.50***	.48***	.49***	–										
5VA	.64***	.49***	.46***	.50***	–									
6.Tot	.72***	.42***	.47***	.55***	.78***	–								
7Ada	-.01	.01	-.06	.01	.02	-.04	–							
8Mal	.22***	.23***	.19**	.22***	.18**	.20**	-.02	–						
9SS/E	.02	.01	-.03	-.08	.10	-.01	.50***	.14*	–					
10Int	.15*	.12*	.10	.15**	.16**	.21***	-.14*	.34***	.05	–				
11Ext	.24***	.17**	.15**	.14*	.19***	.28***	-.16**	.40***	.12*	.74***	–			
12↓SE	.17***	.17**	.12*	.14*	.23**	.22***	-.20**	.31***	.01	.58***	.44***	–		
13Occ	-.15*	-.20**	-.18**	-.07	-.10	-.10	.16*	-.30***	.09	-.42***	-.46***	-.33***	–	
14Soc	-.08	.05	-.01	-.01	.03	.04	-.09	-.10	-.05	-.11*	-.06	-.12*	.60***	–

Note. Variables 1 – 6 = subscales (CMJ = Control, Monitoring, Jealousy; I/T = Isolation/Threatening; RA = Relational Aggression; S = Stalking; VA = Verbal Aggression; Tot = Total) as measured by the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2008). Variables 7 – 9 = coping categories (Ada = Adaptive; Mal = Maladaptive; SS/E = Social Support/Expressive) as measured by Coping Orientation to Problems Experienced (COPE; Carver et al., 1989). Variables 10 – 12 = psychological functioning. Int = Internalizing Problems and Ext = Externalizing Problems as measured by the Adult Self Report (ASR: Achenbach & Rescorla, 2003); ↓SE = Low Self-Esteem as measured by the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). Variables 13 – 14 = adaptive functioning (Occ =Occupational Functioning; Soc = Social Functioning) as measured by the ASR (Achenbach & Rescorla, 2003).
*p < .05. **p < .01. ***p < .001.

and perceived locus of control were included as control variables, the findings were no longer significant at the $p < .01$ level. Perceived social support also was included as a control variable; however, the results were unchanged (see Table 9, page 120).

Research Question Three: Relations among Psychological Cyber PA and Outcomes

Only partial support was found for Hypothesis 3(a), which predicted that online partner aggression would be positively related to poor psychological functioning (i.e., internalizing problems, externalizing problems, total problems, and low self-esteem). As predicted, higher levels of psychological cyber PA were found to be significantly associated with higher levels of both internalizing problems, $r(268) = .21$, $p < .001$ and externalizing problems, $r(268) = .28$, $p < .001$. In addition, high levels of psychological cyber PA also were significantly and positively related to low self-esteem scores, $r(272) = .22$, $p < .001$. Results are presented in Table 8 (page 118). These findings suggest that individuals who experienced psychological cyber PA were more likely to have poorer psychological functioning. However, when partial correlations were conducted with social desirability included as a control variable, the relations between online partner aggression and internalizing problems and online partner aggression and low self-esteem were no longer significant at $p < .01$, which suggested that social desirability accounted for part of the effects. Similarly, when perceived locus of control was included as a control variable, the relation between online partner aggression and low self-esteem was no longer significant. Results did not change after controlling for perceived social support. See Table 9 (page 120) for results from partial correlations.

Bivariate correlations were conducted to test the prediction that psychological cyber PA would be positively related to poor adaptive functioning [Hypothesis 3(b)]. This prediction was not supported. None of the adaptive functioning variables (i.e., education, work, social

Table 9

Partial Correlations among Main Variables Controlling for Social Desirability, Perceived Locus of Control, and Perceived Social Support

	1	2	3	4	5	6	7	8	9
Social Desirability									
1Psych Cyber PA	–								
2Adapt Cop	.02	–							
3SS/Exp Cop	.00	.51***	–						
4Malad Cop	.14*	-.02	.08	–					
5Int Prob	.14*	-.10	-.01	.27***	–				
6Ext Prob	.22**	-.09	-.08	.32***	.68***	–			
7Low SE	.11	-.14*	-.02	.22***	.53***	.40***	–		
8Occ Func	-.02	.11	.08	-.26**	-.34***	-.35***	-.35***	–	
9Soc Func	.10	-.08	.05	-.02	-.14	-.07	-.06	.31***	–
Perceived Locus of Control									
1Psych Cyber PA	–								
2Adapt Cop	.05	–							
3SS/Exp Cop	.01	.47***	–						
4Malad Cop	.08	.02	.14*	–					
5Int Prob	.16*	-.11	.06	.24***	–				
6Ext Prob	.22***	-.15*	.13	.29***	.72***	–			
7Low SE	.10	-.11	.05	.13*	.50***	.37***	–		
8Occ Func	-.01	.08	.05	-.25**	-.34***	-.36***	-.32***	–	
9Soc Func	.08	-.07	.04	-.04	-.14	-.05	-.04	.28***	–

	1	2	3	4	5	6	7	8	9
<u>Perceived Social</u> <u>Support</u>									
1 Psych Cyber PA	–								
2 Adap Cop	-.01	–							
3 SS/Exp Cop	.02	.37***	–						
4 Malad Cop	.20**	-.08	.18*	–					
5 Int Prob	.24***	-.05	.24***	.35***	–				
6 Ext Prob	.32***	-.10	.29***	.43***	.67***	–			
7 Low SE	.19**	-.13	.13	.28***	.51***	.37***	–		
8 Occ Func	-.10	.09	.00	-.25**	-.34***	-.34***	-.35***	–	
9 Social Func	.04	-.07	.02	-.10	-.15	-.10	-.07	.32***	–

Note. Variable 1 (Psych Cyber PA) = Psychological Cyber Partner Aggression Total score as measured by the Partner Aggression Technology Scale (PATS; Piitz & Fritz, 2008). Variables 2 – 4 = coping categories (Adap Cop = Adaptive Coping; SS/Exp Cop = Social Support/Expressive Coping; Malad Cop = Maladaptive Coping) as measured by Coping Orientation to Problems Experienced (COPE; Carver et al., 1989). Variables 5 – 7 = psychological functioning. Int Prob = Internalizing Problems; Ext Prob = Externalizing Problems as measured by the Adult Self Report (ASR; Achenbach & Rescorla, 2003); Low SE = Low Self-Esteem as measured by the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). Variables 8 – 9 = adaptive functioning. Occ Func = Occupational Functioning; Social Func = Social Functioning as measured by the Adult Self Report (ASR; Achenbach & Rescorla, 2003).
*p < .05. **p < .01. ***p < .001.

functioning) were significantly related to online partner aggression. In addition, there was no significant relation between psychological cyber PA and overall adaptive functioning, which was calculated by averaging the *T*-scores of all the adaptive functioning scales. The relations among psychological cyber PA and adaptive functioning variables were nonsignificant both before and after controlling for social desirability, perceived locus of control, and perceived social support.

Research Question Four: Relations among Coping Categories and Outcomes

The present study examined whether coping strategies were related to specific outcomes. With respect to poor psychological functioning, Hypothesis 4(a) was only partially supported. Adaptive coping was negatively related to externalizing problems, $r(282) = -.16$, $p = .006$, and low self-esteem, $r(281) = -.20$, $p = .001$, but not internalizing problems or total problems at $p < .01$ (see Table 8, page 118). However, significant relations were lost at $p < .01$ after partial correlations were conducted with social desirability, perceived locus of control, and perceived social support as control variables (see Table 9, page 120). The social support and expressive coping category was not significantly related to poor psychological functioning variables at $p < .01$ before or after controlling for social desirability and perceived locus of control. However, interestingly, the social support and expressive coping category was significantly related to internalizing problems and externalizing problems after controlling for perceived social support. Neither adaptive coping nor the social support and expressive coping category was significantly related to adaptive functioning at $p < .05$ before or after conducting partial correlations with social desirability, perceived locus of control, and perceived social support as control variables.

As predicted by Hypothesis 4(c), maladaptive coping was significantly positively related to internalizing problems, $r(283) = .34$, $p < .001$, externalizing problems, $r(283) = .40$, $p < .001$, total problems, $r(283) = .38$, $p < .001$, and low self-esteem, $r(282) = .31$, $p < .001$. These

relations remained after controlling for social desirability and perceived social support. The relations also remained among maladaptive coping and internalizing problems and externalizing problems, but were lost for maladaptive coping and self-esteem at $p < .01$ after controlling for perceived locus of control (see Table 9, page 120). In addition, with respect to adaptive functioning variables, greater use of maladaptive coping was significantly related to poorer occupational functioning, $r(179) = -.30, p < .001$, but was not significantly related to social functioning, $r(276) = -.10, p = .10$. The relation between maladaptive coping and occupational functioning remained after conducting partial correlations with social desirability, perceived locus of control, and perceived social support (see Table 9, page 120).

Research Question Five: Direct and Indirect Effects of Coping on Relations among Psychological Cyber PA and Related Outcomes

The fifth primary aim of the study was to examine direct and indirect effects of coping categories among online partner aggression and poor psychological functioning and poor adaptive functioning. Using the AMOS program, Version 19 (Arbuckle, 2010), this research question was investigated using a two-step approach to SEM, which involved testing the model's fit using confirmatory factor analysis (CFA) and testing the structural model using maximum likelihood, as recommended in previous studies (i.e., Anderson & Gerbing, 1988; Tasca et al., 2011). The hypothesized model is presented in Figure 2 (page 75) with ellipses representing latent variables and rectangles representing measured variables. Please note that adaptive functioning scores were reversed for the SEM analysis so that higher scores indicated *poorer* adaptive functioning in the different areas to assist with ease of interpretation of the model. It was hypothesized that psychological cyber PA would be positively related to the use of adaptive coping and social support and expressive coping and that these coping categories would be

related to better psychological and adaptive functioning [Hypotheses 5(a) and 5(b)]. It also was hypothesized that psychological cyber PA would be positively related to the use of maladaptive coping and that this coping category would be related to poorer psychological and adaptive functioning [Hypothesis 5(c)].

In order to assess the fit of the hypothesized model, a Comparative Fit Index (CFI) greater than .95 and a Root Mean Square Error of Approximation (RMSEA) of .08 or less were selected because these criteria have been found to indicate good fit (Hu & Bentler, 1999; Kline, 2011; Schreiber, Stage, King, Nora, & Barlow, 2006; Tasca et al., 2011). In addition, consistent with previous research (i.e., Tasca et al., 2011), any pathways in the initial structural model that were not significant at $p < .05$ were removed and the fit of the final model was reassessed.

Upon initially conducting the SEM analysis, the model did not satisfy the selection criteria (i.e., CFI > .95, RMSEA ≤ .08), and thus was deemed a poor fit. As a result, modification indices were examined for identification of specification errors and areas of poor fit. Modification indices suggested that allowing the error variances of control, monitoring, and jealousy and isolation/threatening behaviours to co-vary with the error variance of relational aggression, would significantly improve the fit of the model. Although pathways between these variables were not specified in the hypothesized model, when considering the subscales conceptually there seems to be theoretical overlap. Control, monitoring, and jealousy, isolation/threatening behaviours, and relational aggression all reflect victimization through involvement of other individuals, either by isolating the victim from members of his or her social network, by responding to the victim's interactions with others (i.e., other-sex individuals), or by spreading rumours. This is in contrast to the remaining subscales, stalking and verbal aggression, which reflect aggression directly exerted on the individual without the involvement of others. Thus,

there is conceptual overlap between these two subscales and relational aggression, which may be the common link explaining why participants would respond similarly to questions reflecting these areas. Post hoc model modifications were performed in order to improve the fit and parsimony of the model. Allowing the error variances between the two subscales (i.e., control, monitoring, and jealousy and isolation/threatening behaviours) and relational aggression to co-vary resulted in an improved model fit, $n = 349$, $\chi^2 = 95.362$, $p < .001$, CFI = .97, RMSEA = .045. The final structural model is depicted in Figure 3 (page 126).
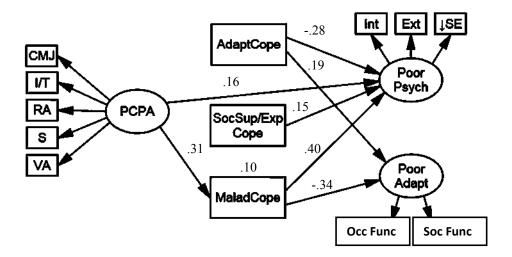
With respect to direct effects, results indicated that psychological cyber PA was predictive of poorer psychological functioning (standardized coefficient = .16), but not adaptive functioning. Online partner aggression predicted greater use of maladaptive coping (standardized coefficient = .31), but did not predict use of adaptive coping or social support and expressive coping. In terms of coping categories, interestingly, adaptive coping was predictive of better psychological functioning (standardized coefficient = -.28), but poorer adaptive functioning (standardized coefficient = .19). Social support and expressive coping also predicted poorer psychological functioning (standardized coefficient = .15), but did not predict adaptive functioning whereas maladaptive coping predicted poorer psychological functioning (standardized coefficient = .40) and better adaptive functioning (standardized coefficient = -.34).

