

Running head: NORMS AND EMOTIONS IN SOCIAL AGGRESSION

**“Does it feel good to be bad?”: The influence of individual and peer group norms on  
emotional responses to the use of social aggression**

by

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## NORMS AND EMOTIONS IN SOCIAL AGGRESSION

### Abstract

The purpose of this study was to determine the roles of individual and peer group norms towards the use of social aggression, and to explore the emotional experiences of perpetrators who use socially aggressive behaviours. The sample consisted of young adults ( $M = 22.45$ ,  $SD = 5.32$ ) who reported a memorable incident of perpetrating an act of social aggression, and the emotions they felt at the time. Individual normative beliefs and peer group norms regarding the acceptability of social aggression were used to predict the emotional experiences of socially aggressive individuals. Norms did not significantly contribute to perpetrators' emotional experiences. However, positive and negative emotions and individual beliefs significantly predicted the frequency of using social aggression, while peer group beliefs were not as influential. The relationship between specific forms of social aggression and emotional states suggested that emotional experiences vary as a function of the specific behaviour used. This research contributes to the field of social aggression by identifying the complex emotional experiences of perpetrators of social aggression.

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## NORMS AND EMOTIONS IN SOCIAL AGGRESSION

### **“Does it feel good to be bad?”: The influence of individual and peer group norms on emotional responses to the use of social aggression**

Childhood, adolescent, and young adult relationships have long been accepted as having a significant influence on social, emotional, and psychological development. These are developmental periods during which the focus of social relationships shifts from parents to peers as adolescents and young adults gain greater independence from their parents. Peer friendships are increasingly important, as they become the primary companions with whom youth spend their time. These relationships can be particularly intense and are characterized by greater intimacy and disclosure than their relationships with parents (Steinberg & Morris, 2001). Beginning in the adolescent stage of development and continuing into early adulthood, youth begin to place more value on the intimacy and reciprocity in their friendships as they develop stronger attachments to friends (Sullivan, 1953). However, according to Underwood, Galen and Paquette (2001), it is imperative that developmentalists, professionals, and parents recognize that not all of these relationships are amiable and that sometimes individuals must deal with “mean” or unkind behaviour from others. These developmental phases can be particularly tumultuous and negative for individuals who are victimized by behaviours such as peer rejection and exclusion.

The study of individual development has always been driven by the objective to describe, explain, predict, and improve problematic behaviours that can contribute to significant social, emotional and behavioural issues in certain persons (Steinberg & Morris, 2001). Peer victimization and problematic social behaviour has proliferated in the literature since the 1980s and 1990s (Steinberg & Morris, 2001), with research on

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bullying predominating in the last few decades in popular and academic research (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996). More subtle indirectly aggressive peer interactions such as indirect, relational, or social aggression have been researched since the late 1960s (Feshbach, 1969). These aggressive social interactions focus on causing harm to an individual's relationships, social status within the peer group, or to their self-esteem through exclusion, ignoring, gossiping or giving dirty looks. Adolescents and young adults victimized in these ways can suffer long-term negative effects (Crick & Grotpeter, 1996), making this a growing concern for parents, educators, researchers and psychologists. The study of these socially aggressive interactions is important because adolescents and early adults targeted by relational forms of victimization are more prone to develop problems in their social and psychological adjustment in adolescence, and later on in early adulthood (Crick & Grotpeter, 1995; Werner & Crick, 1999; Werner & Nixon, 2005). These victims are at an increased risk of experiencing internalizing and externalizing problems such as peer rejection, academic difficulties, low self-esteem, anxiety, social isolation, loneliness, and are more likely to be withdrawn, depressed, and delinquent in later development (Crick & Grotpeter, 1995, 1996; Pronk & Zimmer-Gembeck, 2010).

The published research to date on social victimization clearly establishes the negative long-term consequences of these behaviours, however, the motivations and explanations for the development, continuance, and intensification of these social strategies among individuals who *use* these behaviours are only in the early stages of investigation. Peer relationships are an important context in which individuals experience socially and emotionally complex interactions. Nonetheless, little is known

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about the affective experiences of individuals who use aggressive social behaviours in their peer relations. Evidence that emotions play an important role in social aggression is clear in the qualitative investigations of adolescent girls conducted by Owens, Shute and Slee (2000). They found that girls frequently cited feelings of excitement, fear and sadness when using indirect socially aggressive behaviours with other girls. These findings suggest that emotional rewards and consequences in the form of positive and negative emotions may influence the use of these behaviours. Although there can be a strong argument made for the importance of emotions in the perpetration of socially aggressive behaviours, the affective experiences of individuals who *use* social aggression have been largely unexamined in the existing research. To date research has narrowly focused on the negative emotions of those who *perpetrate* socially aggressive acts, such as jealousy, boredom, anger and revenge (Crick, Bigbee & Howes, 1996; Crick & Grotpeter, 1995, 1996; Pronk & Zimmer-Gembeck, 2010) as well as the negative emotional impact of being *victimized* by social forms of aggression such as loneliness, anxiety and fear of being targeted again (Crick & Grotpeter, 1995; 1996). Despite this focus, more research on the affective experience of perpetrators of social aggression is needed. This information will provide an opportunity for psychologists, educators and parents to better understand the experiences of those who use aggressive behaviours, and allow them to begin contemplating ways of reducing and preventing these behaviours.

Recently, evidence has come to light that social aggression might be affectively experienced more positively for socially aggressive individuals (Arsenio & Lover, 1997). Several studies have found that individuals, who tend to be more aggressive than their peers, report feeling positive emotions, like happiness, following aggressive and

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victimizing acts (Arsenio, Adams & Gold, 2009; Arsenio, Cooperman & Lover, 2000). Past research has suggested that adolescent girls report using social aggression as a means of creating excitement and alleviating boredom (Owens, Shute & Slee, 2000) in addition to creating feelings of power and status. Therefore, it is of interest to ask whether the aggressive tendencies of adolescents and young adults stem from “hot headed” reactions to the social behaviours of others resulting in anger and jealousy, or from the “cold-blooded” desire for excitement and the alleviation of boredom. Given that the last 13 years have seen little response to this issue, the current study proposed to better understand how emotions (both positive and negative) play a role in the use of social aggression. This is an important consideration since the emotional rewards for the use of such behaviours may drive their continued use. In order to better understand the factors that contribute to the use of socially aggressive strategies in peer relationships, the goals of the present study were to examine the emotional experiences of perpetrators of social aggression, and how the individual factors such as attitudes towards the use of social aggression, and contextual factors like the attitudes of the peer group, might influence socially aggressive young adults.

In a study by Paquette and Underwood (1999), the authors suggested that important directions for future research in social aggression would be to examine how normative it is to engage in social aggression, and how contextual factors like peers influence these behaviours. Often referred to in the literature as “normative beliefs”, this construct refers to the regulating perceptions, attitudes and beliefs of the individual and their friends that determine the permissibility or prohibition of particular social behaviours (Huesmann & Guerra, 1997). Individual norms or beliefs about the

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acceptability of social or relational forms of aggression have been shown to predict engagement in these behaviours (Werner & Nixon, 2005). For example, Werner and Nixon (2005) found that adolescents' beliefs about the normality of relational aggression significantly predicted future relationally aggressive behaviours. Furthermore, having a peer group with norms that accepted socially aggressive behaviours among peers played a significant role in development and maintenance of these behaviours (Werner & Hill, 2010). Given that peers are often present when socially aggressive behaviours are perpetrated (Craig & Pepler, 1997), it is important to consider the role the peer group plays in encouraging or supporting the use of these behaviours.

Thus, the purpose of the current study was to examine the emotional rewards and/or consequences involved in the perpetration of social aggression to determine how these affective experiences are involved in the use of these aggressive social strategies in a young adult sample. In considering the emotional reactions experienced when perpetrating social aggression, the attitudes, thoughts, and beliefs of the individual and those of their peer group were taken into account and assessed, as it was hypothesized that they might influence the emotional reactions experienced by the perpetrators.

This thesis critically reviews the contemporary literature regarding the roles of emotions, individual normative beliefs, and peer group norms in the experience of socially aggressive perpetrators. Initial sections set the context for this study by describing social aggression and the behaviours that are involved, while later sections examine the role of emotions, individual normative beliefs and peer group beliefs in the perpetration of socially aggressive behaviours. The existing literature is summarized and critiqued, and gaps in the present research that needed to be addressed are examined.

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### **Definition of Social Aggression**

Aggression is based on feelings of anger and intent to hurt or deliberately harm another (Crick, Bigbee & Howes, 1996) and a great deal of aggression research has focused predominantly on physical forms of such conduct. Despite this tendency, the definition of aggression has been expanded in recent years to include non-physically aggressive behaviours. More covertly aggressive behaviours have been recognized that focus on causing harm to another by damaging his or her self-concept or social standing, and researchers have begun to identify these socially manipulative behaviours in peer relationships as an important focus of research. Although the reality of these forms of behaviours is undeniable, what remains in debate is a clear definition of this type of aggression.

Throughout the literature, these forms of aggressive behaviours have been identified as *indirect aggression* (Bjorkqvist, Lagerspetz & Kaukiainen, 1992; Feshbach, 1969; Lagerspetz, Bjorkqvist & Peletonen, 1988), *relational aggression* (Crick & Grotpeter, 1995), and *social aggression* (Cairns, Cairns, Neckerman, Ferguson & Garipey, 1989; Galen & Underwood, 1997; Xie, Swift, Cairns & Cairns, 2002). As these constructs appear outwardly similar in the essential behaviours that are shared by each category (gossiping, ignoring, and excluding), some argue that the concepts are indistinguishable based on similarities in the types of manipulative acts involved in each of the categories (Archer & Coyne, 2005). Others argue that it is debatable as to which definition best describes this form of aggressive behaviour, as there is undoubtedly overlap between the constructs in behaviours like rumour spreading and ignoring. Yet the categories can be viewed as discrete entities when differences are highlighted

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between the competing constructs, such as the emphasis on anonymity (whether the perpetrator is known or unknown to the victim as in indirect aggression), direct versus indirect nature (whether the aggression is overt or behind one's back as in relational aggression), and the role of non-verbal behaviour (i.e. giving dirty looks as in social aggression) (Nelson, Springer, Nelson & Bean, 2008). Underwood (2003) suggested that each should be considered a separate construct, particularly *social* aggression, which she claimed encompassed and expanded on the other two categories. Although each construct clearly describes manipulative and harmful social behaviours, there are unique elements that distinguish each of the definitions. What follows is a review and differentiation of each of these three constructs.

Feshbach and colleagues were among the first to initiate research into more covert forms of aggression (1969; Feshbach & Sones, 1971). In these early studies of 6 and 7-year-old boys and girls, when a newcomer was introduced to the children, the children judged the new individual as less favourable, were less welcoming, and were more likely to ignore the newcomer. These basic behaviours of rejection and exclusion were labelled *indirect aggression*. In a later study by Lagerspetz et al. (1988) of 11 and 12-year-old children, the researchers found evidence of indirectly aggressive behaviours, such as backbiting and manipulation by girls in their social groups, through such behaviours as “tells untruth behind other's back” and “starts being somebody else's friend in revenge”. The definition put forth by Feshbach and colleagues was expanded in a study by Lagerspetz et al. (1988) to emphasize the distinguishing goals of the perpetrator, including the objective of making it appear as though there was no harm intended, avoidance of counter-aggression or other potential consequences, and the desire to remain

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unidentified when mental pain was inflicted on enemies. Thus, according to the revised definition, indirectly aggressive behaviours were those whereby the perpetrator sought to remain anonymous through seemingly unintentional and subtle behind the scenes manipulative behaviours like gossiping, spreading vicious rumours, breaking contact with someone, or befriending someone else for revenge (Bjorkqvist et al., 1992).

There were several problems with this definition. The first was that this definition suggested indirectly aggressive behaviours were not perceived as intentionally harmful to the victim. However, Galen and Underwood (1997) have pointed out that social aggression can be intentionally damaging in behaviours such as turning away from the victim when they approach or passing them a mean note, which are labelled as aggressive because they are *perceived* as equally hurtful as physical forms of aggression. The indirect aggression construct overlooked that social aggressiveness can occur within close friendships, and even best friend dyads (Crick & Nelson, 2002; Daniels, Quigley, Menard & Spence, 2010), and is not always used against “enemies”. Moreover, one of the fundamental features of indirect aggression was that the identity of the perpetrator remained unknown to the victim, an aspect that is not essential in more recent definitions of these behaviours (Archer & Coyne, 2005). For example, in certain aggressive acts, such as giving disdainful facial or negative expressions, the perpetrator is discernable to the target or victim. These non-verbal aggressive acts are purposefully aimed at victims and are important in defining socially aggressive behaviours, as they are highly salient in girls’ aggression (Galen & Underwood, 1997). Furthermore, characterizations of these behaviours as “indirect” are limited, as instruments of indirect aggression have been confounded with non-verbal aggression (Crick & Grotpeter, 1995; Lagerspetz et al.,

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1988). In short, this early construct of indirect aggression was insufficient for the aggressive behaviours of interest, and failed to consider that behaviours may be intentional, that they might occur in close friendships, and that the victim may know the perpetrator, factors that more recent definitions accommodate.

Soon after research began to emerge on indirect aggression, Crick and Grotpeter (1995) advanced the study of non-physical aggression with their examination of behaviour they termed *relational aggression*. This construct emphasized the manipulation and disruption of existing friendships and other relationships, and also expanded on earlier definitions to include both indirect and *direct* behaviours. Relationally aggressive behaviours were described as those that targeted the friendship or peer group by damaging feelings of inclusion, spreading rumours, making threats related to friendships, gossiping maliciously, and ignoring or socially excluding others (i.e. telling a friend they would stop liking them unless the friend did what they say, or when mad, getting even by keeping the person from being in their group of friends) (Crick, Bigbee & Howes, 1996; Crick & Grotpeter, 1995). In their study of 10 and 11-year-old children, Crick and Grotpeter (1995) emphasized that the central focus of relational aggression was the harm that was inflicted on peers through hindering or damaging highly valued goals (i.e. acceptance, friendship, inclusion) in the peer group. Werner and Crick (1999) later examined relational aggression in a sample of 225 college students and found that behaviours and goals were similar to those found in studies of children and adolescents, suggesting substantial continuity in relationally aggressive experiences across age groups. Relational aggression was distinguished from indirect aggression in that it was not always against an “enemy”, as it typically occurred in peer group contexts

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as well as existing dyadic friendships where the perpetrator was known (Crick & Nelson, 2002). It could also be direct (i.e. giving someone the “silent treatment”) as well as indirect. However, this definition was limited in that a relationship had to first exist, and lead to actual or imagined harm to that relationship, in contrast to indirect aggression in which the victim could be unknown (Feshbach, 1969). Thus, this definition required that harm could only be caused to a relationship if a relationship already existed, an aspect that was not required in indirect and social definitions where aggression could be towards a newcomer (Feshbach, 1969) or an outsider (Nesdale, Milliner, Duffy & Griffiths, 2009). A methodological limitation in the measure of relational aggression was that subscale measures of gossip and rumours did not statistically hold as relationally aggressive behaviours when analyzed, as these items were found to also be associated with overt aggression (Crick & Grotpeter, 1995). Gossiping and rumour spreading have been shown to be central aspects of indirect, relational and socially aggressive conceptual categories (Archer & Coyne, 2005), therefore this construct was not appropriate for the present study as gossiping/rumour spreading were behaviours of interest.

Finally, *social aggression* was originally conceptualized by Cairns, Cairns, Neckerman, Ferguson and Garipey (1989). Although social aggression has been used less frequently in the literature than relational aggression, it encompassed aspects of both indirect and relational definitions (Underwood, 2003) and is the most comprehensive of the three constructs, lending itself best to the study of the aggressive behaviours that were examined in the current study. A defining characteristic of social aggression is that it relies on damaging existing interpersonal relationships through the use of the *social community* or the peer group as a means of achieving aggressive goals, whereas earlier

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definitions did not consider how the peer group was used as the mechanism through which goals were attained. These behaviours can be either overt (confrontational) or covert (non-confrontational) in nature, occurring either in friendship dyads or in larger group contexts, and require a high degree of sophistication in interpersonal interactions. Social aggression includes all forms of behaviours described in indirect and relational definitions, such as gossiping, social ostracizing, writing notes to a third party, talking about someone negatively, telling secrets, stealing friends' boyfriend/girlfriend, and social alienation (Cairns, Cairns, Neckerman, Ferguson & Garipey, 1989; Xie et al., 2002). However, what clearly differentiates socially aggressive definitions from relational or indirect aggression is the inclusion of non-verbal behaviours: negative facial expressions or body movements, including glaring, eye rolling, and turning away when someone approaches, as identified by Galen and Underwood (1997).

The social aggression construct is not limited like indirect forms of aggression where the victim was an enemy or unknown, and the perpetrator's acts seemed unintentional. This definition moves beyond relational forms that focus mainly on direct manipulation of relationships (like gossiping maliciously) to include more subtly harmful acts (such as eye rolling). Social aggression expands on the existing components of rejection, rumour spreading, and social exclusion, by incorporating non-verbal aggressive acts such as giving dirty looks or the silent treatment, or making negative body gestures (Archer & Coyne, 2005; Galen & Underwood, 1997). Evidence of the importance of these non-verbal behaviours came from the work of Owens, Shute and Slee (2000) who conducted a qualitative investigation of indirect forms of aggression using focus groups of 15-year-old girls in Australia. One of the predominant indirectly aggressive

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behaviours reiterated by the teenage girls was giving “daggers” or “death” which involved nasty stares and threatening gestures. This is an important aspect of this form of aggression as social exclusions and manipulations of friendships can most certainly be achieved through non-verbal means. Thus, the social aggression construct is the only definition to include non-verbal aggression to describe behaviours intended to cause harm to social status, self-esteem and relationships.

Researchers of each form of aggression have debated whether they were studying the same concepts and forms of behaviour, or whether these were distinct constructs. Research on social aggression seems to cover both indirect and relational aggression, thus it may be a more comprehensive definition of this aggressive behaviour or an overarching construct that encompasses and supersedes the other two through the inclusion of the non-verbal element (Underwood, 2003). Therefore, to maintain consistency and clarity in the behaviour that was the focus of this study, *social aggression* (Galen & Underwood, 1997) was the construct examined in this study, as it included the most complete description of the behaviour of interest and incorporated aspects of both indirect and relational aggression, as well as non-verbal behaviour (Underwood, 2003).

For the purpose of this study, the term social aggression, along with the behaviours and characteristics that were included in this definition, were used. Furthermore, rather than focusing solely on social aggression as a general form of aggression (i.e. the direct or indirect manipulation or damage to another’s social status, or self-esteem), the focus of this study was on the specific acts *used to perpetrate* social aggression (i.e. ignoring, excluding, gossip/rumours, and negative non-verbal body language) to provide a more thorough and detailed account of these behaviours. With a

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definition of the form of aggressive behaviour established, the contextual and methodological issues involved in the study of social aggression were examined to gain a better understanding of the methodology used in the present study. One of the main concerns in the study of social aggression has been the issue of gender in the use of these behaviours, as divergent results have been the source of much debate. As gender was a variable of interest in the present study, the published research on differences between males and females in social aggression is reviewed below.

**Gender and social aggression.** Early research has maintained that males are generally more aggressive than females, however this tendency is not always the case when a distinction is made between the *forms* of aggression used. Early longitudinal work by Cairns and colleagues (1989) suggested that *physical* aggression is prominent throughout childhood and adolescence in males, but decreases with age in females. This decline in overt aggression in girls is accompanied by a dramatic increase in socially aggressive behaviours such as social alienation and ostracism (Archer, 2004). This indicates that females may be no less aggressive than males, though the form of aggression may differ. Evidence that adolescent girls are more socially aggressive, while boys are more directly or overtly aggressive has been replicated in several studies (Bjorkqvist et al., 1992; Crick & Grotpeter, 1995; Lagerspetz et al., 1988). For example, in a study by Crick, Bigbee and Howes (1996), girls reported that they would be more socially aggressive in response to being angered, whereas boys reported a greater likelihood of being physically aggressive. Early research suggested that typically males used physical and verbal aggression with social goals of physical dominance, while females were more concerned with establishing close connections with others and

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therefore engaged more in social/relational forms of aggression (Crick & Grotpeter, 1995). It was thought that differences may have been due to the social structure of peer groups, which were tighter among young women, making it easier for them to manipulate relationships and cause harm to others through socially aggressive means (Lagerspetz et al., 1988). Collectively, these findings lead one to conclude that males and females differ in their use of aggressive behaviours. However, social aggression has typically focused on females, as it has been assumed to be more characteristic of female behaviour. This form of aggression has been examined far less, is understood less well than the characteristics of male aggression, and has been studied much less in males than in females.

In general, the results are conflicting. Some studies conclude that there are no gender differences in social aggression (Card et al., 2008; Underwood et al., 2001). Additionally, more recent evidence has begun to surface that suggests that socially aggressive behaviours may be more similar for young men and women than previously assumed. Underwood, Galen and Paquette (2001) have stated that although females may engage in a greater frequency of indirectly, relationally, or socially aggressive behaviours than physically aggressive behaviours, and suffer more serious effects from them than males, this does not necessitate that females engage in indirect/relational/social aggression more frequently than males. Furthermore, Card, Stucky, Sawalani and Little (2008) conducted a meta-analysis of 148 studies on direct and indirect (social) aggression in children and adolescents. Girls were more socially aggressive than boys, but mean differences were minimal and it was concluded that the gender differences that were found were small and of little practical meaning. Additionally, Tomada and Schneider

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(1997) and Salmivalli and Kaukiainen (2004) have both demonstrated that young men generally engage in more social aggression than women (in Italy and Finland), supporting findings that suggest, in some cultures, social aggression is not restricted to females' social interactions.

In light of the considerable contradictory evidence that young men and women may be similar in their use of social aggression (see Card et al., 2008), it is important that research continues to examine gender differences in social aggression as variations may exist beyond frequency of perpetration, particularly as a result of individual and contextual factors (like emotions and norms). Although some argue that social aggression remains an important experience for adolescent and young adult females (Reynolds & Repetti, 2010), very little is known about males and their use of social aggression beyond the general frequency of using these behaviours. The current study attempted to address this gap in the literature by examining both male and female experiences of perpetrating socially aggressive behaviours. Considering that gender has been an important component in producing incongruous results in the study of socially aggressive behaviours, another important concern in the present study was the age of the sample.