In order to determine which component of the original social support and expressive coping variable was driving the significant relation between this construct and poor psychological functioning, two post-hoc SEM analyses were conducted to re-test the model without the "expressive" subscale, which assesses participants' focus on and venting of emotions, and then without the "social support" subscales, which assess participants' emotional and instrumental support seeking. Interestingly, following the removal of the "expressive" subscale, social support

Figure 3

Structural Model Representing Significant Direct and Indirect Effects of Coping

Categories among Psychological Cyber Partner Aggression and Outcomes

Note. CMJ = Control, Monitoring, Jealousy; I/T = Isolation/Threatening; RA = Relational Aggression; S = Stalking; VA = Verbal Aggression. PCPA = Psychological Cyber Partner Aggression. AdaptCope = Adaptive Coping; SocSup/ExpCope = Social Support and Expressive Coping; MaladCope = Maladaptive Coping. Int = Internalizing Problems; Ext = Externalizing Problems; ↓SE = Low Self-Esteem. Poor Psych = Poor Psychological Functioning. Occ Func = Occupational Functioning; Soc Func = Social Functioning. Poor Adapt = Poor Adaptive Functioning.

no longer predicted poor psychological functioning (standardized coefficient = .02) and the model's fit no longer satisfied the selection criteria (CFI = .08, RMSEA = .10). Following the removal of the "social support" subscales, expressive coping was found to significantly predict poorer psychological functioning (standardized coefficient = .34). However, although the fit of the model was better for this analysis, the model's fit still did not satisfy selection criteria (CFI = .89, RMSEA = .08). Thus, although these findings suggest that focus on and venting of emotions accounted for much of the effect, the model fit best when including the complete factor (i.e., all components).

Contrary to predictions, there was only one significant indirect effect resulting from the path analysis. Neither adaptive coping nor social support and expressive coping mediated the relations between online partner aggression and poor psychological functioning and poor adaptive functioning. However, the relation between online partner aggression and poor psychological functioning was mediated by maladaptive coping, such that use of maladaptive coping resulted in poorer psychological functioning and better adaptive functioning for individuals who experienced psychological cyber PA. Interestingly, without the indirect effects of maladaptive coping, there was no relation between psychological cyber PA and adaptive functioning. With respect to control variables, social desirability was accounted for in the SEM analyses given that the model was altered based on significant correlations among variables. Further, two additional variations of the final model were tested with social support and perceived locus of control included as control variables to determine whether they improved the fit of the model. However, the fit of the model actually worsened following the addition of these variables; thus, they were excluded from further analyses. Note that the models were tested with and without imputed values for missing data; however, because the imputed values did not impact the fit of the model,

results from the original dataset were maintained.

Research Question Six: Participants' Qualitative Accounts of Psychological Cyber PA Experiences

The sixth aim of the present study was to explore qualitative responses of participants whose questionnaire data suggested that they had experienced at least one act of psychological cyber PA victimization. Interviews were conducted with 12 participants (six male and six female). Data were analysed using coding and thematic analysis. Transcripts were reviewed by the primary researcher and three research assistants independently in consideration of responses that reflected theoretically-based themes (i.e., psychological cyber PA categories, perceived severity ratings, coping categories). Data that did not meet criteria for the established categories were reviewed for additional themes and codes were identified based on interview participants' responses. Responses were then examined by the three independent raters and interrater reliability was calculated for each variable, such as psychological cyber PA (i.e., control, monitoring, jealousy; isolation/threatening; relational aggression; stalking; and verbal aggression), coping (i.e., adaptive coping, social support and expressive coping, and maladaptive coping); and outcome (i.e., poor psychological and poor adaptive functioning) to ensure 100% agreement across all variables.

Perceptions of psychological cyber PA. With respect to previously established categories, participants most frequently identified acts of relational aggression, which were identified by six participants (50%), and acts of verbal aggression, which were identified by six participants (50%), as behaviours constituting online partner aggression. For example, one male participant described acts reflecting verbal aggression and relational aggression as classifying psychological cyber PA:

"They tend to like do things to kind of insult the other person over the Internet, and maybe put information that should be concealed open to everybody to see."

Similarly, a female participant included descriptions of verbally aggressive behaviours in her definition of psychological cyber PA:

"Uh well verbal aggression obviously… umm, anything you say to kind of demean the other person embarrass them, umm well embarr- yeah I guess I would classify embarrassment, deliberately trying to embarrass someone as kind of aggressive."

In both descriptions, the act of trying to insult or demean one's partner through technological means was acknowledged. In addition, the reference to sharing personal information with individuals outside of the romantic relationship was indicative of relational aggression. Half of the sample also referenced "other" behaviours that were not included in the pre-established categories. Here, common themes included the lack of nonverbal and emotional cues as well as the ability to misinterpret information due to use of computer-mediated communication were identified, as illustrated by one participant's description:

"From a technical stand point where basically you're just talking to the screen no matter what network… Twitter, Facebook, uh, using the phone for texts and stuff. Sometimes you can't, even though you know your partner well, sometimes you can't hear their tone of voice and that can lead to confusion, or misunderstanding."

Two participants also referenced "logging off" and ignoring messages when the individual is aware that they have been received as potentially aggressive behaviours:

"I dated a guy… that was long distance and he was back home and the only form we talked through was technology, so I have seen like when you get into a fight with them, they just… they just log off on you… that is one thing that really annoys me."

Interestingly, responses coded in the "other" category reflected behaviours that were quite specific to communicating via technological means as opposed to face-to-face. This speaks to the importance of considering forms of aggression that are specific to communication via technological means.

Participants were quite varied in the degree to which they perceived online partner aggression as severe. Half of the male participants described behaviours constituting psychological cyber PA as mostly annoying rather than threatening. For example, one male participant indicated that in the context of a relationship, aggressive behaviours are only minimally problematic:

"Well like you're… you're with them for a reason, so I believe like even though…if it happens frequently… and [I] know what to do then I would say, very minimal."

Rather than perceiving online partner aggression as a current problem, half of the female participants referred to a potentially growing and serious problem, particularly with respect to advancements in technology. They also described greater risk for partners in long-distance relationships, as demonstrated by the response from one female participant:

"Umm, extremely [serious] if you're doing a long distance relationship. Especially because, if you guys aren't getting along online, chances are you probably won't get along in person."

Experiences with psychological cyber PA. With respect to participants' actual experiences with psychological cyber PA, again, their responses reflected a number of different categories of aggression. Themes generally reflected acts of control, monitoring, and jealousy behaviours; relational aggression; and other behaviours that were not encompassed by the previously-established categories. None of the participants made note of any aggressive behaviours that took place offline. Responses from three participants identified aggression characteristic of control,

monitoring, and jealousy behaviours, such as the description below:

"It wasn't so much something he did, but maybe monitoring what I was doing. Umm, <pause> because everything is recorded on Facebook, it's easy for him to go back and see who I was communicating with… what was said."

Responses that were coded in the "other" category primarily reflected themes of misinterpreting what a partner said and in some cases intentionally manipulating the information during a conflict as well as engaging in covert behaviours without participants' knowledge (i.e., flirting with an other-sex individual, making contact with an individual with whom the individual is uncomfortable through computer-mediated communication). For example, a male participant described a girlfriend's use of computer-mediated communication in order to hide behaviour that might be upsetting to him:

"There's been certain occasions where I felt like she would attempt to, like, kind of flirt with guys or try to conceal her conversation with guys that she's having that I wouldn't know about over the internet and she would use the Internet kind of as protection. So that her information wouldn't be put out there... not so much to protect herself but to keep herself secretive."

Coping with psychological cyber PA. Participants were asked to describe their ability to cope or deal with their experience with psychological cyber PA. The majority (i.e., 10 participants; 83%) reported engaging in some form of coping, as opposed to "doing nothing" to manage the situation. Adaptive coping was identified as a selected strategy by most of the participants (i.e., eight participants; 67%). For example, a primary theme of directly addressing the problem (e.g., trying to communicate more with partner) was identified. However, in some cases, directly addressing the problem with the partner actually resulted in a continuation of the

argument in person (e.g., "I just went home and we fought face-to-face instead of online").

Social support and expressive coping strategies were used by half of the participants (i.e., four

female participants, two male participants), particularly with respect to talking to close friends.

Finally, five participants (42%) mentioned coping behaviours reflective of maladaptive

strategies. For example, themes of apologizing to a partner as a way of reducing the conflict as

well as trying to distract oneself to "ignore" the problem were identified:

> "Anything you can say will lead to a further argument, so you would just give them the
>
> benefit and just, you know, just apologize."

 Most of the participants identified more than one selected coping strategy, suggesting that

they attempted to deal with their experience in more than one way. Of the participants who

engaged in more than one type of coping, most attempted to cope through strategies reflecting

both adaptive coping and social support and expressive coping. When participants were asked to

provide information about the perceived helpfulness of their selected strategies, many (i.e., nine

participants; 75%) described finding it helpful to talk to a partner, particularly after some time

passed and the tension cooled. Also, half of the participants referenced talking to friends as

helpful for reasons such as obtaining another point-of-view:

> "I feel like telling a friend is helpful because you get another perspective. You know,
>
> sometimes you think, like, maybe I'm overreacting."

One individual also made note of the specific advantages of communicating through

technology rather than face-to-face because the individual "can say I'm sorry easily on texting

and not say it over the phone." In regards to coping strategies that were not perceived as helpful,

only three participants were able to describe behaviours that they did not find helpful. Two

primary themes were discussed, including responding back via technological means as opposed

to talking in person and not taking responsibility for one's own contributions to the argument. Participants also expressed frustration about their partners shutting down their computer-mediated communication accounts so that they were unable to contact them. The below example reflects some of the perceived problems with respect to responding via computer-mediated communication:

"I think that when I first responded back on the message, like through Facebook, that didn't really help. I should have, like, called him right away instead of, like, just trying to work it out on there… I find it's easier to, like, talk to them on the phone… then we both just kind of got more angry when we were sending back and forth messages on Facebook."

Outcomes. The majority of participants described having difficulties following their experience with psychological cyber PA. A primary theme that was identified by nine participants (75%) related to internalizing problems. They described feeling "upset", "angry", "sad", "depressed", and "frustrated" following their experience with online partner aggression. However, interestingly, half of the participants specifically noted that they were able to attend work or school in spite of the way they felt, as the below example illustrates:

"I don't think I missed... like it didn't impair anything, like I didn't miss any time at work, but I did feel angry and hurt at the same time."

Although they noted that they did not miss work or school in response to their experience with psychological cyber PA, some participants did indicate that they felt more distracted from what they were doing:

"We got into a fight once while I was pretty much in class, and, uh, he texted me something... I don't really remember, it was just something went wrong and I was just completely thrown off. I was just upset, angry, sad, and then I just didn't want to be there."

Another theme that emerged from participants' accounts was the social embarrassment with which participants dealt as a result of the public nature of social networking sites. For example, participants described feeling "awkward" about facing members of their social network who saw the information, as described in the excerpt below. Others mentioned withdrawing from their social networks as a result of the experience.

"I think because so many people could see it, that it was kind of awkward and embarrassing and stuff for, like, the people who saw it and thought there was a problem with our marriage and stuff because we had a fight… I think it was just more embarrassing and uncomfortable."

With respect to their romantic relationships, the majority (seven participants; 58%) reported remaining in the relationship and resolving the issue with their partner following their experience of psychological cyber PA victimization. An additional three participants (25%) reported that they remained in their romantic relationships, but did not feel as though the situation (i.e., their experience with psychological cyber PA) was resolved. These individuals reported that their romantic relationship was negatively impacted by the episode of online partner aggression because they lost trust in their partner and their expectations of the relationship changed (i.e., they expected "less" from their partner). The majority of participants reported that their use of technology did not change as a result of their experience with psychological cyber PA. However, the four participants who did change their use of computer-mediated communication as a result of psychological cyber PA victimization described behaviours such as being more careful about the information that was publicized as a way of avoiding conflict and deleting information that might be upsetting to their partner. This was illustrated by one participant's account:

"I have more awareness of… I don't want to say like the evidence left behind, you know. Umm if I know certain emails might be read and might be upsetting to this person I might

delete them more quickly… I just try to secure my passwords."

Please refer to Table 10 (page 136) for a summary of the results and the consistency with hypotheses.

Table 10

Summary of Results in Relation to Hypotheses

Research questions and hypotheses	Findings	Consistent with hypotheses?
1. Frequency and perceived severity of psychological cyber PA		
Hyp 1(a): Greater frequency of psychological cyber PA via SNS than email and IM	• Greatest frequency of psychological cyber PA occurred via IM (71.8%), followed by SNS (64.7%), and email (56.0%)	No
Hyp 1(b): Female participants perceive all categories of psychological cyber PA as more severe than male participants	• Female participants perceived all categories of psychological cyber PA as significantly more severe than male participants	Yes
Hyp 1(c): Negative relation between psychological cyber PA and perceived severity	• Psychological cyber PA was not significantly related to perceived severity	No
Hyp 1(d): Greater representation of situational couple violence than intimate terrorism	• The majority (83.4%) of psychological cyber PA reflected situational couple violence (83.4%) not intimate terrorism (16.6%)	Yes
Hyp 1(e): Similar gender rates for psychological cyber PA victimization	• Male and female participants reported similar rates of psychological cyber PA	Yes
2. Relations among psychological cyber PA and coping categories		
Hyp 2: Positive relations between psychological cyber PA and each coping category (i.e., adaptive, social support and expressive, and maladaptive)	• Psychological cyber PA was not related to adaptive coping or social support and expressive coping.	No
	• Psychological cyber PA was positively related to maladaptive coping, but not after controlling for social desirability and perceived locus of control	Partially

3. Relations among psychological cyber PA and outcomes		
Hyp 3(a): Higher levels of psychological cyber PA related to poorer psychological functioning	• Psychological cyber PA was positively related to poor psychological functioning variables (i.e., internalizing problems, externalizing problems, and low self-esteem), prior to controlling for social desirability and perceived locus of control	Partially
Hyp 3(b): Higher levels of psychological cyber PA related to poorer adaptive functioning	• Psychological cyber PA was not related to adaptive functioning variables	No
4. Relations among coping categories and outcomes		
Hyp 4(a) and 4(b): Greater use of adaptive coping and social support and expressive coping related to better psychological functioning and better adaptive functioning	• Greater use of adaptive coping was related to lower levels of internalizing problems, externalizing problems, and low self-esteem, prior to controlling for social desirability, perceived locus of control, and perceived social support	Partially
	• Adaptive coping was not related to adaptive functioning variables	No
	• Social support and expressive coping was not related to psychological functioning variables, prior to controlling for perceived social support, or adaptive functioning variables	No
Hyp 5(a): Greater use of maladaptive coping related to poorer psychological functioning and poorer adaptive functioning	• Greater use of maladaptive coping was related to higher levels of internalizing problems, externalizing problems, and low self-esteem, prior to controlling for perceived locus of control	Partially
	• Greater use of maladaptive coping was related to better adaptive functioning, before and after controlling for social desirability, perceived locus of control, and perceived social support	No
5. Direct and indirect effects of coping on relations among psychological cyber PA and related outcomes		

Hyp 5(a): Higher levels of psychological cyber PA related to greater use of adaptive coping, which would be related to better psychological functioning and better adaptive functioning	• Psychological cyber PA did not predict adaptive coping • Adaptive coping predicted better psychological functioning • Adaptive coping predicted poorer adaptive functioning • No significant indirect effects were revealed	No Yes No No
Hyp 5(b): Higher levels of psychological cyber PA related to greater use of social support and expressive coping, which would be related to better psychological functioning and better adaptive functioning.	• Psychological cyber PA did not predict social support and expressive coping • Social support and expressive coping predicted poorer psychological functioning • Social support and expressive coping did not predict adaptive functioning • No significant indirect effects were revealed	No No No No
Hyp 5(c): Higher levels of psychological cyber PA related to greater use of maladaptive coping, which would be related to poorer psychological functioning and poorer adaptive functioning	• Psychological cyber PA predicted greater use of maladaptive coping • Maladaptive coping predicted poorer psychological functioning • Maladaptive coping predicted better adaptive functioning • For individuals who had experienced psychological cyber PA, greater use of maladaptive coping resulted in poorer psychological functioning • For individuals who had experienced psychological cyber PA, greater use of maladaptive coping resulted in better adaptive functioning	Yes Yes No Yes No

6. Qualitative accounts of psychological cyber PA

Hyp 6: Qualitative themes reflect theoretically-established categories for main study variables, such as psychological cyber PA; coping categories, and outcomes	• A number of qualitative responses reflected themes that were consistent with previously-established categories • Participants reported acts of psychological cyber PA that reflected control, monitoring, and jealousy behaviours and relational aggression and coping behaviours reflecting adaptive coping (i.e., discussing the conflict directly with a partner),	Yes

social support and expressive coping (i.e., turning to a friend for support), and maladaptive coping (i.e., denial)

- Participants reported internalizing problems following their experiences with psychological cyber PA
- Additional themes were identified through responses falling into the "other" category for each area, suggesting that there are a number of qualities (i.e., "logging off" during an argument; showing that a message was received, but not responding; lack of cues) that are unique to computer-mediated communication.

Note. Hyp = Hypothesis. SNS = social networking sites. IM = instant messaging. See Table 9 (page 120) for specific information regarding partial correlations.

CHAPTER IV: Discussion

Over the past decade there has been a large increase in older adolescents' use of technology (i.e., email, instant messaging, and social networking sites) for communication purposes (e.g., Licoppe & Smoreda, 2005). Computer-mediated communication has provided a new avenue for aggression to occur, and studies have reported a number of problems associated with different forms of online aggression over this time period (Alexy et al., 2005; Finn, 2004; Kowalski & Limber, 2007). However, few studies have specifically examined the occurrence of partner aggression occurring via forms of computer-mediated communication. Conducting research in this area seems beneficial considering the negative psychological, medical, and occupational consequences associated with different forms of offline and online aggression (e.g., Alexy et al., 2005; Browne et al., 1999; Cascardi & O'Leary, 1992; Johnson & Leone, 2005; Lammers et al., 2005; Piitz & Fritz, 2010; Riger et al., 2002; Spitzberg & Hoobler, 2002; Ybarra, 2004). The present study attempted to address gaps in the literature by investigating undergraduate students' experiences with psychological cyber PA victimization occurring via email, instant messaging, and social networking sites. In addition, participants' perceptions of the severity of the aggressive online acts were examined. The study also explored whether there were coping responses and outcomes (i.e., psychological functioning and adaptive functioning) related to psychological cyber PA and whether coping indirectly affected the related outcome. Finally, a subset of participants whose questionnaire responses indicated that they had experienced online partner aggression provided qualitative information about their perceptions of and experiences with psychological cyber PA, coping strategies, and any difficulties they experienced as a result of the aggression.

Frequency and Perceived Severity of Psychological Cyber PA

Consistent with prevalence estimates from previous studies that have examined offline and online partner aggression (Draucker & Martsolf, 2010; Melander, 2010; Piitz & Fritz, 2010; Wolfe et al., 2001), quantitative findings revealed that most participants (82.1%) had experienced at least one act of psychological cyber PA during the previous year. In the Canadian study with undergraduate students conducted by Piitz and Fritz (2010), victimization rates were very similar to those of the present study. According to their findings, 82% of participants experienced at least one act of online partner aggression with victimization rates ranging from 35% to 82% depending on the type. In the present study, victimization rates for different types of online partner aggression ranged from 17.1% (isolation/threatening behaviours) to 68.7% (control, monitoring, and jealousy behaviours). Similarly, participants' qualitative descriptions of victimization generally reflected control, monitoring, and jealousy behaviours and relational aggression with respect to previously-established categories. This was consistent with qualitative results from Draucker and Martsolf's (2010) and Melander's (2010) studies in which participants described aggression reflective of monitoring and controlling behaviours and emotional and verbal aggression via technological means.

During the interviews in the present study, participants also discussed unique features of computer-mediated communication that made the experience of psychological cyber PA victimization additionally upsetting. For example, they described escalations in arguments as a result of misinterpreting what a partner was saying. In other cases, they described feeling victimized because their partners could "twist" their written information to provide support for their arguments. Another theme that arose through qualitative

responses was the ability to use computer-mediated communication to "conceal" behaviours that could be upsetting to a partner, such as flirting with other-sex individuals and contacting previous partners without current partners' knowledge.

Overall, previous research and the present study suggest that partner aggression perpetrated via computer-mediated communication is common, which is very concerning considering that initial findings from this study and others examining psychological cyber PA identify a relation with psychological consequences (Melander, 2010; Piitz & Fritz, 2010). In addition, considering the negative consequences (i.e., anxiety, depression, low self-esteem, difficulties at school and at work, physical health consequences, substance abuse issues) associated with other forms of intimate partner aggression (e.g., Arias & Pape, 1999; Cascardi & O'Leary, 1992; Campbell, 2002; Follingstad et al., 1991; Straight et al., 2003) the seriousness of such high rates of victimization should be recognized. There are a number of legal implications to consider regarding aggression occurring via technological methods. For example, providing evidence of other forms of offline psychological aggression may be particularly difficult, whereas, electronic exchanges leave an evidence trail that can be accessed. As a result, individuals who pursue legal action in response to psychological cyber PA victimization would likely be advised to save the aggressive messages. Taken together, these findings provide further indication that online partner aggression is occurring frequently and some form of victimization is experienced by most undergraduate students.

Over half of the study participants also had experienced at least one act of victimization via the three forms of computer-mediated communication: instant messaging (71.8%), social networking sites (64.7%), and email (56%). Studies have

suggested that the majority of university students use computer-mediated communication, such as email, instant messaging, and Facebook on a regular basis (e.g., Finn, 2004; Muise et al., 2009; Statistics Canada, 2010). Interestingly, contrary to prediction, the largest percentage of participants in the present study experienced victimization via instant messaging followed by social networking sites and then email. One previous study that considered forms of technology used in the perpetration of aggression determined that cellular phones were most frequently used (Draucker & Martsolf, 2010); however, they did not differentiate between instant messaging and verbal communication. Because individuals of the current generation frequently access email, instant messaging, and social networking sites on their cellular phones, there are additional implications and opportunities for perpetration of psychological cyber PA. Learning more about the extent to which psychological cyber PA is perpetrated via cellular phones as opposed to desktop or laptop computers would be an interesting direction for future research to pursue. Perhaps the expectation that individuals are constantly available to receive messages communicated via technology on their cellular phones is changing the frequency with which online partner aggression can be perpetrated because various sources of computer-mediated communication can by synchronized and available via cellular phones.

The differences in communication across forms of computer-mediated communication, such as email, instant messaging, and social networking sites, is noteworthy with respect to aggression. For example, with email, there is an opportunity to craft a message prior to delivering and the message may not instantly reach the individual once sent. In these cases, there likely is not an expectation to have an immediate exchange with the recipient, which is in contrast to instant messaging, where

the assumption is that the message reaches the recipient immediately. With instant messaging, there also is likely more opportunity for the recipient to respond and for the exchange to become heated, especially if the individuals engaged do not have an opportunity to calm down in between exchanges. Perhaps, in this type of exchange, aggressive behaviours become increasingly likely as the communication progresses. In the case of social networking sites, over which aggression also was experienced by a large number of individuals, there is an opportunity for the information communicated to be made public. This additional element of publicly exposing the private exchange to others may invite humiliation and embarrassment and potentially greater victimization as a result, which was a theme identified in the qualitative data in the present study as well as findings from Melander's (2010) qualitative study.

In previous research, a number of studies have discussed theoretical models of offline partner aggression; however, given the limited research in the area of online partner aggression specifically, a theoretical basis for the development and occurrence of psychological cyber PA has not been developed (Melander, 2010). As a result, Johnson's (1995) theoretical framework of offline partner aggression was considered in order to establish whether the different types of partner aggression (i.e., intimate terrorism and situational couple violence) also were evident in psychological cyber PA. Findings from Melander's (2010) qualitative study suggested that situational couple violence was evident in participants' accounts of partner aggression occurring via technological means. Similarly, the present study revealed that the majority (83.4%) of psychological cyber PA victimization reflected situational couple violence, which was consistent with hypotheses and previous research indicating that situational couple violence is the most common

form of intimate partner aggression (Johnson, 2009).

However, despite the greater rates of situational couple violence, it is still noteworthy that 16.6% of participants experienced aggression reflective of the more severe intimate terrorism. This is concerning especially considering that there is a high likelihood that individuals who are victimized by their partners via online methods are also victimized in the offline world as well. This may result in a prolonged pattern of aggressive behaviours intended to maintain control over one's partner. Themes identified in Melander's (2010) qualitative study also suggested that the online partner aggression described by participants reflected both situational couple violence and intimate terrorism. These findings speak to the potential severity of the aggressive online acts. Although they may not be perpetrated face-to-face, they actually provide several opportunities to maintain control over one's partner. Online communication also provides additional outlets for a partner to assert his or her control. For example, there are opportunities for monitoring forms of computer-mediated communication, opportunities for frequent check-ins with one's partner, and greater access to the victim given that perpetration of aggression is no longer reliant on physical presence. In addition, these findings further support the notion that Johnson's (1995) typology is reflected in different forms of offline aggression as well as psychological cyber PA occurring during online interactions (Melander, 2010).

Of additional concern, when examining the group of participants who were victimized by their partners via online methods, 80.3% also reported experiencing at least one act of offline partner aggression. This was compared to 17.7% who reported only experiencing at least one act of either online or offline aggression. These findings suggest that there is a high likelihood that individuals who have experienced online partner

aggression also will be victimized in some way through offline methods. The few studies that have examined online partner aggression also provided indications that psychological cyber PA is related to offline forms of partner aggression. For example, Piitz and Fritz (2010) reported significant positive correlations between measures of online and offline partner aggression. In addition, qualitative findings suggested that negative exchanges beginning through technological means often continued and escalated when the couple was face-to-face, in some cases, resulting in isolated violent acts (Melander, 2010). Melander (2010) also noted that aggression can be perpetrated via technology with greater speed and less opportunity for the recipient to walk away. Thus, there is potential for a greater psychological impact and increasingly escalated arguments prior to continuing the exchange face-to-face. Research on couples' interactions has found that husbands' facial expressions reflecting anger and wives' facial expressions reflecting sadness were associated with husbands' beliefs that problems could not be solved whereas husbands' facial expressions reflecting contempt were associated with wives' beliefs that problems could not be solved (Gottman, Levenson, & Woodin, 2001). Perhaps face-to-face interactions occurring when partners' emotions are heightened following psychological cyber PA may result in feelings of hopelessness regarding solving the problem. Considering the large number of older adolescents who are victimized through online partner aggression, these findings speak to the importance of conducting more research in this area and examining possible interventions.