**Social aggression in young adults.** Given that involvement in relational aggression has been shown to escalate in adolescence (Bjorkqvist et al., 1992; Owens et al., 2000; Werner & Hill, 2004) and remain a frequent behaviour among adults (Nelson et al., 2008), late adolescence to young adulthood is an important developmental age group to study. Researchers have identified this age group as "emerging adulthood", focusing on individuals in their late teens to twenties (Arnett, 2000). Nelson, Springer, Nelson and

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Bean (2008) found that relationally aggressive behaviours, such as manipulation and exclusion, generally became more subtle and sophisticated over time, and that relational aggression seemed to be quite salient in the social interactions of emerging adults. Similarities in goals and behaviours involved in social aggression have been found between younger children and college samples, suggesting substantial continuity in socially aggressive experiences across age groups (Werner & Crick, 1999). Furthermore, according to Bjorkqvist et al. (1992), indirect or social aggression depends on possessing an elevated level of both verbal and social skills, thus maturity plays an important role in the use of these behaviours. A young adult sample was chosen for the current study, as the age was expected to be appropriate for detecting a high frequency of socially aggressive behaviours. With this in mind, the next section considers some of the methodological concerns involved in the present study given the nature of the behaviours and population of interest.

**Methodological considerations in the study of social aggression.** Previous studies have relied on a variety of methods for examining socially aggressive behaviours including observations (Feshbach, 1969), teacher or parent ratings (Crick, 1996), and peer nominations (Crick & Grotpeter, 1995; Lagerspetz et al., 1988), and each method has its strengths and weaknesses. Peer nominations may be a valuable measure for determining frequency and types of experiences with social aggression because young adults are expected to be experts when it comes to knowing about their peers' behaviours (Archer & Coyne, 2005). Yet, this method may not be ideal as only the more aggressive individuals are identified, while the less obvious, more manipulative aggressors may be missed. Furthermore, it can be difficult to distinguish an appropriate and well-defined

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group within which to conduct the peer nominations in a young adult sample (Werner & Crick, 1999; Werner & Nixon, 2005). Naturalistic observations were also a problematic method for the current study given that children and adolescents much younger than those in the present sample can be skilful at refraining from outward expressions of covert behaviours (like social aggression) and emotions (such as anger) in the presence of observers (Coie & Dodge, 1998), though they have been proven useful for the study of social aggression in very young children (preschool age) when it is less sophisticated and more direct.

Despite the limitations often associated with self-report questionnaires, they were selected for the purposes of this study as the best choice for a number of reasons. While it has been suggested that adolescents may try to hide aggressive behaviours when they self-report their aggression to adults due to reluctance to respond honestly (Archer & Coyne, 2005), studies of children 8 to 12-years-old have demonstrated evidence of moderate correlations between observed behaviours and self-reports (Underwood & Bjornstad, 2001). Furthermore, research examining reporter differences in relational aggression have found that self-report instruments are reliable and correlate well with peer reports of aggression (Little, Brauner, Jones, Nock & Hawley, 2003). While the reliability of participant's recollections of aggressive incidents might be called into question, aggressive experiences are generally highly salient for those involved, and individuals are likely to recall details of the incident even if time has passed (Rigby, 2003). In addition to being efficient and comprehensive, self-report methods have been successfully used in studies of aggression (Zelli, Dodge, Lochman, Laird & Conduct Problems Prevention Research Group, 1999), promoting this method of measurement

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used by many researchers of social/relational/indirect aggression in childhood through to emerging adulthood (Bjorkqvist et al., 1992; Crick & Grotpeter, 1996; Loudin, Loukas & Robinson, 2003).

With a clear definition of the form of aggressive behaviour that was examined, and consideration of the methodology and context in which the present study was conducted, the potential influences on these behaviours were considered. Having established socially aggressive behaviours such as excluding, gossiping and ignoring as a unique form of aggression, it was important to consider the emotional rewards or consequences received by the perpetrator when they used these behaviours. For example: What emotions do these individuals experience when they act in a socially aggressive way and are these experiences positive or negative? Gaining a better understanding of the emotions experienced by perpetrators when they engage in socially aggressive interactions will be important in understanding how aggressive behaviours develop and why individuals continue to use these strategies. In the current study, the goal was to move beyond what was known about the long term-emotional consequences of victims, to better understand the *immediate* emotional experiences of perpetrators of social aggression.

### **Considering the Role of Emotions**

While much is known about the *behaviours* that children, adolescents, and young adults use when they are socially aggressive (Cairns et al., 1989; Xie et al., 2002) and the underlying *motivations* that lead to their use particularly among girls (Owens et al., 2000), much less is known about how *emotions* play a role in socially aggressive interactions. The inclusion of emotions in the study of social phenomena such as social

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aggression is essential, as affective experiences of social aggression are likely to play an important role in perpetuating the use of these strategies.

The use of socially aggressive behaviours relies on the fundamentally *social* context of relationships in order to manipulate and damage the social status of others, as well as the affective stimulation that is produced in the bonding and breaking of social relationships. In fact, the interpersonal theory of emotional development states that it is in face-to-face interactions between children and significant others that the frequency and intensity of emotional expressions are learned, and that individuals learn to contemplate and mediate conflicting emotions (e.g. those that arise in social conflicts) through these social relationships (von Salisch, 2001).

As social aggression necessitates that aggressive behaviours occur in some sort of relationship with others, in order to better understand the salience of this form of aggression it was necessary to understand the importance of relationships and membership in social groups. Baumeister and Leary (1995) have proposed the belongingness theory, which hypothesizes that “human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” and that a great deal of human behaviour, emotions and thoughts are motivated by this need for social connectedness. This fundamental need to belong was first put forth by Maslow (1968) with love and belongingness needs at the middle of his hierarchy of human needs and motivations, and later by Bowlby (1973) who proposed a theory of attachment that emphasized the need to develop and maintain relationships. Emotional reactions are elicited from these basic desires to be part of a social group, such that individuals will experience positive affect, such as happiness,

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when social bonds and close personal relationships are created, and negative feelings, such as anxiety, when those social relationships are denied, broken or threatened (Baumeister & Leary, 1995). Emotions are not intra-individual phenomena, meaning that they do not solely originate or occur within the individual. They are formed through, and influence, social processes and interactions (Frijda & Mesquita, 1994; Lemerise & Arsenio, 2000). Thus, emotions are an important factor to consider in social interactions as perceptions of relational experiences depend on affective evaluations of them. Little is known about what role these affective experiences play in socially aggressive interactions for those involved, however, the next section reviews the early studies assessing the function of emotions in social forms of aggression.

### **Social Aggression and Emotions**

It is evident that humans are social beings and that the desire to establish and preserve relationships is essential, therefore any behaviour that threatens such social connections, such as social aggression, is likely to be an affectively laden experience for the individuals involved, including both the perpetrator and the target. Baumeister and Tice (1990) and Leary (1990), in studies of emotional responses to social exclusion, have suggested that a primary source of negative emotions may derive from threats to social attachments or the breaking of social connections, whereby people feel anxious or jealous at the possibility of losing a friend, depressed when social bonds are dissolved, or lonely if they do not have those intimate relationships. While these researchers shed light on one type of socially aggressive behaviour, social exclusion, these were not studies of *social aggression* per se and did not include an examination of the range of other socially aggressive behaviours, including gossip/rumour spreading and negative non-verbal

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gestures and expressions. Furthermore, the research was constrained in its bias toward negative emotions. For example, social aggression can be used to build group cohesion, as well as foster feelings of group belonging (Paquette & Underwood, 1999). In a short-term longitudinal study by Murray-Close, Ostrov and Crick (2007) of relational aggression in middle childhood, intimacy among adolescent girls increased as relational aggression increased in peer interactions. Overall, the findings suggest social aggression might positively influence certain aspects of peer relationships, as well as foster positive feelings at the expense of others, making the use of social aggression a highly affective experiences and potentially fuelling the use of socially aggressive strategies in future social interactions.

The study of emotions has been on the periphery of research into the functions and motivations of social aggression for some time. Nearly ten years ago Underwood (2003) speculated that emotions were unquestionably involved in socially aggressive behaviours, but that research on social aggression had largely ignored the role of emotions and the affective experiences involved in aggression. The willingness of adolescents and young adults to intentionally inflict harm on others through aggressive behaviours is undoubtedly a highly affectively arousing issue (Arsenio, 2010), though research has yet to fully explore how emotions influence the use of behaviours like social aggression.

Underwood (2003) has stated that studies specifically investigating the emotional correlates of social aggression have been limited, and the rare research study to consider this aspect of the use of social aggression has really only examined the role of a few specific emotional states. The few studies that have been carried out have been biased in

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that they focused exclusively on the *negative* emotions involved, such as loneliness, anxiety, nervousness, and fear for victims (Crick & Grotpeter, 1995, 1996; Pronk & Zimmer-Gembeck, 2010), or jealousy, boredom, anger, and revenge seeking for perpetrators (Pronk & Zimmer-Gembeck, 2010). Although there can be a strong argument made for the importance of negative emotions in the perpetration of socially aggressive behaviours, little is currently known about the emotional experiences of those who use socially aggressive behaviours, especially the potential positive emotional experiences of perpetrators of these behaviours.

Several research studies have focused primarily on emotions as potential *motivators* of socially aggressive acts. While the scant research on emotions in social aggression has focused on the motivations that bring about affective and behavioural responses, this research does not discuss the emotional theory behind these actions. One theory of emotion, called the behavioural approach/behavioural inhibition system (Fowles, 1987), suggests that when there is an incentive or motivation for something (e.g. an increase in popularity perhaps), the result is approach behaviour and positive affect, and when there is a perceived threat or an aversion motivation (e.g. a fear of being targeted), the result is behavioural withdrawal and negative affect (Carver, 2004). To this model, Carver and Scheier (1990, 1998) added that behavioural affect comes to exist from a feedback system that monitors the effectiveness with which people are motivated towards incentives and away from threats. Baumeister, Vohs, DeWall and Zhang (2007) also discuss feedback in their theory of how emotions shape behaviour, to replace the earlier direct causation models that focus on whether emotions cause behaviour or behaviour causes emotions. Combining the emotions that motivate one to approach or

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avoid particular outcomes with the feedback and appraisal of emotions involved in past actions, this model suggests that a feedback loop is created. Such a model negates the cause and effect problems with other theories of emotions and suggests the effect of emotions on behaviour is more indirect.

In essence, positive feelings such as happiness and excitement arise when one is successfully approaching a desired goal, (e.g. when spreading rumours creates the desired excitement), and negative feelings such as sadness occur when goals are not achieved (e.g. when you try to get friends to not like someone, but they stay friends with her) (Carver, 2001). Conversely, when the motivation is to avoid a perceived threat or harm, positive feelings such as relief and calmness are felt when successfully avoiding harm (e.g. when you exclude someone else, you feel relieved that it is not you being excluded), and negative emotions such as fear and anxiety are experienced when avoidance of harm is unsuccessful (e.g. when an individual fears not being invited to a special party, and purposely don't get invited in the end). Thus, motivation towards a goal, and motivation to move away from a threat can both induce positive feelings (or both induce negative feelings), yet the specific emotions might not be the same. Furthermore, appraisal of our emotions as positive or negative, after exhibiting/engaging in certain behaviours, provides feedback that can promote learning and alter future behaviour (e.g. to do it again in the future or to cease the behaviour).

Though the existing studies to date on the role of emotions in social aggression have not been based on this particular theory, it is beneficial to keep this theory in mind in order to better understand the results found thus far. What follows is a review of the few studies in the current literature on social aggression that have examined the influence

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of specific negative emotional states associated with the perpetration of socially aggressive behaviours including anger, fear and anxiety, and jealousy.