With respect to gender, as expected, findings from the present study suggested that male and female participants were equally likely to experience online partner aggression victimization. This is consistent with family violence researchers' results, which revealed

gender-balanced rates of aggression, and previous literature suggesting that there are

similar gender rates of offline intimate partner aggression reflecting situational couple

violence in more representative populations (Johnson, 2009; Straus et al., 1980).

Situational couple violence tends to result from an exchange between partners that has

gotten out of hand and is less likely to be used as a means to gain control over one's

partner as is the case with intimate terrorism (Johnson, 1995, 2009). These findings

provide greater support for Johnson's (1995) theory of intimate partner aggression and

suggest that this theory may be applicable to psychological cyber PA as well as offline

forms. However, as a cautionary note, although these results are consistent with previous

research, they should be interpreted with caution considering the much lower number of

male participants relative to female participants in the present study.

In order to better understand participants' experiences of psychological cyber PA,

information about their perceived severity of the aggressive acts also was collected. This

has not been previously investigated, although one study examined perceptions of

severity with respect to offline unwanted pursuit behaviours (Cupach & Spitzberg, 2000).

In the present study, overall, participants' average ratings of perceived severity (i.e., the

extent to which they felt or would feel annoyed, upset, threatened, and violated by each

act of psychological cyber PA) were fairly high (i.e., means above 6 on a 10-point scale)

for the majority of psychological cyber PA subscales (control, monitoring, jealousy;

isolation/threatening behaviours; relational aggression; and verbal aggression). The

quantitative results suggest that undergraduate students recognize online partner

aggression as relatively undesirable and as having potentially negative consequences.

These findings were inconsistent with those of Cupach and Spitzberg (2000) who found

that unwanted pursuit behaviours were generally considered only moderately severe. This difference speaks to the importance of examining perceived severity of each form of aggression (i.e., online partner aggression versus offline unwanted pursuit behaviours) specifically.

Interestingly, in the present study, participants appeared to perceive stalking behaviours as significantly less severe than the other categories. In some ways this seems surprising considering that these behaviours are generally perceived as quite serious (Cupach & Spitzberg, 2000). However, as Cupach and Spitzberg (2000) reported, pursuit behaviours that are not considered threatening may actually be perceived as flattering because they reflect romantic pursuit to some degree. In addition, a number of studies have indicated that stalking behaviours are perceived as less serious or concerning when targets are pursued by romantic partners than by acquaintances and strangers (Dennison & Thomson, 2002; Phillips, Quirk, Rosenfeld, & O'Connor, 2004; Sheridan, Gillett, Davies, Blaauw, & Patel, 2003). Thus, stalking behaviours may be fairly normal relationship behaviours that have become disturbed (Cupach & Spitzberg, 1998). If so, then there may be a blurry line between romantic pursuit and inappropriate behaviours. This is concerning considering that stalking targets of intimate partner stalking are at greater risk for negative outcomes than targets of stranger or acquaintance stalking (Palarea, Zona, Lane, & Langhinrichsen-Rohling, 1999).

Another possible factor influencing perceived severity of stalking behaviours is that the aggressive behaviours do not include involvement of other individuals. In other words, stalking is directly perpetrated onto the individual, which is in contrast to some of the other forms of aggression (i.e., control, monitoring, and jealousy behaviours;

isolation/threatening behaviours; and relational aggression) that have some degree of involvement of other people through isolation, jealousy, or spreading rumours. Perhaps the additional involvement of or isolation from others adds an element to the aggression that leads to the perception of greater severity (i.e., because of greater embarrassment, need for social explanations, etc.) as participants emphasized through qualitative responses. These possibilities should be examined in future research to gain a better understanding of individuals' perceived severity of the aggressive acts.

Contrary to prediction, the present study also found that frequency of psychological cyber PA was not significantly related to individuals' perceptions of severity nor were there significant differences in participants' perceptions of severity based on whether they had previously experienced online partner aggression. Although previous research has not specifically considered perceptions of severity for online partner aggression, the study that examined perceived severity of unwanted pursuit behaviours found that, with the exception of one category, participants had similar perceptions of severity regardless of whether they had been victimized previously (Cupach & Spitzberg, 2000). This was consistent with results in the present study, suggesting that previous experience with certain types of aggression does not influence the degree to which these behaviours are perceived as severe. Perhaps individuals do not become desensitized to aggressive behaviours perpetrated by romantic partners in a similar fashion as cyberstalking (Alexy et al., 2005).

Perceptions of severity were examined by gender to determine whether male and female participants provided significantly different ratings. As hypothesized, findings revealed that female participants had higher levels of perceived severity than male

participants for all categories of aggression. More specifically, female participants perceived control, monitoring, and jealousy behaviours, isolation/threatening behaviours, relational aggression, stalking, and verbal aggression as more severe than male participants. These results are consistent with findings from Cupach and Spitzberg's (2000) study, which also revealed that women perceived higher levels of severity of unwanted pursuit behaviours than men in most cases. As noted previously, the effect sizes for the gender differences in the quantitative findings for the present study were quite small, which could be influenced by the ratio of female to male participants and the low number of male participants. As a result, these gender differences should be interpreted with caution. The small effects might also suggest that variables other than gender are more influential in predicting perceptions of severity. Future research should explore other possible predictors.

Qualitative data from the present study also seemed to be in line with the quantitative findings with respect to gender differences, although participants were varied in the extent to which they perceived psychological cyber PA as severe. Half of the male interview participants described behaviours characteristic of psychological cyber PA as more annoying than upsetting, threatening, or violating. These individuals suggested that arguments between romantic partners would happen in a similar manner regardless of the medium. Although most of the female participants did not describe psychological cyber PA as an extremely serious problem yet, they did discuss online partner aggression as a growing problem that had the potential to become increasingly serious, particularly as technology advances. In addition, they made note of contextual factors that could potentially add to the severity of psychological cyber PA, such as being in a long distance

relationship that is more reliant on computer-mediated communication.

When considering these gender differences in perceptions of severity, the importance of examining individuals' actual perceptions of aggressive behaviours is highlighted. As indicated by results of the present study, male and female participants differ in the extent to which they perceive acts of online partner aggression as severe, with women generally perceiving online partner aggression as more severe across different categories of aggression and severity. Perhaps the extent to which individuals perceive aggressive behaviours as severe can impact their subjective experience should they be victimized by psychological cyber PA. As noted by Spitzberg and colleagues (1998), although men may experience some forms of victimization at similar rates as women, they likely do not experience the same level of fear. This is consistent with research examining arguments of couples with a violent husband in which Jacobson and colleagues (2000) found that only wives (i.e., not husbands) expressed feeling fearful of their spouses during arguments. Again, more research examining individuals' subjective experiences of victimization rather than focusing on specific acts of aggression is greatly needed to understand what victims have gone through.

As noted previously, there are a number of factors that may contribute to differences in men and women's reactions to aggressive behaviours. As noted by Johnson (2006), the role of gender in intimate partner aggression goes far beyond comparing men and women's perpetration rates and gender-related theories are important to consider. For example, gender differences in size and strength, societal attitudes toward men and women, traditional roles of men and women, and barriers to escaping the relationship (e.g., Felson, 1996; Holtzworth-Munroe, 2005; Johnson, 2010) are all important factors

in individuals' subjective experience of the aggression. Further, studies have demonstrated that all forms of intimate partner aggression are related to greater injury, fear, and negative psychological consequences when perpetrated by men rather than by women (e.g., Follingstad et al., 1991; Johnson, 2010). Again, these findings highlight the need to recognize that men and women's experiences of victimization by online partner aggression may differ.

One of the goals of the present study was to obtain information about behaviours participants perceived as reflecting psychological cyber PA through qualitative data in order to better understand this construct. Qualitative data revealed different behaviours that participants felt were characteristic of psychological cyber PA. As predicted, some of the described behaviours, such as verbal aggression and relational aggression, were similar to the previously-established categories. In these cases, participants referred to acts of embarrassing and insulting romantic partners as problematic behaviours. These findings were consistent with participants' reports in Draucker and Martsolf's (2010) qualitative study investigating the role of technology in dating aggression. Over half (i.e., 53%) of the participants in their study reported using computer-mediated communication to perpetrate verbal or emotional aggression against a partner. The aggression ranged from mild put-downs to leaving threatening voicemails or text messages.

In the present study, interview participants also highlighted behaviours related to making intimate details of the romantic relationship public as important aspects in the definition of psychological cyber PA. A similar theme of publicly revealing private information also was found in the two qualitative studies to date that examined online partner aggression. For example, in Melander's (2010) study, participants identified

posting insulting comments online as constituting online partner aggression because of the additional element of public embarrassment. Some of the aggression occurring via technological means described in Draucker and Martsolf's (2010) study also was public. For example, some of the aggressive behaviours included past partners posting a hateful website about one participant and derogatory comments on a social networking site.

Interestingly, similar to participants in Melander's (2010) study, participants in the present study made note of behaviours that were specific to online interactions in their interview responses. They described perceiving the lack of verbal and nonverbal cues that are absent in interactions via computer-mediated communication as problematic. Thus, they suggested that these unique aspects of computer-mediated communication should be included in the definition of psychological cyber PA. Similarly, participants who completed interviews made note of the ability to "log off" during an argument with a partner as a potentially aggressive behaviour. In addition, they indicated that certain forms of computer-mediated communication (i.e., instant messaging) provide information about when a message recipient actually receives a message. As a result, participants described in their interviews, a potential risk of learning a romantic partner received a message, but did not respond. These characteristics are in contrast to offline forms of aggression. Although there is always the possibility that a partner simply may not respond to efforts at communication through offline forms of aggression (e.g., not picking up the telephone or answering the door), perhaps the additional knowledge that the message was received is especially upsetting to the individual. Thus, despite the overlap among behaviours measured in the present study through questionnaire data that were previously established and are more consistent with forms of offline aggression, the

unique aspects of computer-mediated communication that are perceived as upsetting and reflective of psychological cyber PA should likely be considered as part of the definition.

Relations among Psychological Cyber PA, Coping Categories, and Outcomes

With respect to relations among psychological cyber PA, coping categories, and outcomes, as noted previously, control variables of social desirability and perceived locus of control appeared to account for part of the effects in the correlations. There are a number of possible explanations as to why these variables played a role in the analyses. In terms of social desirability, perhaps individuals who are concerned about presenting themselves in a socially desirable way are more likely to underreport their experiences with online partner aggression because of the stigma of partner aggression. Previous research has considered the extent to which social desirability affects reporting of partner aggression. For example, a meta-analytic review of the role social desirability plays in reporting offline intimate partner aggression suggested that social desirability was more strongly related to individuals' reports of perpetration than victimization, although social desirability was still correlated with victimization (Sugarman & Hotaling, 1997). Findings have been mixed regarding whether there are gender differences in the extent to which social desirability impacts reporting of offline partner aggression. For example, some studies have indicated that female and male participants are equally likely to report perpetration and victimization (e.g., Follingstad et al., 1991; Sugarman & Hotaling, 1997) whereas other research has found that female participants' reports of offline partner aggression were more likely to be influenced by social desirability than reports of male participants (Bell & Naugle, 2007). Further, Bell and Naugle (2007) found that women who attempted to present themselves in more socially appropriate ways were less likely

to report perpetration and victimization of different types of offline partner aggression (i.e., psychological, physical, and sexual). Perhaps the strong influence of social desirability in the present study's analyses was affected by (or a product of) the relatively large number of female participants in the present sample.

Although Sugarman and Hotaling (1997) and Bell and Naugle (2007) made note of the relation between social desirability and self-reports of offline partner aggression, both groups of researchers indicated that the effect sizes were relatively weak, particularly for reports of victimization. Sugarman and Hotaling (1997) further argued that the weak effect size may be overestimated due to a lack of reporting nonsignificant findings and because individuals tend to be less concerned about presenting in a socially desirable manner for less severe forms of violence (i.e., situational couple violence reflected in the present study) than more severe forms. In addition, participants whose confidentiality is protected are less likely to respond in a socially desirable light (Sugarman & Hotaling, 1997).

There is also the possibility that the effect of social desirability is an artifact of the measure (i.e., Marlowe-Crowne Social Desirability Scale; Reynolds, 1982) itself. According to Dutton and Hemphill (1992), there is the possibility that social desirability measures create confusion by assessing both impression management (i.e., intentional manipulation of responses to present in a more socially appropriate way) and self-deception (i.e., a genuine bias of positive self-belief; as cited in Sugarman & Hotaling, 1997), resulting in a lack of clarity regarding the construct being measured.