### **The role of negative emotions.**

**Anger.** Research suggests that anger may be a common reason for the use of social aggression when it is used in reaction to being provoked or having one's goals impeded (Fabes, Eisenberg, Smith & Murphy, 1996). In a study of normative beliefs about aggressive behaviours, Crick, Bigbee and Howes (1996) were interested in whether children associated relationally aggressive acts with anger. In the sample of 459 children in grades 3 through 6, the participants were asked, "What do most girls do when they are mad at someone?" and "What do most boys do when they are mad at someone?", where "mad" was used as an age appropriate term for anger. Both male and female respondents cited relational aggression (i.e. keeping a person out of the group, not being friends with that person, or telling lies about them) as the most frequent behaviour for interactions between girls, providing evidence that these behaviours are indeed associated with anger and result in harmful or aggressive acts.

**Fear and anxiety.** In their study of relational and physical aggression in middle childhood, Crick and colleagues (1995, Werner & Crick, 2004) commented that some girls might participate in relational aggression due to fear of becoming the next target if they do not partake, and these girls frequently reported higher levels of distress than boys when provoked by relational aggression. Loudin, Loukas and Robinson (2003) examined the influence of social anxiety and empathy in their sample of 300 college students 19 to 25 years-of-age. Social anxiety was assessed based on measures of social distress/avoidance and fear of being negatively evaluated by others. Results indicated

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that social anxiety uniquely contributed to the use of relationally aggressive strategies, particularly for those individuals that believed their peers were negatively evaluating them. Aggressive individuals were more likely to use relational aggression as a means of retaliation, whereby anonymity was maximized and direct confrontation and fear of disapproval by peers were minimized.

*Jealousy.* Jealousy is a fundamental emotion that may stem from social threat, or uncertainty in relationships, and can be a considerable source of conflict and aggression. Parker, Low, Walker and Gamm (2005) examined the role of jealousy in 5<sup>th</sup> to 9<sup>th</sup> grade adolescent best friendships and found that high levels of self- and peer- reported friendship jealousy were associated with behaving aggressively. It may be expressed in subtle socially aggressive behaviours like giving the “silent treatment” or more direct social acts like gossiping. Similarly, in their study of relational and overt aggression in a sample of 9 to 12-year-olds, Grotperter and Crick (1996) examined the friendship qualities of these highly aggressive relationships. The results of this study found that individuals in highly socially aggressive relationships exhibited increased levels of exclusivity and jealousy, whereby social aggression was used as a strategy to control existing friendships and discourage peers from playing with others. While feelings of anger can certainly *motivate* socially aggressive behaviours, what is yet unknown is whether youth feel angry *at the time* of perpetrating these types of behaviours and how this relates to the frequency with which they use social aggression. Furthermore, while research has examined school age children’s emotional experiences surrounding the use of social aggression, much less is known about adult experiences.

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While this research did examine affective experiences in social aggression, these studies focused on negative emotions, and mainly on the emotions that lead to or motivated the use of social aggression. The existing literature has largely neglected the role of positive emotions that could be experienced in socially aggressive interactions and the emotional consequences or rewards that may be felt by perpetrators when they target their peers. For example, in a unique qualitative study by Owens, Shute and Slee (2000), high school girls were asked to describe why a fictional character in a vignette engaged in relationally aggressive behaviour. The participants cited motives that could be categorized into two general categories: creating excitement/alleviating boredom and group processes that included jealousy, attention seeking, revenge, and desire for inclusion in the group. These findings provide evidence for the notion that perpetrating social aggression can be related to both positive and negative emotional experiences. Additionally, although Owens et al. (2000) described the above reasons for relationally aggressive interactions as *motives*, they could also be considered rewards or payoffs for the use of aggression. For example, perpetrators may be rewarded by the excitement or amusement gained by their aggressive behaviour, creating an incentive to be aggressive in future interactions, and resulting in an increased frequency of the use of these behaviours due to the positive emotions experienced. Specifically, the notion that involvement in social aggression may be positively emotionally arousing or amusing requires further exploration, particularly from a theoretical perspective, as this may be an important consideration in the development of interventions to prevent or reduce these behaviours. Additional research was needed to better understand how these behaviours

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are supported and perpetuated. What follows is an examination of the role positive emotions might play in the use of socially aggressive behaviours.

**The role of positive emotions.** Recent studies have explored what is referred to as “happy victimizers”, examining children and adolescents who felt more positive emotions following aggressive and victimizing acts, and were generally more aggressive than their peers (Arsenio & Lover, 1997). To examine the connections between social information processing and emotion attributions in reactive and proactive aggression, Arsenio, Adams and Gold (2009) examined 100 African American and Latino adolescents 13 to 18-years-old. Results showed that these young adults had more positive attributions (felt more happiness) about their proactive aggressive behaviour leading to desirable materials and psychological rewards. In contrast, reactively aggressive behaviours were generally due to frustrations or misperceived threats and were not linked to positive emotional outcomes. The researchers proposed that once positive emotional expectancies were established, they promoted future aggression for at least some individuals, and therefore might act in a predictive capacity. This study was limited in that it did not examine socially aggressive phenomenon (only reactive and proactive aggression) and relied on a small sample of ethnic, low socioeconomic status young adults, but it set the stage for further examination of positive emotions in the use of other socially aggressive behaviours such as gossip, rumours and exclusion.

In a more ethnically diverse sample using children between the ages of 4 and 5 years, observing the emotional displays of preschoolers in aggressive interactions, researchers found that children who displayed positive emotions more frequently in aggressive situations were actually more aggressive and liked less by their peers (Arsenio

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et al., 2000). Although the sample was much younger, a noteworthy finding requiring further exploration was that initiators of overt aggression were as likely to feel happiness as they were to feel anger, however, it was more so the tendency to be happy *during* aggression that predicted the likelihood of general aggressiveness, beyond baseline levels of anger and happiness. These findings highlight the limitations of studies that focus exclusively on anger in aggression, and support the need for research that goes beyond the negative emotions associated with aggressing. However, the correlational nature of the study prohibited the assumption that emotional dispositions caused variations in aggressiveness, when in fact it might be that aggressiveness (or another factor) influences affective states. Thus current research suffers from having primarily examined only negative emotional experiences and a failure to examine the emotional outcomes when using socially aggressive strategies.

Another issue with the current research on social aggression and emotions is the bias towards victim's emotional experiences and a failure to consider the emotional experiences of the perpetrator. With this in mind, the next section addresses the importance of shifting the focus from victims of social aggression to individuals who perpetrate these behaviours.

**Victims versus perpetrators.** The existing research has tended to concentrate on the emotional correlates of being victimized through socially aggressive behaviours. It has been demonstrated that being the repeated target of such behaviours leads to depression, anxiety, loneliness and low self-esteem (Archer & Coyne, 2005; Hawker & Boulton, 2000; Merrell, Buchanan & Tran, 2006). Not until recently has the focus expanded to include the feelings of the perpetrator, which is a more important issue if we

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want to understand the maintenance or perpetration of these aggressive behaviours. Proneness to anger has been linked to perpetrating aggressive behaviour (Cornell, Peterson & Richards, 1999), however beyond this, what remains unknown is how perpetrators feel about social aggression, what emotions precipitate socially aggressive acts, and the emotions experienced as a results of perpetrating social aggression.

A preliminary study by Reynolds and Repetti (2010) sought to address some of these questions by seeking to better understand how social aggression feels for the people directly involved (both victims and perpetrators), and whether emotions vary as a function of the form of relational aggression exhibited. In their study of adolescent girls' perceptions of relationally aggressive behaviours, 14, 15, and 16-year-old participants were asked to report their own experiences with relationally aggressive behaviours. Perpetrators were asked to recall and describe a specific incident in which they acted socially aggressively and then rate how they felt during the incident from a list of seven emotions (relieved, guilty, sad, hurt, confused, nervous and happy). Reynolds and Repetti (2010) found that girls reported feeling guilty, hurt, and sad at the time of the incident when they perpetrated relational aggression. Importantly their results also indicated that emotional responses of the perpetrators varied as a function of the type of socially aggressive behaviour they used. Girls reported more sadness when they ignored others than when they spread rumours, and felt *happier* excluding others than they did ignoring or spreading rumours, providing evidence that the positive and negative emotional experiences of perpetrators is complex and requires further research to better understand the association between social aggression and emotions. One of the limitations of this study was that although social aggression has been found to occur

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among males (Card et al., 2008), they were not examined in this study. Also the sample was relatively small ( $N = 114$ ) and the participants were only given a limited number of emotions to choose from that were mostly biased toward negative affective states.

This thesis was proposed and designed as an extension of this preliminary study by Reynolds and Repetti (2010). The research focus of the present study was a more in depth examination of the positive and negative emotional experiences of perpetrators at the time of a socially aggressive incident and how these experiences related to the general use of social aggression. This could later be important in understanding why these social strategies are initially used and persist. Research is demonstrating that the emotional experiences of perpetrators might be more positive than previously considered. While early studies found that perpetrators were socially aggressive due to feelings of anger, fear or jealousy (Crick et al., 1996; Parker et al., 2005; Werner & Crick, 2004), recent evidence has revealed that perpetrators' behaviours might also be related to more positive emotions such as excitement and happiness (Arsenio et al., 2000; Owens et al., 2000; Reynolds & Repetti, 2010). These "happy victimizers" tend to feel more positive emotions, like happiness, following aggressive and victimizing acts and tend to be more aggressive than their peers (Arsenio et al., 2009; Arsenio et al., 2000). This suggests that there are more complex emotional experiences involved in socially aggressing than previously considered.

The goal of the present study was to address what is currently a limited notion of how emotions relate to social aggression in perpetrators, using a more thorough model of self-rated affect than has been previously used in other studies of these behaviours. What remains unknown is how perpetrators feel about social aggression, what emotions

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precipitate socially aggressive acts, and the emotions experienced as a result of perpetrating social aggression *at the time* of the incident. Furthermore, an exploration of how emotions differ as a function of the socially aggressive behaviour is important for better understanding the immediate emotional experiences of being aggressive. For example, is rumour spreading more often associated with feelings of happiness and excitement than ignoring? Is exclusion more often associated with feeling confident or in control than a non-verbal behaviour like rolling one's eyes? These details could be important and useful in the design of programs and interventions to help professionals, teachers, and parents develop strategies to focus on the specific emotions felt by perpetrators when they are aggressive. With a clear explanation of the emotional elements that were the focus of this study, an examination of the definitional and methodological issues in the study of emotions was taken into account.

**Measuring emotions.** The significance of emotions as an important psychological construct has only developed in the past 25 years or so. However, research has been hindered by a considerable issue in the study and measurement of emotions, as there continues to be a lack of a consistent definition of emotions among psychologists, since emotional states and processes are very complex and can be examined from several viewpoints (Izard, 2010; Kleinginna & Kleinginna, 1981). This disagreement over definitions has impeded the development of an acceptable theory of emotions. Classifications of emotions have focused on several different categories: *affective* definitions emphasize feelings of excitement/depression or pleasure/displeasure, *cognitive* definitions highlight the appraisal or labelling processes involved, *physiological* definitions underscore the importance of biological mechanisms of emotional

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experiences, *expressive* definitions rely on externally observable emotions through breathing and bodily secretions. Other definitions focus on functional aspects, disruptive or adaptive, motivational, restrictive, or regulatory dimensions of emotions (Izard, 2010; Kleinginna & Kleinginna, 1981).

Of the existing definitions of emotion in the literature, the *affective* definition has been emphasized more frequently than other emotional dimensions, and was the most straightforward and clear definition of the affective states that were examined in this study. Therefore, for the purposes of this study, the affective definition of emotion was utilized. Though it was more simplistic than some of the others, it was the most central and fundamental of the definitions of emotion (Kleinginna & Kleinginna, 1981). In the discussion of emotions and affect in this study, *emotions* did not refer to moods, which are less intense and more diffuse, or dispositional affect, which is related to one's underlying affective personality (Barsade & Gibson, 1998). Affect, feelings and emotions have often been used interchangeably in the existing definitions, and for the purposes of this study, referred to individuals' feeling responses about their perpetration of social aggression. The affective definition of emotion emphasized subjective or personal feelings or states of arousal involving either pleasure (positive emotions) or displeasure (negative emotions) (Kleinginna & Kleinginna, 1981). Thus, emotions were experienced as strong feelings to which an individual would attach conscious labels such as fear, anger, sadness, or joy to positively or negatively evaluated stimuli (Barsade & Gibson, 1998; Kleinginna & Kleinginna, 1981). Although an alternate definition might have provided different findings due to the complexity of emotional experiences, the affective definition fit well and was the most practical for the intent of this study, which

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was to examine whether perpetrators of social aggression felt positive emotions or negative emotions when they were socially aggressive. Understanding how socially aggressive situations might feel to the individuals involved will have important implications for how these behaviours are viewed and how intervention strategies are developed.

Another considerable issue in the study of emotions was the difficulty in directly measuring others' subjective emotional states and experiences. Although self-report measures are common, the validity of such measures is often called into question. An examination of self-reported emotions and emotional behaviours relies on the assumption that subjects are emotionally competent, in that they are relatively aware of their own emotions, can communicate about their emotions adequately, and have the ability to manage expressing their affective experiences in different social contexts (Halberstadt, Denham & Dunsmore, 2001; Underwood & Bjornstad, 2001). In a study by Underwood and Bjornstad (2001), children as young as 8-years-old were able to reliably self-report their emotions in response to being provoked by a peer.

Many investigations have relied on responses to self-report questionnaires and hypothetical vignettes when examining emotional development in adolescent samples (Crick et al., 1996; Loudin et al., 2003; Owens et al., 2000; Pronk & Zimmer-Gembeck, 2010; Reynolds & Repetti, 2010). Hypothetical vignettes have been used successfully in investigations of how individuals view social aggression to answer specific questions (i.e. how hurt would you be if something like this happened to you) (Delveaux & Daniels, 2000; Galen & Underwood, 1997). Other studies have used vignettes to obtain more open-ended responses from participants. For example, in a study of display rules for

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anger in aggressiveness, Underwood, Coie and Herbsman (1992) had students in grades 3, 5, and 7 give hypothetical responses to videotaped vignettes of anger-inducing scenarios among peers and teachers, assessing the intent of the provoker and emotional display rules for the scenarios. Regardless of the specific use of hypothetical vignettes in studies, it is important that vignettes are developmentally appropriate for the sample.

Vignettes were also used by Owens, Shute and Slee (2000) in a study of indirect aggression among adolescent girls. Focus group interviews were conducted following an introductory stimulus vignette. The vignette was developed by the researchers based on what they expected was involved in a typical teenage scenario of indirect aggression, and was modified based on feedback from adolescent girls. The scenario described Jo, a 15-year-old girl, and how she was ignored, avoided and gossiped about by her peers, and then students were asked about what happened, why it happened, and the effects it might have. The use of the vignette was not to get participants to respond hypothetically, but to get students talking about a form of behaviour that they could all relate to. This method was deemed much less threatening than directly asking students about their own socially aggressive behaviours, and was used in a later study by Pronk and Zimmer-Gembeck (2009). The results of the Owens et al. (2000) interviews were highly successful as participants provided focused and detailed descriptions of behaviours, explanations, and emotional reactions to aggressive behaviours such as gossiping and exclusion, including confusion, denial, and fear. Furthermore, it was from these findings that Reynolds and Repetti (2010) developed items for their relational aggression measure in their study, demonstrating a moderate internal consistency reliability (Cronbach's alpha) of .76 for the overall measure (personal communication, April 11, 2011). This suggests that the use

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of hypothetical vignettes as a means of building rapport, or as a primer to initiate discussion, is reliable and valid for the study of socially aggressive behaviours.

Additionally, this method is highly relevant for adolescent and young adult experiences with social aggression (and for recalling emotional experiences) and thus hypothetical vignettes were beneficial for priming the emotions of participants in the present study.

While methodologies relying on the use of questionnaires and hypothetical vignettes seem logical for the study of intra-psychological phenomena such as emotional experiences, researchers such as Underwood and Bjornstad (2001) have questioned how well accounts of emotional behaviours correspond to actual observed behaviours. They examined the correlations between children's self-reports of their emotional experiences in situations involving peer provocation, and their observed behaviours in a sample of 565 children aged 8 to 12-years-old. The results indicated that there was a modest correlation (i.e. girls' reports of feeling sad were related to observed distress gestures  $r = .29$ ) between the observed behaviour of children and the self-reports of their emotional experiences in response to provocation by peers, suggesting that self-report methodologies are reasonable for the study of emotionally arousing experiences and can be used to reflect internal feelings to a certain extent.

Self-report and vignette methods have also been considered a suitable strategy given the ethical problems that are often associated with designing experiments that could be emotionally stressful, particularly for socially aggressive interactions that might cause fear and anxiety in individuals (Crick & Grotpeter, 1995, 1996; Pronk & Zimmer-Gembeck, 2010). Some suggest that adolescents and young adults might be more proficient at refraining from expressing particular emotions, such as anger, and

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particularly from displaying aggression in the presence of adult observers during naturalistic observation (Coie & Dodge, 1998). This raised the issue of social desirability, which has been a considerable factor in observation methods as well as self-report. However, it is reasonable to assume that participants would be *more* likely to respond in an emotionally and socially desirable manner in the presence of adult observers, than in questionnaire methods, particularly if surveys are anonymous. In sum, while having some limitations, emotional self-reports can be a valuable tool for assessing the internal affective states of individuals, and were employed in the present study because they were the most practical approach given the subjective nature of emotions and other variables of interest in the study, including beliefs about the acceptability of using social forms of aggression.

With clear explanations of social aggression and emotional phenomena provided, and consideration of some of the methodological issues addressed, mitigating factors that might influence the relationship between the use of socially aggressive strategies and emotional reactions were considered. In taking into account the emotional reactions an individual might have to the perpetration of social aggression, it was apparent that the attitudes, thoughts, and beliefs of the individual and those of the peers involved in the situation might influence these emotional reactions. What follows is a review of the literature on two types of normative beliefs, normative beliefs of the individual and peer group norms, and the role each plays in social forms of aggression.

### **Normative Beliefs**

The aim of the present study was to examine the positive and negative *affective* experiences of social aggression; however, there are also *cognitive* aspects of social

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aggression, such as appraisal processes, that can influence emotional experiences (Izard, 2010; Kleinginna & Kleinginna, 1981). Lemerise and Arsenio (2000) have suggested that individuals who are likely to have strong emotional experiences might be overwhelmed in provoking social situations and be unable to consider alternatives to aggression in conflicting social contexts, and repeated experiences of this may lead to a cognitive style that supports aggression. Despite the greater attention to social aggression in the literature in the last decade, the body of research on how cognition influences this behaviour is still growing. Few studies have assessed socially aggressive behaviours within the context of beliefs about different forms of aggression, resulting in little knowledge of the social cognitive processes related to the use of social aggression. However, Arsenio and colleagues (2009, 2010) have suggested that there is an inevitable interaction between cognitive and emotional processes in aggressive behaviour, and have found evidence that social cognitive judgments in support of aggression are linked to aggressive tendencies. According to their research, how an individual thinks about the acceptability of an aggressive behaviour is likely influenced by emotions in affectively intense social interactions, such as feelings of distress, anger, or upset at a peer's actions, resulting in a negative evaluation of the situation and leading to a socially aggressive response.

Normative beliefs are a form of social-cognitive reasoning or knowledge structure based on one's beliefs regarding the acceptability or legitimacy of a behaviour (such as aggression), that influence the regulation of one's behaviours, and emotional reactions to others' behaviours. Normative beliefs have been associated with increases in aggression (Huesmann & Guerra, 1997; Werner & Nixon, 2005), and have been shown to be part of

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a response decision process involving moral rules or values of the permissibility of an aggressive behaviour that influence the processing of social stimuli. However, normative beliefs may also be affected by other factors such as emotional states and recent stimuli (Huesmann & Guerra, 1997). Normative *beliefs* differ from *attitudes*, which tend to be a more general construct defined as broad evaluations of a person, group, or issue that have a basis in beliefs, but are also comprised of emotional and behavioural components (Salmivalli & Voeten, 2004). Normative beliefs are an individual process; they are influential whether the social situation is novel or familiar, they may or may not be consistent with the social norms of peers or social groups (but there is generally considerable overlap), and they regulate behaviour despite internal or external approval from others (Huesmann & Guerra, 1997). With a conceptual understanding of normative beliefs in mind, the following literature review examined the influence of social cognitive beliefs on the response-decision processes involved in socially aggressive behaviours.

**Normative beliefs and aggression.** Studies of normative beliefs about *overt* aggression have found that youth who support aggression as an appropriate act, and view it as a typical or common event in peer interactions tend to be more aggressive in contrast to those that deem aggression to be intolerable or inappropriate (Henry, Guerra, Huesmann, Tolan, VanAcker & Eron, 2000; Huesmann & Guerra, 1997). Huesmann and Guerra (1997) examined normative beliefs about overt aggression in a longitudinal study of first and fourth grade children using a 20-item self-report measure developed specifically for the study to examine cognitive beliefs about the acceptability of specific aggressive behaviours in specific contexts. Participants were asked to evaluate statements such as “It is usually okay to push and shove other people around if you’re

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mad". The results indicated that aggressive behaviour in younger children could significantly predict later beliefs about the acceptability of overt aggression, indicating that involvement in aggressiveness at an early age seems to increase approval for aggression at later ages. In contrast, older participants' normative beliefs became more stable and could significantly predict changes in aggressive behaviour, whereby children who approved of aggression demonstrated an increase in their level of aggressiveness over time.

A similar study was conducted by Henry and colleagues (2000), on the relationship between individual and classroom norms, and children's overt aggression. The results indicated that individual normative beliefs significantly predicted overtly aggressive behaviour, and highlighted the importance of beliefs in the use of aggressive behaviours. However, the populations studied consisted of high-risk or economically disadvantaged children in urban environments, thereby neglecting older subjects and individuals that did not live in a peer culture embedded in aggression. Additionally, these studies did not examine the processes or alternative mechanisms involved in the association between normative beliefs about aggression and aggressive behaviour, such as the influence of emotions. Although findings have shown that individuals hold similar beliefs about overtly aggressive and socially aggressive acts (Crick et al., 1996), much less is known about normative beliefs about *social* aggression specifically, as the vast majority of earlier studies assessing beliefs about aggression and behaviour have narrowly focused on overtly physical and verbal forms of aggression, while only a few have examined social or relational forms.

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**Normative beliefs and social aggression.** Though few studies have examined the influence of individual normative beliefs in purely social forms of aggression, a few notable studies have considered aggression in both physical and relational forms. A study of social victimization in various romantic relationship contexts by Goldstein, Chesir-Teran, and McFaul (2008) examined the prevalence and correlates of experiencing and perpetrating relational aggression in 18 to 25-year-olds. Specific thoughts about the normality and acceptability of relationally victimizing a romantic partner were more common in those who reported higher levels of these behaviours, results that resemble other findings in platonic relationships (Werner & Hill, 2010; Werner & Nixon, 2005). Bailey and Ostrov (2008) also studied normative beliefs about physical and relational aggression in an emerging adult sample, and the results revealed an association between aggression subtypes and normative beliefs, specifically proactive relational aggression predicted normative beliefs about the acceptability of these behaviours. The issue with the above studies was that they were conducted with older samples using a measure that was tested on 6 and 9-year olds, calling into question the developmental relevance of the measure in these populations. The latter study was also limited by a composite measure of various types of aggression, making interpretation of relational forms more difficult. Nonetheless, collectively the research does suggest that beliefs about the acceptability of relational forms of aggression are associated with the increased use of these social behaviours.