Perceived locus of control and perceived social support are also considered important factors in individuals' experiences of stressful events. Women in aggressive relationships

have been found to have significantly lower perceptions of control than women who are not (O'Neill & Kerig, 2000). A lack of perceived control for women who have been victimized by their partners may impact their decisions to stay in the relationship, reduce their use of problem-focused coping, and reduce their resilience when faced with aggression (O'Neill & Kerig, 2000). Further, greater perceived control has been found to relate to lower levels of psychological symptoms and better adjustment (Follingstad et al., 1991; O'Neill & Kerig, 2000). Similarly, the extent to which individuals perceive availability of social support can impact their selected coping strategies and related outcomes (Asberg et al., 2008; Moos & Holahan, 2003). Thus, perhaps the degree to which participants perceived control over their experiences of psychological cyber PA and perceived social support as available to them played a role in their selected coping strategies and psychological functioning.

Although previous research has not examined coping categories related to psychological cyber PA, higher levels of offline psychological aggression has been found to relate to greater use of problem-focused coping and adaptive emotion-focused coping (e.g., Calvete et al., 2008). These findings were inconsistent with the present findings as online partner aggression was not found to significantly relate to either adaptive coping or social support and expressive coping, which was contrary to expectations.

A number of studies have indicated that individuals who have been victimized by offline partner aggression are more likely to engage in certain maladaptive coping strategies. For example, women have demonstrated greater use of maladaptive coping strategies (i.e., avoidance) when they are in ongoing abusive relationships (Mitchell & Hodson, 1983; Waldrop & Resick, 2004). In addition, previous research has indicated

that exposure to an aggressive partner is related to an increased likelihood of using substances, such as drugs, alcohol, and cigarettes, which may reflect attempts to cope with the aggression (Clark & Foy, 2000; Kilpatrick et al., 1997; Riger et al., 2002; Straight et al., 2003). Findings from the present study suggest that, prior to including control variables, higher levels of psychological cyber PA were related to greater use of maladaptive coping strategies, as predicted. This finding reflects a similarity between strategies used to cope with online and offline partner aggression and has important clinical implications. Because there have been mixed findings in the literature in terms of how individuals cope with partner aggression, the findings from the present study provide a first step in understanding coping categories related to psychological cyber PA. An interesting direction for future research would be to examine the extent to which individuals engage in these coping strategies and the degree to which these strategies are truly "maladaptive" in terms of managing the relationship and long-term outcomes.

Previous research has demonstrated a number of negative psychological effects of both online and offline forms of aggression such as fear, depression, anxiety, anger, low self-esteem, posttraumatic stress disorder, and emotional suffering (Alexy et al., 2005; Arias & Pape, 1999; Carlson et al., 2002; Cascardi & O'Leary, 1992; Follingstad et al., 1991; Johnson & Leone, 2005; Riger et al., 2002; Spitzberg & Hoobler, 2002). To date, few studies have examined outcomes of online partner aggression specifically; however, those that have also indicated that psychological cyber PA is related to psychological consequences. For example, Piitz and Fritz (2010) found that all forms of psychological cyber PA examined in their study, except for one (i.e., stalking), were positively related to internalizing and externalizing problems. Participants in Melander's (2010) study also

reported experiencing humiliation and embarrassment as a result of aggressive content being made public through technology such as social networking sites.

Findings from the present study were partially consistent with previous research. Higher levels of psychological cyber PA were related to poorer psychological functioning, such as greater internalizing problems, externalizing problems, and low self-esteem. Thus, similar to other forms of online and offline aggression, victimization by psychological cyber PA is associated with a higher likelihood of experiencing psychological difficulty. Through qualitative data, participants' accounts of their difficulties following exposure to psychological cyber PA victimization further supported these findings. The majority of individuals who completed interviews reported facing a number of emotions, such as sadness, frustration, anger, low self-esteem, and depression in response to the aggression. They also discussed the embarrassment of having to face members of their social network who had witnessed the aggressive act in cases where psychological cyber PA occurred via social networking sites. These results were consistent with qualitative findings from Melander's (2010) study in which participants also described the humiliation associated with publicizing the aggressive exchange, particularly with the additional opportunity for others to comment on or join in the argument.

Taken together, these findings provide support for the negative impact of online partner aggression, which has clinical implications and speaks to the importance of developing strategies to provide support to individuals who are victimized. Despite the lack of physical proximity in online partner aggression, there still appear to be related negative consequences. However, again, the inclusion of control variables of social

desirability affected relations among psychological cyber PA and internalizing problems and low-self esteem and perceived locus of control affected the relation between psychological cyber PA and low-self-esteem, suggesting that these variables may have accounted for part of the effect.

Studies have demonstrated that a number of areas of functioning, including occupational functioning and social functioning, may be affected by partner aggression; however, there has been limited research with respect to outcomes associated with psychological cyber PA specifically. In terms of offline partner aggression, individuals who have been victimized by their intimate partners were found to be impacted at work and miss school more frequently than those who were not (Browne et al., 1999; Byrne et al., 1999; Riger et al., 2002). There have been mixed findings with respect to social functioning, although research investigating the association between online and offline forms of partner aggression and individuals' social functioning is very limited. Although previous research has demonstrated that perceived availability of social support can potentially reduce negative outcomes and enhance functioning following exposure to a stressful encounter (Asberg et al., 2008; Moos & Holahan, 2003), individuals victimized by intimate partner aggression may also avoid sharing details of their experiences with members of their social networks due to feelings of shame, embarrassment, guilt, and fear of being judged (Barnett, 2001).

Results from the present study were inconsistent with previous research described above. None of the relations between psychological cyber PA and adaptive functioning variables (i.e., education, work, social functioning) were statistically significant nor was psychological cyber PA significantly related with overall adaptive functioning. In

addition, through qualitative data, participants specifically noted that in spite of the emotional difficulties they faced as a result of psychological cyber PA victimization, they were able to attend school or work. Some of the participants who completed interviews did note that they felt distracted when at work or school, but were able to attend nonetheless. Although these findings are somewhat surprising given previous research, there are a number of possible explanations as to why this may be the case. In addition to intimate partner aggression having been found to relate to poorer functioning at work (e.g., Riger et al., 2002), a lack of economic difficulty and higher levels of occupational functioning (i.e., obtaining work) also have been found to act as protective factors for individuals victimized by partner abuse (Carlson et al., 2002; Riger et al., 2002). Although some participants in the present study may have experienced poorer occupational functioning as a result of online partner aggression, the overall sample likely reflects individuals who function relatively well to begin with given that they attend university. Moreover, because of university students' unique financial status, exposure to psychological cyber PA might not have resulted in as many economic difficulties for the present sample as it might have for others (e.g., employed nonstudent adults). Thus, perhaps for these individuals, their lack of economic difficulty and higher levels of education may have served as protective factors for psychological cyber PA. Alternatively, it is possible that poorer adaptive functioning is simply not related to individuals' experiences with psychological cyber PA. This is an area that should be explored further in future research to better understand this nonsignificant finding as related effects on adaptive functioning has important clinical implications.

Selected coping strategies have been found to relate to different outcomes, in some cases, buffering the individual from the negative effect of a stressful experience (e.g., Calvete et al., 2008; Sabina & Tindale, 2008). With respect to qualitative findings in the present study, the majority of participants discussed coping with their experience of psychological cyber PA victimization through use of adaptive strategies, such as directly addressing the problem. As expected, quantitative results suggested that, prior to controlling for social desirability and perceived locus of control, greater use of adaptive coping was related to lower levels of externalizing problems and low self-esteem. However, correlational analyses revealed that adaptive coping was not related to internalizing problems or adaptive functioning.

Qualitative findings from the present study revealed that half of the participants reported coping by seeking social support, mostly referring to turning to close friends for support. A number of studies have examined the role social support plays with respect to emotional functioning when faced with various problems and situations (e.g., Moos & Holahan, 2003; Waldrop & Resick, 2004; Wester, Christianson, Vogel, & Wei, 2007). For example, previous research has demonstrated a link between perceived availability of social support and more positive psychological adjustment and well-being later in life (Cowie, Naylor, Talamelli, Chauhan, & Smith, 2002; Mitchell & Hodson, 1983; Reinhardt et al., 2006). In addition, a lack of instrumental support for male adolescents and emotional support for female adolescents was found to be related to depression (Cheng, 1998). Findings from the present study were inconsistent with hypotheses and previous research as the coping category of social support and expressive coping was not related to either psychological functioning (i.e., internalizing problems, externalizing

problems, and low self-esteem) or adaptive functioning (i.e., occupational functioning and social functioning). Although the reliability and validity of the measures used to assess coping, psychological functioning and adaptive functioning are generally considered good (please see pages 90 to 93), perhaps results would differ with use of alternate measures. The COPE (Carver, 1989) in particular had a lower Cronbach's alpha (i.e., $\alpha = .68$) for the adaptive coping category in the present study.

With respect to maladaptive coping, qualitative data revealed that just under half of the participants coped with their experience of online partner aggression through maladaptive strategies, such as trying to "ignore" the problem and apologizing to one's partner. Participants also described finding behaviours, such as responding back through computer-mediated communication rather than speaking face-to-face and not taking responsibility for their own contributions to the problem, problematic for psychological cyber PA. As expected, prior to controlling for perceived locus of control, bivariate results from the present study indicated that individuals who engaged in use of maladaptive coping were more likely to experience poor psychological functioning (i.e., higher levels of internalizing problems and externalizing problems, and low self-esteem). On the other hand, contrary to hypotheses, greater use of maladaptive coping was actually related to better adaptive functioning before and after including control variables suggesting that individuals who use these methods of coping tend to demonstrate better occupational and social functioning.

Direct and Indirect Effects of Coping on Relations among Psychological Cyber PA and Related Outcomes

One of the goals of the present study was to examine whether the coping strategy that

individuals victimized by psychological cyber PA used indirectly affected their outcomes. This has not been examined in previous research therefore representing a unique contribution to the literature. The majority of participants who completed interviews reported that they used more than one coping strategy to deal with their experience of online partner aggression victimization. The most commonly reported strategies revealed through qualitative data reflected adaptive coping, followed by social support and expressive coping, and then maladaptive coping. Seeking help (i.e., from friends, emergency services) via forms of computer-mediated communication also was identified as a strategy for coping with psychological cyber PA in Draucker and Martsolf's (2010) qualitative study.

Examination of the overall model using SEM revealed that adaptive coping predicted better psychological functioning. In addition, participants provided qualitative information about the perceived helpfulness of their selected coping strategy. The majority described finding adaptive strategies, such as talking about the problem with their romantic partner, helpful. Overall, these results seem to provide further support for this category of coping strategies as "adaptive" given that participants' use of this form of coping was found to relate to better psychological functioning (i.e., fewer externalizing problems, higher self-esteem), even when control variables were included.

Adaptive coping was not related to occupational functioning or social functioning at the bivariate level. However, interestingly, results from the overall SEM model revealed that use of adaptive coping strategies actually predicted poorer adaptive functioning, when controlling for all other variables in the model. Thus, individuals' use of adaptive coping was related to poorer functioning at work and at school as well as poor social

functioning (e.g., time with family and friends). Perhaps the coping strategies that comprise the "adaptive" category have aspects of them that are not always helpful for occupational and social functioning when faced with psychological cyber PA. Many of these coping strategies reflect efforts to address the problem directly, which may improve psychological functioning, but create greater difficulty functioning in daily life (i.e., at work or school and socially). It is possible that avoidance of the problem (rather than directly facing the problem) provides enough distance to allow the individual to function at work and at school, and with members of one's social network. Research has demonstrated that strategies, such as distraction, have some beneficial qualities for certain types of problems (e.g., depression, pain-produced distress; McCaul & Malott, 1984; Oikawa, 2002). In addition, for some individuals, distraction may actually involve thinking about more pleasant thoughts, which allows them to deal with negative affective information (Boden & Baumeister, 1997).

Interestingly, contrary to hypotheses, results from the overall SEM model revealed that social support and expressive coping actually predicted poorer psychological functioning, but did not predict adaptive functioning. Based on past research identifying a link between social support and better well-being (e.g., Reinhardt et al., 2006), these results seem surprising. In addition, these results do not seem entirely in line with participants' qualitative responses, in which half described talking to friends as beneficial because they are able to obtain another perspective. An important consideration is that there are a number of factors that determine whether social support is actually helpful. For example, helpers' responses may impact whether the individual perceives the help as beneficial or not, particularly if the responses represent a form of support that the

individual did not anticipate or want (Simmering & Fritz, 2008). One study found that when helpers responded in negative ways (i.e., through conflict and criticism), this was related to poorer adjustment for the help seeker (Moos & Holahan, 2003). Research has also indicated that individuals who have experienced partner aggression may feel hesitant to disclose this particular problem to members of their social network due to feelings of embarrassment and shame as well as fear of being judged and receiving an unhelpful response (Barnett, 2001). According to Mitchell and Hodson (1983), participants in their study who were victimized by partners often perceived responses as unhelpful after turning to others for support. Perhaps results from the present study indicating that use of social support and expressive coping predicted poorer psychological functioning are due in part to the fact that individuals who turned to others did not receive the response or support that they wanted. As a result, their psychological functioning may have been negatively affected. An interesting and important direction for future research would be to examine specific aspects of social support that may be effective or ineffective in helping individuals who are faced with online partner aggression.