A notable study by Werner and Nixon (2005) that specifically examined the relationship between normative beliefs and perpetration of relational aggression in children in grades 5 through 8 found that adolescents' beliefs about the normality of

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relational aggression significantly predicted their self-reported relationally aggressive behaviour. These findings suggest that adolescents' beliefs about the acceptability of specific forms of aggression can significantly predict later engagement in those types of aggressive acts.

In a short-term longitudinal study of 3<sup>rd</sup> through 8<sup>th</sup> graders, Werner and Hill (2010) also examined normative beliefs about relational aggression at individual and classroom levels. Results showed that students who reported greater approval of social aggression demonstrated higher levels of this behaviour one year later, suggesting that individual norms predict future relational aggression.

These studies point to the significant contribution individual beliefs may play in the perpetration of social aggression. Research has highlighted that emotions are likely to influence how an individual thinks about the acceptability or legitimacy of behaviour such as aggression (Crick & Dodge, 1994). Nonetheless, the relationship between normative beliefs, the use of social aggression and subsequent emotional experiences has been largely neglected (Werner & Nixon, 2005). Individual's thoughts and beliefs about the acceptability of aggressive behaviour are likely to have a significant influence on affectively arousing social situations in conflicting social contexts (Crick & Dodge, 1994; Lemerise & Arsenio, 2000), suggesting a need for further studies on the association between emotions, normative beliefs, and social aggression. Given the earlier discussion on gender differences in social aggression, the influence of gender on normative beliefs was considered, as the focus of the present study was on both male and female perpetrators.

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**Gender and age in normative beliefs.** As with other research on gender differences in aggression, research examining the influence of gender on normative beliefs about certain forms of aggression has been contradictory. Huesmann and Guerra (1997) examined the correlation between normative beliefs about direct aggression and the resulting aggressiveness and found that it was significantly greater for boys than for girls. Similarly, Crick, Bigbee and Howes (1996) revealed that boys and girls both viewed physical aggression as more normative for males, while females view social aggression as a more normative behaviour for females and one of the most normative behaviours in their peer groups. These results were also confirmed by Nelson et al. (2008) in a sample of emerging adults several years later. The studies finding gender differences in both overt and social forms of aggression may have been limited by a bias in the normative beliefs measures utilized. Measures of normative beliefs have generally only assessed beliefs about direct aggression. This is an important concern given that physical aggression has been more frequently associated with males, while social forms have been suggested to be more common in females (Bjorkqvist et al., 1992; Crick & Grotpeter, 1995; Lagerspetz et al., 1988).

Collectively, the above findings are inconsistent with other research that has suggested that there are no significant gender differences in the endorsement of social and overt forms of aggression despite perceived differences that males are more supportive of aggression and tend to engage in it more often (Werner & Hill, 2010; Werner & Nixon, 2005; Zelli et al., 1999). Social cognitive processes like individual normative perceptions may be similar for males and females, but more research is necessary to clarify this issue. A measure of normative beliefs that only examined beliefs

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about *social* aggressiveness was needed to minimize the likelihood of examining beliefs solely about general aggressiveness (which is often more typical of males); therefore the current study attempted to address this issue by utilizing a measure of normative beliefs of the endorsement of social aggression.

Despite evidence that normative beliefs are relatively stable in late adolescence and early adulthood, intervention studies have demonstrated that normative beliefs about aggression are malleable and that adaptive behaviour can increase over time, resulting in behavioural improvement (Werner & Nixon, 2005; Crick, Grotpeter & Bigbee, 2002). Though the current study examined a young adult population with normative beliefs that were likely well established, it remained important to study normative beliefs about social aggression, as targeting beliefs about aggression could be an important tool in modifying future use of aggressive social strategies. Thus, research suggests that normative beliefs appear to influence both males and females from elementary grades through to adolescence and young adulthood, and should be considered in the perpetration of socially aggressive behaviours. Given the importance of these cognitive processes, it was valuable to examine how normative beliefs have been measured in past studies.

**Measuring normative beliefs.** Previous research examining normative beliefs has measured this construct in a variety of ways. The most frequent techniques used in the research to date have been interviews and self-reports. Linder, Werner and Lyle (2010) suggest that, in the study of social information processes such as normative beliefs in relational aggression, reliance on measures of these processes that only examine premeditated, conscious, and controlled cognitive processes through self-reports and

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interviews may be problematic, as the processing of social information may be more of an unconscious or automatic process. However, the results of their study showed that both self-report methods (which were more consciously measured) and timed readings of aggressive scenarios (which were automatically measured) resulted in similar justifications of aggression. Furthermore, each significantly predicted relational aggression, indicating that self-report methods are not problematic in the study of aggression norms as was postulated.

Huesmann and Guerra (1997) developed the self-report Normative Beliefs About Aggression Scale (NOBAGS) for their study of adolescent's normative beliefs about direct aggression. Although this measure only examined direct forms of aggression, this instrument was of interest for the current study as it has excellent reliability (Cronbach's alpha .84 to .90) and validity across genders, ethnicities and grades. Studies using self-report measures of overt aggression beliefs have demonstrated robust findings of the relationship between specific beliefs about aggression and reported behaviours (Werner & Nixon, 2005), suggesting the reliability of these techniques. The self-reported measures of normative beliefs used in existing research have examined mainly overt or physical forms of aggression, therefore, a normative beliefs measure of *social* aggression was required for the current study to examining the role individual beliefs play in the perpetration of social forms of aggression.

The above studies provided preliminary evidence of the influence of normative beliefs on direct and social forms of aggressiveness, however further research was needed, particularly on *socially* aggressive behaviours. Furthermore, based on the neglected focus of emotions in these behaviours evidenced by Werner and colleagues

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(2005, 2010), this study sought to address how individual normative beliefs influence the use of socially aggressive behaviours, and particularly how these social cognitive processes shape the emotional experiences of using social aggression.

While research suggests that an individual's beliefs about aggression may play a considerable role in adolescent and young adult perpetration of aggressive acts, this might not be the only moderating variable affecting the use of aggressive behaviours. Given that individuals spend the majority of their time with their peers, there is good evidence to suggest that normative beliefs of the peer group also play a considerable role in the use of socially aggressive behaviours.

### **Peer Group Norms**

The developmental literature on social aggression has largely neglected the influence of peer groups on social aggressiveness despite the abundance of theoretical and empirical research emphasizing the significance of the group as a determinant of human nature in the last century (see Hartup, 1983 for a historical review). As was previously highlighted, belongingness and inclusion have long been shown to be critically important to individuals of all ages, motivating the establishment of friendships and joining of social groups (Baumeister & Leary, 1995), therefore it is not surprising that peers play a significant role in the use of social aggression during childhood, adolescence, and young adulthood. One cannot attempt to understand aggression in social contexts without considering the role of the peer group, as peer-group membership has been shown to exert a powerful influence on aggression (DeRosier, Cillessen, Coie & Dodge, 1994; Espelage, Holt & Henkel, 2003).

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One theory for explaining group norms has been the social identity approach, whereby membership in a particular social group makes the norms of that group particularly influential in predicting attitudes and behaviour of an individual (Duffy & Nesdale, 2010). This approach moved beyond the theory of individual decision response processes involved in normative beliefs, and considered contextual factors where children who belonged to a group that was supportive of aggression would engage in a greater frequency of aggressive behaviours than if these behaviours were not normative within the group (Werner & Hill, 2010). In fact, in their study of gender differences in normative beliefs about relational aggression in an adolescent sample, Crick, Bigbee and Howes (1996) actually modified their definition of normative beliefs to include how often aggressive behaviours actually occur in the peer group, which was deemed more relevant to the relational form of aggression.

Plenty of evidence supports the fact that groups exert a great deal of influence on the attitudes and behaviour of adolescents and young adults, but limited research has examined the specific group processes that are likely to influence aggressive behaviours. Research has shown that physically and socially aggressive youth tend to be highly prevalent in peer groups, and associate with other similarly aggressive youth (Cairns, Cairns, Neckerman, Gest & Garipey, 1988). Peers are also generally involved in the majority of aggressive incidents, either through participating, observing, or intervening (Craig & Pepler, 1997). In their study of peer group contextual effect on aggression, Espelage, Holt and Henkel (2003) demonstrated that within-group similarity (or homophily) was significant, whereby students seemed to associate within a peer group of individuals who bullied or aggressed at the same frequency as they did. Researchers

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have also demonstrated that having a peer group that supported and reinforced the use of relational aggression increased relationally aggressive behaviour in these individuals over time (Ellis & Zaratany, 2007; Werner & Crick, 2004). In their study of group influence on child and adolescent deviancy, aggression and pro-social behaviour, Ellis and Zaratany (2007) found that the peer group was central in continuing to support and shape involvement in aggressive interactions. The study provided early evidence of the importance of the peer group in affecting the socialization of relational forms of aggression, particularly because behaviours such as gossip and exclusion require involvement from other members of the group. Similarly, Werner and Crick (2004) examined the influence of physically and relationally aggressive peers using peer nominations in a sample of children in grades 2 through 4, and demonstrated that both physically and relationally aggressive peer relationship experiences predicted future aggression.

While there may be many peer-group contextual factors that affect the likelihood of engaging in socially aggressive behaviours, one important consideration is the *norms* of the peer group. Studies have demonstrated the utility of studying peer groups in explanations of physical and more direct forms of aggression, but much less is known about how peers might play a role in the study of group norms in *social* forms of aggression. Only a few notable studies have examined contextual factors like group norms in social aggression.

In their examination of peer group roles in direct and indirect aggression, Duffy and Nesdale (2010) found that membership in groups characterized by norms supporting indirect aggression was significantly associated with members engaging in indirectly

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aggressive behaviours. In this study, when subjects were informed that aggression was normative or accepted among the group, these individuals reported an increased likelihood of aggressing against members of the out-group. These results suggested that more frequent behaviours in the peer group might be considered as more normative by the group, while infrequent behaviours would be considered non-normative. Interestingly, the authors defined group norms as students' ratings of how "happy" or "unhappy" their peer group would be if one of the members displayed aggression toward someone else (Duffy & Nesdale, 2009). Although not examining the specific role of emotions, this definition of group norms highlighted the affective component that is involved in aggressive behaviour, and how group members might view aggressive behaviours more positively when they are perceived as normative in the group, and might experience more positive emotions when they engage in behaviours that are endorsed by the group.

Valuable studies by Nesdale and colleagues (Nesdale & Lawson, 2011; Nesdale, Milliner, Duffy & Griffiths, 2009) examined the effects of social group norms regarding direct and indirect forms of aggressive behaviour on children's *attitudes*. In their sample of 6- and 9-year-olds, Nesdale et al. (2009) found that membership in a particular peer group significantly predicted an individual's attitudes and intentions for aggression, however participants tended to like their in-group *less* when the group norm supported direct or indirect forms of aggression. In a later study by Nesdale and Lawson (2011), on a sample of 7- and 10-year-olds, group norms in support of a socially aggressive behaviour like exclusion counteracted individual tendencies to be empathetic towards rejected members of the out-group. Consistent with what was expected, participants had

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more negative attitudes towards out-group members when the in-group supported excluding or socially aggressing towards them. However, participants tended to have less positive attitudes towards their in-group when the in-group supported exclusion or relational aggression. These findings are interesting and suggest that while both individual norms and group norms may influence socially aggressive behaviours, these norms may not necessarily coincide, a notion that was put forth by Huesmann and Guerra (1997) in their study of individual normative beliefs. Collectively, these findings suggest that there may be a limit to the extent to which an individual in the group may positively endorse or conform to certain attitudes and behaviours of the other in-group members. Further studies needed to be done on the influence of peer group norms on aggression to determine the extent to which they influenced aggression when compared to individual normative beliefs. However, before considering the association between individual and peer group beliefs in social aggression, the role of the peer group in social forms of aggression was first considered.