In addition, it is interesting to consider that emotional expression (i.e., focus on and venting of emotions) loaded with the social support seeking items in the factor analysis of the COPE measure. Perhaps when these characteristics hang together, they reflect support seeking behaviours, such as venting, frequently seeking reassurance, and potentially ruminating on the problem that are less helpful for the individual. Post-hoc analyses revealed that after removing the COPE focus on and venting of emotions subscale, the construct social support no longer significantly predicted poorer psychological functioning whereas expressive coping significantly predicted poorer psychological

functioning following removal of the COPE social support subscales. Although the post-hoc analyses suggest that expressive coping accounted for a large part of the effect, interestingly, the model fit best when all components (i.e., "social support" and "expressive") were included. Therefore, the combination of social support and expressive coping strategies appears to have a greater impact on psychological functioning than either component on its own. Future research specifically examining the impact of type of support received on psychological functioning for psychological cyber PA seems beneficial.

The only indirect effects observed in the SEM analysis involved maladaptive coping, which mediated the relations between psychological cyber PA and poor psychological functioning and poor adaptive functioning, even when control variables were accounted for. More specifically, for individuals who experienced online partner aggression, use of maladaptive coping strategies was related to poorer psychological functioning and better adaptive functioning.

With respect to psychological functioning, these findings are consistent with previous research that has demonstrated relations between the use of maladaptive coping strategies (e.g., avoidance, substance use, disengagement) and a number of symptoms such as depression, anxiety, and negative health perceptions (Browne et al., 1999; Calvete et al., 2008; Holahan et al., 2005; Straight et al., 2003). Thus, results of the present study seem to further indicate that, for individuals who have been exposed to higher levels of psychological cyber PA, engaging in maladaptive coping strategies results in poorer psychological functioning. As past studies have indicated, individuals who use maladaptive coping strategies have poorer outcomes with respect to their psychological

functioning and may experience more symptoms of depression, anxiety, inattention, rule-breaking behaviours, and low self-esteem.

However, SEM analyses demonstrated that maladaptive coping predicted better adaptive functioning. Although improvement in adaptive functioning was not expected to be associated with use of maladaptive coping, one consideration is that all of the coping strategies represented by the maladaptive category reflect forms of distraction, denial, or disengagement as a way of managing the problem. Trying to "distract" oneself from the problem also was discussed through qualitative data. Perhaps when individuals attempt to cope by using strategies that avoid the problem rather than attempting to take action to solve the problem, they end up spending more time at work and at school or with friends and family members. Thus, although they may not be addressing the problem directly in doing this, the benefits that might result from increased focus on work/school and on spending time with supportive others, might actually facilitate greater adaptive functioning. In addition, as noted previously, participants in the present study may generally reflect a higher functioning group of individuals with respect to cognitive functioning and socioeconomic status. Perhaps the different areas of individuals' lives that are represented by adaptive functioning (i.e., work, school, time spent with family members and friends) act as protective factors for university students. It also is possible that these findings reflect a developmental trend and that selection of coping strategies may differ for younger or older individuals.

Although the present study and previous research (e.g., Calvete et al., 2008; Holahan et al., 2005; Straight et al., 2003) provide support for maladaptive coping as a harmful strategy with respect to psychological functioning, this does not seem to be the case for

adaptive functioning. In addition, there does not appear to be any research specifically examining whether these coping strategies are in fact maladaptive for the problem at hand. Perhaps there are differences with respect to whether coping categories are helpful depending on the specific problem and area of functioning. It is possible that for individuals who are victimized by online partner aggression and remain in the relationship, strategies that provide them with an escape from the problem (e.g., through distraction, disengagement, substance use, denial) may actually be helpful for some areas of their lives. Also, the escape/avoidance theme that is reflected in the strategies that comprise the maladaptive coping category seems to be a less mature manner of responding than more direct forms of coping. Perhaps developmental level plays a role in selection of these strategies.

An important direction for future research would be to continue investigating whether these coping strategies captured under the category of "maladaptive" are in fact harmful when coping with psychological cyber PA. Perhaps for these individuals, they are provided with a reprieve or escape from the problem, which allows them to function well in certain areas of their lives, such as at work, at school, and socially. In addition, for individuals who are victimized by psychological cyber PA on an ongoing basis and remain in their romantic relationships, such an escape may be necessary in terms of their well-being in order for them to function in other areas of their lives. Although their psychological functioning may be significantly impacted by the online partner aggression, perhaps providing themselves with distance from their problem is necessary in terms of their daily functioning in terms of behaviour.

Relationship Quality

With respect to relationship quality, findings from the present study revealed that, overall, participants reported a high level of commitment and satisfaction and a low likelihood of ending the relationship. This finding was supported by the interview data as well. The majority of participants who completed interviews remained in their romantic relationships following their experience with psychological cyber PA. These findings are noteworthy when considering the high rates of aggression reported in the present study. As indicated by Johnson (2009), individuals victimized by offline forms of intimate partner aggression do not always report low relationship satisfaction or a high likelihood of ending the relationship. In addition, there may be differences based on the severity of the aggression, which could be a factor with respect to these findings. For example, one study found that when the partner aggression was characterized by intimate terrorism, a large number of women reported low relationship satisfaction compared to a much smaller percentage (i.e., 13%) of women who were victimized by situational couple violence (Johnson et al., 2002). Perhaps because the majority of victimization in the present study reflects situational couple violence, there is less impact on perceived relationship satisfaction than if the online partner aggression was characterized by intimate terrorism. Again, these findings speak to the importance of considering the types of aggression and developing appropriate interventions for each (Johnson, 2009).

However, when results were compared based on previous experience with psychological cyber PA, participants who had experienced psychological cyber PA reported lower ratings of satisfaction than those who had not, but were equally committed and equally unlikely to end the relationships. Although the majority of individuals who

completed interviews indicated that they felt as though the situation (i.e., their experience with psychological cyber PA) was resolved, a quarter reported remaining in the relationship despite not feeling satisfied that the situation had been resolved. However, because only participants who had previous experience with psychological cyber PA completed the interviews, qualitative comparisons with individuals who had not experienced psychological cyber PA could not be made. Overall, these results tell us that the experience of psychological cyber PA and lower levels of satisfaction are not perceived as viable reasons for ending the relationship, which is concerning if the negative consequences of nonphysical aggression are not recognized. Perhaps in these cases, expectations in relationships are quite low. In addition, if individuals intend to remain in their romantic relationship, perhaps feeling satisfied and committed to the relationship is a way of reframing the experience. Previous studies have suggested that individuals victimized by partner aggression can have various emotions toward their partners. For example, toward their partners, they may feel love, emotional distance, uncertainty about the relationship, or a lack of support (Campbell et al., 1998; Carlson et al., 2002). In addition, in cases where the abuse was determined to be less severe, women were more likely to report beginning the relationship because of their "love" for the partner compared to women who experienced more severe abuse and were more likely to begin their relationships for reasons such as loneliness (Garcia-Linares et al., 2005).

When comparing abused and nonabused individuals, Garcia-Linares and colleagues (2005) found that most women who had not been abused reported feeling love, affection, and respect for their partners compared to abused women who reported having negative feelings (i.e., pity, indifference, hate) toward their partner. Similarly, another study found

that participants experiencing emotional abuse often reported feelings of loneliness, hopelessness, and desperation (Lammers et al., 2005). These findings are somewhat consistent with the results of the present study. Although mean ratings were relatively high for relationship quality, participants who had been victimized by online partner aggression reported significantly lower levels of satisfaction than those who had not. Therefore, overall, participants who had been victimized by psychological cyber PA were less satisfied with their relationships than participants who had not been.

Another possible explanation for these results is that a decrease in satisfaction may occur before individuals began to feel less committed and more likely to leave their relationships. According to Bell and Naugle (2005), individuals who have been victimized by offline partner aggression first determine relationship satisfaction by estimating the payoffs and consequences of remaining in their relationship versus an alternative relationship. This level of satisfaction then factors into their level of commitment to the relationship and individuals are more likely to leave the relationship if they had lower levels of satisfaction, believed they had other available alternatives, and had fewer investments into the relationship. Perhaps individuals in the present study also would report decreased ratings of commitment to the relationship and begin to contemplate ending the relationship following a period of lower satisfaction.

Participants also reported a low likelihood of leaving the relationship, regardless of whether they experienced online partner aggression. Again, qualitative data further supported this finding as all but two participants who completed interviews reported staying in their romantic relationship following their experience with psychological cyber PA. Several studies have suggested that individuals often do not dissolve the romantic

relationship after being victimized by their partners and that there are many barriers to leaving (e.g., Johnson & Leone, 2000). Findings also suggest that individuals are more likely to attempt to leave an abusive romantic partner when the aggression is frequent and severe (Arias & Pape, 1999; Johnson & Leone, 2000; Waldrop & Resick, 2004). In the present study, higher frequencies of psychological cyber PA were significantly related to increased likelihood of ending the relationship when $p < .05$, but not when $p < .01$, suggesting a trend in the same direction.

Findings from the present study revealed that the longer participants had been in romantic relationships, the less likely they were to leave the relationship. In addition, length of relationship was significantly related to higher levels of reported commitment to and satisfaction with the relationship. Perhaps in cases where individuals do remain in the relationship, feeling satisfied and committed to the relationship may be a protective coping strategy by reframing the experience. Herbert and colleagues (1991) suggested that cognitive strategies were often used by participants in their study as a way of reframing their romantic relationships when they were not ready to leave. In addition, individuals who are victimized may believe their partners will change, minimize the seriousness of the aggressive acts, and become isolated from their support networks (Arriaga & Capezza, 2005), which may provide some explanation for their reluctance to leave. Further, their expectations of future relationships may be affected, such that they expect to be victimized again (Riger et al., 2002), which may influence them to stay in the relationship. However, as was noted by Johnson and Leone (2000), many individuals who have experienced situational couple violence continue to perceive a number of positive qualities about their relationships, and thus, likely remain with their partners

because they continue to see the relationship as positive. All of these possibilities are likely plausible in the present study and are consistent with previous research. Again, these results speak to the importance of identifying the type of aggression being examined and conducting research that contributes to our understanding of relationship quality for those victimized by psychological cyber PA.

Limitations

The present study contributes to the literature by providing an understanding of undergraduate students' experiences with online partner aggression, selected coping strategies, and related outcomes through quantitative and qualitative methods. In addition, the present study was the first to date to examine participants' perceptions of severity with respect to the aggressive acts. Due to the limited research in this specific area, this study represents a preliminary investigation of a number of variables related to online partner aggression. As such, the findings should be considered in light of several limitations that may impact the conclusions and generalization.

One limitation of the present study is the inclusion of university students as participants. Although there are several advantages (i.e., access to computers, frequent use of technology for communication purposes, likelihood of being involved in a romantic relationship, more autonomy from parents) to including university students as participants for this research, particularly considering its exploratory nature, results may differ across populations. For example, younger and older individuals' use of computer-mediated communication may differ and, as a result, they may have more or less potential for exposure to online partner aggression. For younger individuals, parental monitoring of their online usage may also change the degree to which they are exposed to online

partner aggression specifically. In addition, the criterion of being a university student, on its own, suggests a number of protective factors (e.g., access to computers, access to financial means to pay the costs associated with attending university, completion of high school, etc.). Thus, future research should investigate experiences with online partner aggression among individuals from different socioeconomic and educational backgrounds as well as different age groups to obtain more generalizable results.

The composition of the sample with respect to gender and ethnicity may also affect the generalizability of the findings. Although gender comparisons were not a main area of investigation in the present study and interviews were conducted with equal numbers of male and female participants, the gender imbalance with respect to the questionnaire responders may have impacted the results. In addition, the limited variability with respect to ethnicities may affect generalizability. Future studies should conduct research with comparable numbers of male and female participants and a variety of ethnicities to gain a better understanding of the experiences across gender and ethnicity.

Another limitation that should be taken into consideration is that the measure of online partner aggression, the PATS (Piitz & Fritz, 2008), was only recently developed and there do not appear to be other measures assessing online partner aggression at this point. In addition, investigating perceptions of severity with respect to online partner aggression has not been examined previously and the measure assessing perceived severity in the present study was modified. Therefore, sound psychometric properties have yet to be established for these measures, which should further be explored in future research.

Given that most of the participants in the present study reported psychological cyber

PA victimization, future research may benefit from being more specific about the areas being measured, such as limiting participants' responses to their current partners or obtaining information about coping with psychological cyber PA rather than examining dispositional coping strategies. Further, because the data collected from the PATS is not limited to one's current romantic partner, it is possible that participants in the present study were describing psychological cyber PA occurring in a previous relationship, but responding to questions about relationship satisfaction for a different partner.

With respect to qualitative data, because participants were included based on a first come, first serve basis (i.e., the first six male and six female participants who expressed interest were included), there is the possibility that there was a selection bias and that results would differ for participants who may have responded to the invitation for participation at a later time. In addition, half of the qualitative participants reported having met their partners online, which was the case for only a small proportion of the entire sample. Thus, perhaps use of computer-mediated communication, perceived relationship quality, and experience of psychological cyber PA differed for participants who met their partners online as opposed to offline.