**Peer group norms and social aggression.** Peer group norms that endorse the use of social aggression may play a significant role in the development and maintenance of socially aggressive behaviours. Norms and expectations for behaviour in an individual's social group can powerfully influence the attitudes and behaviours of that individual. Social manipulation and aggression may not be condoned or reinforced unless the social environment supports such behaviours (Bjorkqvist et al., 1992), therefore, peer relationships and maladaptive peer socialization can play an important role in the development of relational aggression (Werner & Crick, 2004).

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While other research on peer group norms has mainly focused on direct and indirect forms of aggression (Nesdale & Lawson, 2011; Nesdale et al., 2009), a noteworthy study specifically on social aggression and peer group normative beliefs was conducted by Werner and Hill (2010) in a sample of children 8 to 13 years-of-age. In their short-term longitudinal study, Werner and Hill (2010) examined individual norms and contextual factors such as classroom-level norms. The results of this study showed that when students were in peer groups that highly supported relational aggression, these individuals displayed relationally aggressive behaviours more frequently in the following year than those in peer groups that did not support the behaviour. Interestingly, this research found that when comparing the influence of peer-group-level and individual-level norms, individual norms could not explain a significant amount of variance in predicting future relational aggression, even when interacted with group norms. This finding suggests that group norms may play a more significant role in explaining socially aggressive behaviours than individual beliefs. The authors suggest that an important factor in the perpetuation of these relationally aggressive behaviours is students' observations of the approved relational aggression of popular peers, causing a bidirectional relationship whereby the peer group then evaluates the aggressive behaviours as more positive. It is important to note that most of these studies were conducted on child or adolescent samples.

Although not specifically examining the role of *emotions*, these research studies have established that affective evaluations are involved in aggression, whereby norms validating the use of socially aggressive strategies lead to more positive evaluations of these aggressive behaviours. The next section reviewed the existing literature on the

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association between individual and peer group beliefs. The relative effects of individual perceptions/beliefs and peer group norms were reviewed to evaluate whether peer group beliefs have been more influential on socially aggressive experiences than normative beliefs, or whether the latter contributes more to using social aggression.

**Normative beliefs versus peer group norms.** Relatively few studies have examined the effects of both individual and peer group norms on attitudes and behaviours. One study that did do this (Salmivalli & Voeten, 2004) examined the connection between attitudes at the individual level and norms of the group regarding bullying in the classroom in over 1200 grade 4, 5 and 6 students. Although this was a study of bullying and not aggression, given the scarcity of research on the association between individual perceptions and peer norms, and the similarities between aggression and bullying behaviours, the findings were still applicable. The results indicated that individual attitudes did predict bullying behaviour, however norms of the group contributed to this beyond the beliefs of the individual. In contrast, Nesdale and Lawson (2011) studied the effects of social group and school norms on intergroup attitudes and found that norms were only influential at the group level and not the larger school level. Positive school norms promoting inclusionary behaviour did not moderate or extinguish socially aggressive group norms. This indicated that norms in smaller groups were more influential than larger groups in predicting socially aggressive behaviour.

In their study of normative influences on direct aggression, Henry and colleagues (2000) found that classroom norms about classmates' *actual* aggressive behaviour (or what most classmates *will* do) had no direct or indirect effects on aggressive behaviours, a finding that was contrary to expectation. However, classroom norms about classmates'

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*normative beliefs* about aggression (or what classmates were *expected* to do) had a significant effect on beliefs about aggression and subsequent behaviours. These findings indicated that classroom normative beliefs about the acceptability/unacceptability of direct aggression influenced the individual students' beliefs about how acceptable these behaviours were, as well as the frequency with which these aggressive behaviours were used. In contrast, classmates' actual behaviour norms regarding aggression had no effect on individual beliefs or aggression.

Werner and Hill's (2010) study of 3<sup>rd</sup> through 8<sup>th</sup> grade adolescents was the only one to examine the specific roles of both individual and contextual norms in *social* aggression. The finding that individual level norms did not significantly contribute to perpetrating relational aggression warrants further study, as the results were surprising and contrary to expectations. Based on the existing literature, it seemed that peer group beliefs had a greater influence on aggression than individual beliefs, however further research was needed to examine the unique contribution that each of these had on the use of socially aggressive behaviours.

### **The Current Study**

The purpose of the present study was to address the gaps in current research by examining the contributions of individual and group norms in the endorsement and perpetration of socially aggressive behaviours, and how these individual and contextual factors related to affective experiences of being socially aggressive.

The present study sought to amalgamate research on emotions, individual normative beliefs, and group norms to better understand the precipitating factors and effects of perpetrating social aggression. In previous research, social information

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processing factors have been proposed to explain aggression through beliefs about the acceptability of aggression (Crick & Dodge, 1994; Huesmann & Guerra, 1997) and additional empirical research has suggested that socially aggressive behaviours might emerge and be maintained through environmental (such as peer group norms) and emotional factors (Musher-Eizenman, Boxer, Danner, Dubow, Goldstein & Heretick, 2004).

Important questions remained about what factors were involved in the perpetration of social aggression: What are the emotional experiences of socially aggressive perpetrators? What types of emotions do these young individuals feel and are these experiences more positive or negative? How do individual beliefs and group norms affect these experiences? Do emotional experiences of perpetrating social aggression differ as a function of the specific form of social aggression?

In summary, the goal of the present research was to add to the existing literature in a number of important ways: to identify gaps in the existing research on specific emotions and examine whether they were empirically linked to the perpetration of socially aggressive acts, and to examine the unique influence of peer group norms and individual endorsement of these aggressive behaviours to determine the extent to which each contributed to the use of socially aggressive behaviours. The study was an extension and elaboration of the recent research by Reynolds and Repetti (2010), as well as studies indicating that general positive affective states occur when aggression is accepted (Arsenio et al., 2009; Arsenio et al., 2000). The research focus of the present study was a more in-depth examination of the emotional experiences of *perpetrators* at the time of a socially aggressive incident. The role of gender was examined to determine

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if differences existed between males and females in their use of social aggression, and the potential moderating role it could play between norms and the emotional experiences of perpetrators.

The approach in this study was novel in that no research has examined emotional factors of social aggression this thoroughly, particularly while considering the influence of norms. This study not only used hypothetical vignettes in addition to self-reports, but also was unique in that it relied on reports of real life events of perpetrating social aggression. This research aimed to understand why these social strategies are used and why they might persist.

Evidence has been contradictory as to whether gender differences exist in social aggression. Despite debate about prevalence rates among males and females, it was important to remember that both males and females engage in social aggression to some extent, and that gender needed to be examined to gain a more complete picture of these experiences. The socially aggressive interactions of males should be studied as they have received much less attention in the research to date (Reynolds & Repetti, 2010).

Therefore, a preliminary research question explored whether differences existed between males and females in their beliefs, emotions, and perpetration of aggression. It was expected that there would be gender differences in the perpetration of social aggression based on previous evidence (Underwood, Galen & Paquette, 2001) indicating that socially aggressive behaviours may differ for males and females in some way.

Additionally, research on gender differences in normative beliefs about aggression has suggested an effect of gender on these behaviours (Crick, Bigbee & Howes, 1996; Nelson

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et al., 2008). Therefore, it was anticipated that norms/beliefs and the emotional experiences of perpetrating social aggression would vary for males and females.

The first research question was: Do the emotional experiences of perpetrating social aggression involve more positive emotions or more negative? It was hypothesized that because the sample consisted solely of self-reported perpetrators, participants would describe higher levels of positive emotions in the incidents they recalled. To answer this question, participants read a hypothetical vignette about an individual experiencing social aggression, and were asked to recall and describe a memorable incident in which they perpetrated an act of social aggression, and choose from a list of behaviours the form of social aggression the incident most closely resembled. Previous studies have relied on this methodology with success (Owens, Shute & Slee, 2000; Pronk & Zimmer-Gembeck, 2009), therefore it was expected that most participants would be able to describe an incident of social aggression that they perpetrated. Respondents then completed a measure of the emotions they felt when they perpetrated the behaviour, including a number of positive and negative affective states. A review of the literature suggested that perpetrators would feel an assortment of both positive (Arsenio et al., 2000; Owens et al., 2000; Reynolds & Repetti, 2010) and negative (Crick et al., 1996; Grotzinger & Crick, 1996; Werner & Crick, 2004) emotions, however it was anticipated that these individuals would feel more positively than has been suggested by some research (Parker et al., 2005; Pronk & Zimmer-Gembeck, 2010).

The next question explored through this research was: Among perpetrators of social aggression, how do individual normative beliefs and peer group norms regarding the acceptability of social aggression uniquely influence the emotional experiences of

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socially aggressive individuals? The proposed study was based solely on a sample of perpetrators, and given a review of the literature, it was expected that the majority of these individuals would have normative beliefs and peer group beliefs that endorsed the use of socially aggressive behaviours, as research has demonstrated that relational aggression is more common among individuals who endorse the use of these behaviours (Goldstein et al., 2008; Werner & Hill, 2010; Werner & Nixon, 2005). Both individual beliefs and peer group norms supporting the use of socially aggressive behaviours were examined to determine if differences in the emotional responses of perpetrators of these behaviours could be predicted from these norms. It was expected that the emotional responses of perpetrators to the use of social aggression would be more intense, particularly because it was anticipated that the individual's normative beliefs as well as those of his/her peer group would be more likely to support the use of social aggression.

A final exploratory research question for this study was: What are the specific emotions that are experienced by individuals who engage in socially aggressive behaviours when they initiate the behaviour, and how do these emotions vary as a function of the specific type of socially aggressive behaviour used? For example, it was expected that behaviours such as rumour spreading would be associated with more positive feelings such as excitement and fun, while perhaps excluding others would be associated with negative emotions such as guilt or sadness.

In summary, this study aimed to contribute to the existing literature in several important ways. While the majority of research on the emotional correlates of social aggression has primarily examined the negative emotions associated with relational victimization, the current study was a closer examination of the perpetrators of this

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behaviour and the positive and negative affective experiences of instigating social aggression, to better understand how these behaviours develop and persist. Moreover, how an individual thinks about aggression is likely to contribute to the frequency with which these behaviours are used, therefore the study of social aggression could not be complete without considering the influence of individual normative beliefs and peer group norms. Finally, the study of social aggression has primarily focused on the behaviours and experiences of girls, however the present study examined both males and females to see if gender differences emerged. This was the first empirical study to examine how individual and peer group norms could be used to predict the emotional experiences involved in perpetrating social aggression.

### **Method**

#### **Participants**

The data for the present study was collected as part of a large study investigating the motivations, goals and experiences of social aggression, using a sample of male and female undergraduate students in first and second year at Carleton University. A total of 334 students participated in the study over two waves of data collection ( $n = 199$  from sample 1 in the spring term and  $n = 135$  from sample 2 in the summer term). However, 37 subjects did not complete the questionnaires and were immediately removed from the overall sample, including individuals that did not identify their gender and thus were unable to complete the majority of the measures due to an issue with the online survey requiring assignment of a gender specific to the questionnaire. This resulted in a final sample of 297 undergraduate students ( $n = 173$  in sample 1,  $n = 124$  in sample 2).