In regards to statistics performed in the present study, a major limitation is that path models do not demonstrate causality (Tabachnick & Fidell, 2001). In addition, model modifications can also be perceived as exploratory in some ways and although the data may fit well, there are potentially other untested models that also provide an explanation for the data. Another limitation is that the data included in the present study were retrospective, which may introduce potential errors resulting from retrospective reports (e.g., reliance on memory). Social desirability scores also were related to some of the

main variables in the present study, such as psychological cyber PA, coping, and psychological functioning. This suggests that some participants who provided lower ratings of online partner aggression had higher scores on the social desirability measure. Despite controlling for social desirability, findings may not have completely reflected participants' true attitudes as a result of the possibility that some individuals might have under- or over-reported their experience with online partner aggression. In addition, due to the possibility that individuals may reframe the experience, particularly if they are still in a relationship with the perpetrating partner, it may be useful to examine whether there are differences in coping strategies and related outcomes for participants who remained in the relationship versus those who did not.

Finally, the present study only examined participants' experiences with victimization from a single informant without collecting information about the rates of perpetration. It is likely that, in addition to being victimized, some participants also perpetrated online partner aggression. An interesting direction for future research would be to compare whether there are differences in perceptions of severity, coping strategies, and outcomes for relationships reflecting mutual aggression and relationships reflecting victimization only. In addition, learning about individuals' experiences with online partner aggression from the perspective of both partners would likely provide a more comprehensive understanding of this construct.

Clinical Implications of the Present Study

This study represents an initial exploration of undergraduate students' experiences with online partner aggression, their selected coping strategies, and levels of psychological and adaptive functioning. Findings revealed that psychological cyber PA is

occurring at high rates among university students and that it predicts poorer psychological functioning (i.e., internalizing problems, externalizing problems, and low self-esteem). These results have a number of clinical implications and speak to the importance of gaining a better understanding of this area of research and developing intervention strategies to address the issue of online partner aggression specifically. In addition, the majority of participants victimized by psychological cyber PA also experienced at least one act of offline partner aggression, which further demonstrates the seriousness of this issue. Six key clinical implications from findings of the present study are discussed below.

First, Kelly and Johnson's (2008) major types of partner aggression (i.e., intimate terrorism and situational couple violence) were both evident in the present study. Although the majority of psychological cyber PA was characterized by situational couple violence as is common in the general population (Johnson, 2009), the finding that 16.6% of participants experienced aggression reflective of intimate terrorism is concerning in itself. A number of negative consequences have been found to result from intimate terrorism, which poses a greater threat than other forms of partner aggression (Johnson, 2009). Findings from the present study illustrate the severity of online partner aggression, which may be minimized due to the nonphysical nature of the abuse. Not only can online partner aggression reflect control and domination characteristic of intimate terrorism, there is also a high likelihood of offline victimization.

Clinicians working with clients who have been victimized by partner aggression should ensure that they obtain information about the type of aggression by learning about preceding contextual factors and patterns of dominance and control. Distinguishing

between types of partner aggression is important for selecting intervention strategies. For example, with situational couple violence, working on couples' communication and identifying strategies to de-escalate situations before they get out of hand would be important. Further, working with the couple dyad may be beneficial when the aggression reflects situational couple violence whereas this likely would not be the case for intimate terrorism. Babcock, Graham, Canady, and Ross (2011) conducted research examining whether two interventions (i.e., editing out the negative and accepting influence) that were developed with nonviolent couples and were aimed at improving communication (Ryan & Gottman, 2004 as cited in Babcock et al., 2011) also could be applied to violent couples. Couples were actively taught both interventions and then engaged in a conflict discussion. Results indicated that men's aggressive feelings (as measured by self-report and observation) were significantly lower in the argument that followed for both interventions compared to the control group. The aggression described in Babcock and colleagues' (2011) study reflected situational couple violence. Thus, identifying the type of partner aggression, whether occurring online or offline, and then implementing appropriate clinical interventions based on the type are important aspects of treatment.

Second, there are a number of implications resulting from the perpetration of partner aggression via technological means. Some examples include the opportunity for an abusive message to be sent multiple times in a short period of time, multiple avenues through which to monitor a partner's activities, the ability to engage in a "one-sided" argument without exposure to the other party's response, and the ability to make private information public and to draw others into the argument. Further, according to Bocij (2004), individuals tend to be less inhibited when communicating via technological

means and may express themselves differently than they would in person (as cited in Melander, 2010). Therefore, there are several qualities of online partner aggression that are unique and potentially damaging (i.e., due to opportunity for more frequent aggression, less inhibition, lack of nonverbal cues, etc.) and warrant further investigation. In addition, the high likelihood of individuals victimized by psychological cyber PA also being exposed to offline partner aggression is especially concerning. Thus, strategies aimed at preventing or de-escalating the conflict may be an important focus of treatment when individuals intend to remain in their relationships. It may be beneficial for clinicians to obtain specific information about the modes of communication through which victimization is occurring, as well as the specific content of the messages. For example, gaining information about clients' interpretations of their partners' messages, identifying whether there are possible alternate interpretations, and then examining evidence for the interpretations prior to reaching a conclusion could be beneficial. Such information also could be considered when identifying strategies for addressing the partner following the exchange. For example, qualitative data revealed that some participants found responding back via computer-mediated communication was particularly unhelpful. Of course, this type of intervention would have to be implemented with caution to ensure that the responsibility or blame is not placed on individuals who have been victimized.

Third, findings from the present study provide support for the importance of understanding the experience from the individuals' perspectives rather than focusing on the aggressive act itself (Johnson, 2010). Perceptions of severity had not been examined previously despite providing important insight regarding how individuals may experience

online partner aggression, and therefore, addressing a gap in the literature. When compared by gender, although there were fewer male participants than female participants, overall, women were found to perceive online partner aggression as more severe than men. Although male dominance may not be a central feature in situational couple violence (i.e., Johnson, 1995), acknowledgement of gender inequality within society and abusive relationships is important (Kurz, 1989; Pagelow, 1992). Recognizing that women perceive acts of online partner aggression as more severe than men also may suggest that they have more negative consequences in response to a particular act of aggression than men would to the same act. Therefore, although victimization rates of situational couple violence may be similar for both genders, women may be impacted to a greater degree.

Considering individuals' perceptions of the victimization experience also are important with respect to clinical interventions and approaches that they may perceive as beneficial. For example, children and youth who were victimized by bullying have identified a need to be assertive and to stand up for themselves as well as to avoid the emotional difficulties resulting from being bullied as motivators for stopping the bullying (Craig, Pepler, & Blais, 2007). Thus, for these individuals, attempting to incorporate the development of assertiveness skills into their intervention and identifying strategies that would make seeking help early on easier for them would likely be important (Craig et al., 2007). Similarly, depending on individuals' own subjective experience of psychological cyber PA victimization, they may have different ideas of areas they wish to improve. Understanding victimization experiences from the individuals' perspective as a way of informing treatment can also be empowering for them. As Stovers, Meadow, and

Kaufman (2009) suggest, although many partner aggression treatment programs include aspects of advocacy intervention, couples therapy, and cognitive behavioural strategies, individual treatment needs must be considered and attempts to apply a blanket intervention to all individuals should be avoided.

Fourth, with respect to relationship quality, although it might be expected that individuals who have experienced psychological cyber PA would be less committed to their relationships and more likely to end their relationships than those who have not, results from the present study suggest that this is not the case. The present study found that, although commitment to the relationship and likelihood of ending the relationship were not influenced by previous experience with psychological cyber PA, relationship satisfaction was (such that participants with previous experience of psychological cyber PA reported lower satisfaction). These results suggest that for many individuals, online partner aggression victimization (likely in addition to offline partner aggression for many) is not reason enough for dissolving the relationship. One important consideration is that, despite differing on previous experience with psychological cyber PA, mean scores of satisfaction were still relatively high (i.e., above 6 on a 10-point scale) for both groups. However, individuals who intend to remain in their romantic relationships may be using cognitive strategies, such as reframing, as a method of coping. Perhaps research and interventions focused on helping to improve satisfaction and to reduce aggressive behaviours for those remaining in their romantic relationships would be beneficial.

Obtaining information about relationship quality and reasons for remaining in the relationship is necessary for informing clinical intervention. For example, if an individual who has been victimized has remained in the relationship because of various barriers that

make dissolution difficult, working on addressing the barriers and identifying helpful coping strategies may be important treatment foci. On the other hand, if an individual cites reasons such as love and commitment as motivators for remaining in the relationship, which could very well be the case with situational couple violence, clinical intervention focused on improving communication, preventing the escalation of conflict, and identifying alternate coping strategies with both partners would be important.

Fifth, previous research has not investigated whether coping indirectly affects the relations between online partner aggression and related outcomes. Use of maladaptive coping strategies appears to play an important role in victimized individuals' outcomes and can actually result in poorer psychological functioning. Although the more traditionally adaptive strategies (i.e., adaptive coping and social support and expressive coping) did not indirectly affect outcomes for individuals who had been victimized by psychological cyber PA, it is possible that they prevented poorer outcomes. Thus, interventions focused on increasing the use of adaptive coping strategies and reducing the use of maladaptive coping strategies may be beneficial for those who are victimized by online partner aggression with respect to psychological functioning.

The other interesting piece is that use of traditionally maladaptive coping strategies, such as behavioural and mental disengagement, denial, and substance use, resulted in better adaptive functioning. Although the impact on psychological functioning does provide support that these strategies are in fact "maladaptive" for online partner aggression, perhaps these strategies also have some usefulness for specific areas of functioning, such as occupational and social functioning. Future research could examine whether a combination of these coping strategies is a better approach for overall

functioning given that traditionally maladaptive strategies may provide some benefits for individuals on a short-term basis (i.e., tasks related to daily functioning), whereas, traditionally adaptive coping strategies may provide longer-term benefits because the problem is being addressed. However, there is a risk that when an individual who has been victimized appears to be functioning well on a day-to-day basis, friends and family members may discount their experience of the abuse or assume the aggression is not serious.

Sixth, one cautionary note is that the age of the individual also is essential to guiding intervention strategies as the inclusion of parents in treatment may need to be considered. Further, increasing parents' awareness of the risks of psychological cyber PA is very important, especially when considering that the current generation has grown up with computer-mediated communication and may be more familiar with technology use than their parents. Parents should consider the degree to which their children's or teenagers' online behaviours are monitored, particularly when they are younger. For example, keeping computers in more public areas of the home, such as a family room, as opposed to children's and teenagers' bedrooms may be beneficial. Such supervision may provide more opportunity for early intervention to occur.

Results of the present study provide a starting point in understanding undergraduate students' perceptions of and experiences with psychological cyber PA, related coping strategies and outcomes, and the role that coping plays in the functioning of individuals who have been victimized. Clearly more research is needed in this area to better understand these findings and gain more insight into coping strategies that are useful for online partner aggression specifically.

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Appendix A: Qualitative Items for Semi-Structured Interview

House number (e.g., 123):
Birthday month:
Birthday year:

1. There is much talk these days about how people are aggressive to one another using different forms of technology, such as email, instant messaging, and social networking sites (e.g., Facebook, MySpace, blogs, etc.). During online communication between romantic partners, are there things that go on that you would classify as online partner aggression? Please describe:

2. Please describe how serious of a problem you perceive online partner aggression to be?

3. How often each day do you and your romantic partner communicate using technology (get idea of how often per day for email, instant messaging, and social networking sites)?

4. Please describe a situation when you felt upset by something a romantic partner did over email, instant messaging, or social networking sites (e.g., Facebook, MySpace, blogs, etc.)

5. How did you cope or deal with this situation? Please describe:

6. Did you turn to anyone for help (e.g., friends, family members, professionals)?

7. How did this experience impact your romantic relationship (e.g., did you break-up)?

8. Did you find there was anything that helped or did not help this situation? Please describe why or why not:

9. Did you experience any difficulties in response to this incident (e.g., felt sad, angry, hurt; missed time at school or at work; had arguments with friends)?

    a. If yes, please describe the difficulties you faced in response to this incident:

10. Did your use of technology change as a result of the experience?

Appendix B: Demographic Characteristics

1. How old are you?

   I am _____ years old.

2. What is your gender?
   ☐   Male
   ☐   Female
   ☐   Transgendered
   ☐   Other

3. What sexual orientation do you most identify with?
   ☐   Heterosexual   ☐   Bisexual
   ☐   Gay or Lesbian   ☐   Not Sure

4. Which race or ethnicity do you identify with the most?
   ☐   Caucasian/White
   ☐   Chinese
   ☐   South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)
   ☐   African American/Black
   ☐   Filipino
   ☐   Latin American
   ☐   Southeast Asian (e.g., Cambodian, Malaysian, Laotian, Vietnamese, etc.)
   ☐   Arab
   ☐   West Asian (e.g., Afghan, Iranian, etc.)
   ☐   Japanese
   ☐   Korean
   ☐   Aboriginal
   ☐   Multiracial
   ☐   Other (please specify): _____

5. What is your religious preference?
   ☐   Roman Catholic
   ☐   Anglican
   ☐   Jewish
   ☐   Protestant (e.g., Methodist, Presbyterian, Lutheran, etc.)
   ☐   Muslim
   ☐   Buddhist
   ☐   Hindu
   ☐   Sikh
   ☐   Agnostic
   ☐   None
   ☐   Other (please specify) _____

6. What is your current year of study?
   ☐   First year   ☐   Second year

☐ Third year   ☐ Other _____

☐ Fourth year

7. Are you a:

☐ Part-time student   ☐ Full-time student

8. What is your current major? _____

9. Where are you currently living?

☐ Residence (alone)

☐ Residence (shared)

☐ Parental home

☐ Off-campus housing (alone)

☐ Off-campus housing (with significant other)

☐ Off-campus housing (with roommate)

☐ Other _____

10. What is your current relationship status?

☐ Single

☐ Casually dating (different people at same time)

☐ Dating exclusively (single person, short term, long term, or serious)

☐ Engaged

☐ Married

11. Did you meet your current partner:

☐ Online   ☐ Offline

12. How long have you been in a relationship with your current partner?

☐ Less than six months   ☐ One to two years

☐ Six months to one year   ☐ Over two years

13. On average, how many hours per week do you spend with your partner in person?

14. On average, how many hours per week do you spend with your partner online?

15. How committed do you feel to keeping your relationship with your current partner?

         0   1   2   3   4   5   6   7   8

   Not at all   Completely

     committed   committed

16. How likely is it that you will end your relationship with your current partner in the next 3 months?

         0   1   2   3   4   5   6   7   8

<div align="right">Not at all   Extremely</div>

Not at all   Extremely
  likely   likely

17. How satisfied are you with your relationship with your current partner

      0   1   2   3   4   5   6   7   8
Not at all   Completely
  satisfied   satisfied

18. Do you own a personal computer?
    ☐   Yes   ☐   No

19. Do you have an email account?
    ☐   Yes   ☐   No

20. On average, approximately how many minutes do you spend using email each day?
    <Open-ended>

21. On average, approximately how many emails do you send per day?
    ☐   Fewer than 5   ☐   10 – 15
    ☐   5 – 10   ☐   15 – 20
    ☐

22. Do you have an instant messaging account?
    ☐   Yes   ☐   No

23. On average, approximately how many minutes do you spend using instant messaging each day?
    <Open-ended>

24. Are you a member of a social networking site (e.g., Facebook, MySpace, blogs, etc.)?
    ☐   Yes   ☐   No

25. If yes, please specify all social networking site(s) (e.g., Facebook, MySpace, blogs, etc.) you use:
    <Open-ended>

26. On average, approximately how many minutes do you spend using a social networking site (e.g., Facebook, MySpace, blogs, etc.) per day?
    <Open-ended>

Appendix C: Participant Pool Recruitment Advertisement

This study is an opportunity to participate in research on conflict in romantic relationships among university students as well as their use of computer-mediated communication, such as email, instant messaging, and social networking sites (e.g., Facebook), coping strategies, and psychological, occupational, and social adjustment. This survey will be completed online and will take approximately one and a half (1.5) hours to complete. You have the ability to earn one and a half (1.5) bonus points for your participation. Some participants who agree to be contacted again once they finish their survey, may be invited to complete a 60 minute interview about their experiences and views and receive an additional one (1.0) bonus point for their participation. In order to qualify and receive the bonus points, participants must be in a current dating relationship with an other-sex partner. After signing up for the study, you will be able to access it at www.uwindsor.ca/coping. Please address all study comments, concerns, or questions to simmeri@uwindsor.ca.

Appendix D: Information Letter/Consent Form

LETTER OF INFORMATION FOR CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Coping with Relationship Conflict

You are asked to participate in a research study conducted by **Mary Simmering McDonald, M.A.** and **Dr. Patti Timmons Fritz** from the Department of Psychology at the University of Windsor. If you have any questions or concerns about this research, please feel free to contact Mary Simmering McDonald at simmeri@uwindsor.ca or Dr. Fritz at pfritz@uwindsor.ca or (519) 253-3000 ext. 3707. The results of this study will form the basis of Mary Simmering McDonald's doctoral dissertation research project.

PURPOSE OF THE STUDY
This study will assess relationship conflict among university students as well as their use of computer-mediated communication, such as email, instant messaging, and social networking sites (e.g., Facebook), coping strategies, and psychological, occupational, and social adjustment.

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

- To enter the study, you will need to enter the **User ID** and **password** provided at the bottom of this page. Please **DO NOT** use your University of Windsor User ID and password.

- To print a copy of this form to keep for your records, simply select the "print" button at the bottom of the page.

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

If you choose to participate, you will be asked to complete a series of questionnaires asking about relationship conflict, use of technology, coping, and psychological functioning. This study should take approximately 90 minutes to complete. Once you have completed the survey or exited the survey, you will be provided with a research summary and a list of local resources.

POTENTIAL RISKS AND DISCOMFORTS
Some people may have some negative feelings (e.g., anxiety, sadness, embarrassment, anger) in response to some of the questions about their relationship experiences within the past year. However, you do not have to answer any questions that you do not want to answer. You will also be given a list of community resources when you finish or exit the survey. If you experience any form of distress during or after this study, please contact someone from this list or Dr. Patti

Timmons Fritz. You may also contact the **Student Counselling Centre** on campus (Rm. 293, CAW) at http://www.uwindsor.ca/scc; (519) 253-3000 Ext. 4616 where support and assistance is provided to students free of charge OR the **Psychological Services Centre** (326 Sunset Avenue) at (519) 253-3000 Ext. 7012.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY
Information obtained from this study will help us understand some of the conflicts young people have in their relationships, how technology is being used by romantic partners, how individuals are coping with relationship conflicts involving technology, and what difficulties they have experienced as a result of these conflicts. Such information can be used to help raise awareness and develop prevention and treatment programs aimed at helping individuals build healthy relationships. In addition, some people report that they learn something about themselves in the process.

PAYMENT FOR PARTICIPATION
Participants will receive 1.5 bonus points for 90 minutes of participation towards the Psychology Participant Pool, if registered in the pool and enrolled in one or more courses.

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

PARTICIPATION AND WITHDRAWAL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without penalty. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. You can withdraw your data at any time prior to the end of the survey by exiting the study or by closing your web browser. If you wish to have your information removed from the study after participation, please contact Mary Simmering McDonald (simmeri@uwindsor.ca) or Dr. Fritz (pfritz@uwindsor.ca).

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS
Once this research study is complete, a summary of the results will be posted on the following website: www.uwindsor.ca.reb. You may access these results by clicking on "Study Results: Participants/Visitors". The results are expected to be posted by December 2012.

SUBSEQUENT USE OF DATA
These may be used in subsequent studies.
Do you agree to be contacted for participation in an additional interview portion of this study?

☐ Yes
☐ No

RIGHTS OF RESEARCH SUBJECTS
You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, please contact:

Research Ethics Coordinator, University of Windsor
Windsor, Ontario N9B 3P4
Telephone: 519-253-3000, ext. 3948
E-mail: ethics@uwindsor.ca

User ID required to access the survey: **COPING**
Password required to access the survey: **SURVEY**

SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE
I understand the information provided for the study **Coping with Relationship Conflict** as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form. By clicking "I Agree", I am giving consent to participate in this study.

_____   _____

Name of Participant   Date

SIGNATURE OF INVESTIGATOR
These are the terms under which I will conduct research.

_____   _____

Electronic signature of Investigator   Date

[Print]

["I Agree" button]

["I do not wish to participate" button]

Appendix E: Invitation for Part 2 of Study (Pop-Up Page)

Thank you for participating in the study **"Coping with Relationship Conflict."** Based on your answers, you qualify for participation in a second phase of this study, which involves being interviewed about your experiences with relationship conflict, use of technology, coping, and psychological functioning. Participants will receive 1.0 bonus points for 60 minutes of participation towards the Psychology Participant Pool, if registered in the pool and enrolled in one or more courses.

Do you agree to be contacted for participation in an additional interview portion of this study?

☐ Yes
☐ No

University
of Windsor

Appendix F: **CONSENT TO PARTICIPATE IN RESEARCH**

Title of Study: Coping with Relationship Conflict

You are asked to participate in a research study conducted by **Mary Simmering McDonald, M.A.** and **Dr. Patti Timmons Fritz** from the Department of Psychology at the University of Windsor. The results of this study will form the basis of Mary Simmering McDonald's doctoral dissertation research project. If you have any questions or concerns about this research, please feel free to contact Mary Simmering McDonald at simmeri@uwindsor.ca or Dr. Fritz at pfritz@uwindsor.ca or (519) 253-3000 ext. 3707.

PURPOSE OF THE STUDY
This study will assess relationship conflict among university students as well as their use of computer-mediated communication, such as email, instant messaging, and social networking sites (e.g., Facebook), coping strategies, and psychological, occupational, and social adjustment.

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

- Respond to a series of interview questions asking about relationship conflict, use of technology, coping, and psychological functioning. The interview will take place in Chrysler Hall South, Room 284/284A or 283-1. The interview will be conducted by one researcher and is expected to take approximately 60 minutes to complete. Once you have completed the interview or decide to withdraw from the study, you will be provided with a research summary and a list of local resources.

POTENTIAL RISKS AND DISCOMFORTS
Some people may have some negative feelings (e.g., anxiety, sadness, embarrassment, anger) in response to some of the questions about their relationship experiences within the past year. However, you do not have to answer any questions that you do not want to answer and will be offered breaks as needed during the interview. You will also be given a list of community resources when you finish the interview. If you experience any form of distress during or after this interview, please contact someone from this list or Dr. Patti Timmons Fritz. You may also contact the **Student Counselling Centre** on campus (Rm. 293, CAW) at http://www.uwindsor.ca/scc; (519) 253-3000 Ext. 4616 where support and assistance is provided to students free of charge OR the **Psychological Services Centre** (326 Sunset Avenue) at (519) 253-3000 Ext. 7012.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY
Information obtained from this study will help us understand some of the conflicts young people have in their relationships, how technology is being used by romantic partners, how individuals are coping with relationship conflicts involving technology, and what difficulties they have

experienced as a result of these conflicts. Such information can be used to help raise awareness and develop prevention and treatment programs aimed at helping individuals build healthy relationships. In addition, some people report that they learn something about themselves in the process.

PAYMENT FOR PARTICIPATION
Participants will receive 1.0 bonus points for 60 minutes of participation towards the Psychology Participant Pool, if registered in the pool and enrolled in one or more courses.

CONFIDENTIALITY
Any information that is collected in connection with this study and that can be associated with you will remain private and anonymous and will not be disclosed. Any identifying information collected will be for the sole purpose of awarding participation points. Your interview responses will be identified by a code number, not your name. Your answers will not be matched to your identity and will be released only as summaries with other participants' responses. The interview will be audiotaped for the purpose of transcribing the interview responses. Audiotapes will be accessed only by researchers in this study and will be erased by 2016. The interview responses will be stored in a non-identifiable data file with other participants' responses, independent from your personal information. This data file will be saved on a password-protected, secure computer accessed only by the researchers in this study.

PARTICIPATION AND WITHDRAWAL
You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without penalty. You may also refuse to answer any questions you do not want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. You can withdraw your data at any time prior to the end of the survey. If you wish to have your information removed from the study after participation, please contact Mary Simmering McDonald (simmeri@uwindsor.ca) or Dr. Fritz (pfritz@uwindsor.ca).

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS
Once this research study is complete, a summary of the results will be posted on the following website: www.uwindsor.ca.reb. You may access these results by clicking on "Study Results: Participants/Visitors". The results are expected to be posted by December 2012.

SUBSEQUENT USE OF DATA
This data may be used in subsequent studies.

RIGHTS OF RESEARCH SUBJECTS
You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, please contact:

Research Ethics Coordinator, University of Windsor
Windsor, Ontario N9B 3P4
Telephone: 519-253-3000, ext. 3948
E-mail: ethics@uwindsor.ca

SIGNATURE OF RESEARCH SUBJECT/LEGAL REPRESENTATIVE

I understand the information provided for the study **Coping with Relationship Conflict** as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Name of Subject

_____   _____
Signature of Subject   Date

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

_____   _____
Signature of Investigator   Date

Revised February 2008

Appendix G: CONSENT FOR AUDIO TAPING

Research Participant's Name: _____

Title of the Project: **Coping with Relationship Conflict**

I consent to the audio-taping of interviews.

I understand these are voluntary procedures and that I am free to withdraw at any time by requesting that the taping be stopped. I also understand that my name will not be revealed to anyone and that taping will be kept confidential. Tapes are filed by number only and store in a locked cabinet.

I understand that confidentiality will be respected and that the audio tape will be for professional use only.

_____   _____
(Signature of Research Participant)   (Date)

VITA AUCTORIS

NAME:	Mary Simmering McDonald
PLACE OF BIRTH:	Ottawa, Ontario
YEAR OF BIRTH:	1982
EDUCATION:	Albert College, Belleville, Ontario
	1999-2001
	University of New Brunswick, Fredericton, New Brunswick
	2001-2005 B.A. Honours
	University of Windsor, Windsor, Ontario
	2005-2007 M.A.
	University of Windsor, Windsor, Ontario
	2007-2012 Ph.D.