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The overall sample consisted of 93 males (31.3%) and 204 of females (68.7%) between the ages of 18 and 61 ( $M = 22.45$ ,  $SD = 5.315$ ), however 90% of the sample was between 18 and 26 years of age. The inequality found in the gender distribution is consistent with the general findings that females represent 65 to 80% of individuals in psychology programs (American Psychological Association, 2007). The sample obtained was relatively diverse in ethnicity (55.9% White/Caucasian, 12.1% Asian, 12.1% Arab/West Asian, 10.1% South Asian, 5.4% Black, 2.0% South East Asian, 2.0% Native/Aboriginal, 2.0% Latin American, 3.4% Other).

This sample size was adequate given current research that has demonstrated modest associations between children's normative beliefs or emotions, and aggressive behaviour (Huesmann & Guerra, 1997; Sullivan, Helms, Kliewer & Goodman, 2010). Additional evidence has found that correlations between attitudes and behaviour are generally weak and only explain about 10% of variance in behaviour (Salmivalli & Voeten, 2004). Therefore, in order to obtain similar results given the variables considered for the multiple regression and the small to moderate effect sizes found in other research, a large sample was needed to obtain a power of .80 at an alpha level of .05 (Cohen, 1992). According to Tabachnick and Fidell (2007), a general formula for achieving an adequate sample size in testing multiple R is  $N \geq 50 + 8m$  and  $N \geq 104 + m$  for testing each predictor, thus for the current study, the obtained sample of 297 subjects was more than adequate to satisfy sample size recommendations.

**Protection of human participants.** Completion of the surveys was anonymous. Participants' responses and information remained confidential to the research team, and all data was stored in a secure location. Though the study of social aggression was a

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sensitive issue to examine, this study did not involve deception or manipulation, and it was not anticipated that subjects would suffer any risks, discomfort, stress, or adverse effects as a result of completing the measures. Participants were able to decline or withdraw from involvement in the study at any time.

### **Procedure**

This study received ethical approval from the Carleton University Board of Ethics (Project # 12-056). Students enrolled in introductory psychology undergraduate courses at Carleton University were recruited online through the university's SONA data-collection system (Appendix A). Participants logged on to an online data collection system to complete the questionnaires. Students who wished to participate were given additional course credit, valued at 0.5%, for their participation, though participants who did not complete the survey in full were still given course credit. An informed consent form was provided to students prior to participation in the study (Appendix B).

Participants had to complete the survey in full once they signed on, as they were not given the opportunity to go back and complete it at a later time. Students were provided with a unique username and password that was required to logon to SONA and complete the survey, which ensured the confidentiality and anonymity of participants. Usernames and passwords were electronically generated by the SONA system and were not related to their survey responses in any way. Students were given contact information for the SONA administrator for forgotten passwords so anonymity was maintained. Once informed consent was read and students chose to participate, they were provided with online copies of the measures described below, thus reducing the potential time burden common in paper and pencil surveys. Following completion of the survey, SONA

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participants were presented with a debriefing form (Appendix C) thanking them for their participation, describing the reasoning of the study, and listing available resources should they need help.

### **Measures**

The data collected for the current study was obtained from several instruments including demographic information, a description of a memorable incident of perpetrating social aggression, emotions associated with the memorable incident of social aggression, normative beliefs of social aggression, group norms, and a measures of the frequency of socially aggressive behaviour. All surveys were completed in the same order by all participants, first describing the memorable incident of social aggression, then answering follow up questions on emotions, beliefs, attitudes and norms. A description of each of these measures follows.

**Gender and demographics.** A brief demographics questionnaire asked participants about their gender, age, and cultural or ethnic heritage (Appendix D).

**Primer and memorable incident of perpetrating social aggression.** Students read a short story about an individual who had experienced social aggression. This story was based on the vignette used by Owens, Shute and Slee (2000) in their study of indirect aggression in 15 year-old girls, to encourage the students to talk about an incident to which they could relate. For the current study, the primer was made gender neutral so it would be appropriate for use with both male and female participants. The purpose of the vignette was to prime a real memory of a socially aggressive behaviour so the subject would be able to remember and describe a specific incident of social aggression they had engaged in (Appendix E). This strategy was chosen over asking participants to speak

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theoretically about why a character in a hypothetical vignette might use social aggression. It was expected that participants would be better able to reflect on their own socially aggressive behaviours if they considered events that had actually taken place, rather than give stereotypical or socially desirable responses about a character in a hypothetical scenario. A blank text box was provided where participants were asked to describe a memorable incident in which they were the perpetrator of social aggression, and to answer a follow up question about which form of social aggression best categorized the act they described, as well as how long ago the incident occurred ranging from 1 (within the last week) to 5 (beyond a year). This strategy was used as it was assumed that participants would choose specific incidents that were salient and meaningful to them, and also to improve the external validity of reports (see Reynolds & Repetti, 2010). Hypothetical vignettes have been used successfully in previous research on social aggression (Galen & Underwood, 1997). Owens and colleagues (2000) utilized this as a less threatening option than directly asking respondents about their involvement in such behaviours. Leading with a hypothetical vignette as a primer prior to asking about personal accounts was also used by Pronk and Zimmer-Gembeck (2010) as a means of building rapport and making responses more systematic. Only participants that completed this section and described an incident of perpetrating social aggression were included in this study for the main analyses, as the measure on emotions associated with social aggression relied on the memorable incident the respondent were asked to describe. As the current study only required participants to recount their most memorable incident of perpetrating an act of social aggression, it was expected that the majority of respondents would be able to complete this section. In the present study, 228 (76.8%) of

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the 297 subjects described such an incident. For further examination and discussion regarding this sample of self-reported perpetrators, see the results section.

**Emotions associated with social aggression.** In order to examine the emotions related to perpetrating a socially aggressive behaviour, participants were asked to recall a memorable incident in which they had perpetrated or initiated social aggression over the last year, (Appendix F) and rate the extent to which they had felt a variety of emotions (Table 1).

The purpose of this measure was to examine emotional reactions to incidents of social aggression that participants engaged in. The self-report measure was based on the 60-item Positive and Negative Affect Schedule – Expanded Form (PANAS-X; Watson & Clark, 1994). The modified instrument consisted of two higher order scales from the PANAS-X comprised of positive affective states (10-items) and negative affective states (10-items), and 8 of the lower order scales measuring more specific affect in the following domains: fear (6-items), hostility (6-items), guilt (6-items), sadness (5-items), joviality (8-items), self-assurance (6-items), attentiveness (4-items), and serenity (3-items).

The resulting measure consisted of a total of 44 emotion items on which participants were asked to rate from 1 (not at all) to 5 (extremely) based on the extent to which they felt each of the particular emotions as a result of the memorable incident in which they initiated an act of social aggression. Items were summed and averaged for the positive and negative affect scales and each of the specific lower order affect scales, where higher scores indicated a greater degree of a particular emotion.

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Table 1

*Item Composition of Emotions Measure and Subscales*

Higher Order Scales	
Negative Affect (10 items)	afraid, scared, nervous, jittery, irritable, hostile, guilty, ashamed, upset, distressed
Positive Affect (10 items)	active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, strong
Lower Order Scales	
Fear (6 items)	afraid, scared, frightened, nervous, jittery, shaky
Hostility (6 items)	angry, hostile, irritable, scornful, disgusted, loathing
Guilt (6 items)	guilty, ashamed, blameworthy, angry at self, disgusted with self, dissatisfied with self
Sadness (5 items)	sad, blue, downhearted, alone, lonely
Joviality (8 items)	happy, joyful, delighted, cheerful, excited, enthusiastic, lively, energetic
Self-Assurance (6 items)	proud, strong, confident, bold, daring, fearless
Attentiveness (4 items)	alert, attentive, concentrating, determined
Serenity (3)	calm, relaxed, at ease

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The original PANAS-X scale has been used successfully in adolescent, college, adult, and psychiatric samples and has been found to demonstrate excellent construct validity, convergence with other measures of mood states, and largely independent measures of the higher orders scales of Positive Affect (Cronbach's alpha .83 to .90) and Negative Affect (Cronbach's alpha .85 to .90) (see Ciarrochi, Heaven & Davies, 2007; Gallaty & Zimmer-Gembeck, 2008; Watson & Clark, 1994). In the present study, the reliability of the negative affect scale was .86, and the positive affect scale was .88. With respect to the 11 lower-order affect scales, internal consistencies have been quite high in past research, with alpha reliabilities ranging from .76 to .93 (Watson & Clark, 1994). In the present study, internal reliabilities for each of the subscales were examined using Cronbach's alpha and ranged from .77 (hostility) to .92 (guilt), suggesting that the revised PANAS-X and the higher order and lower order subscales used for the present study were reliable.

**Normative beliefs.** In order to predict the influence of individual beliefs about social aggression on the emotions of perpetrators, participants evaluated the acceptability or intolerability of socially aggressive behaviours in certain social interactions. The individuals' normative beliefs were examined using a revised version of the Normative Beliefs About Aggression Scale (NOBAGS; Huesmann & Guerra, 1997 revised by Goldstein et al., 2008). This measure was used to assess participants' personal views on how normal socially aggressive behaviours are, or the degree to which they thought it would be acceptable for someone to perpetrate these behaviours (Appendix G). The original NOBAGS measure was used to examine physical forms of aggression, however,

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in this study, a revision based on a study by Goldstein et al. (2008) was used to assess beliefs about the acceptability of *socially* aggressive behaviours.

The revised measure consisted of 6 items for which participants responded on a 4-point scale indicating whether each of the behaviours was really wrong (1), sort of wrong (2), sort of OK (3), or perfectly OK (4). Items were summed and averaged to create the final score, where higher scores indicated more endorsement of the use of social aggression. Items were specific to social forms of aggression, such as “It is usually OK to give people the ‘silent treatment’ if you are mad at them”. Goldstein and colleagues found acceptable internal reliability of their general beliefs about social aggression subscale (.70). An exploratory factor analysis was conducted to examine whether all items emerged as one factor related to social aggression, and the internal consistency reliability of the measure was assessed using Cronbach’s alpha. The results of these analyses are discussed in the results section.

**Peer group norms.** To predict the influence of group norms about social aggression on the emotions resulting from initiating this behaviour, respondents were asked questions about how the peer group would react to socially aggressive behaviours. This questionnaire was designed specifically for this study in order to evaluate group norms regarding social aggression. There are currently no readily available measures that examine group norms regarding socially aggressive behaviours. As such, this questionnaire was developed to assess socially aggressive behaviours and whether they were endorsed or condemned by the peer group (Appendix H). Students were instructed to complete the norms questionnaire while imagining the potential consequences and responses of their peer group if they were to behave in the manner described. A total of

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11 socially aggressive situations were presented to students: 6 items reflected pro-aggressive group norms (e.g. gave a guy/girl the “silent treatment” because everyone else was doing it too), while 5 items reflected anti-aggressive group norms (e.g. asked your friend to stop ignoring a girl). The 11 situations presented in the questionnaire were derived from scenarios of frequent forms of socially aggressive behaviours (Galen & Underwood, 1997; Reynolds & Repetti, 2010). Each scenario depicted the respondent *participating* in a form of social aggression, representing endorsement of aggressive norms, or *opposing* the use of social aggression, representing a lack of support for socially aggressive behaviours.

For each scenario, students evaluated the extent to which the peer group would approve or disapprove of the respondents’ behaviour and what the consequences might be (i.e. would the peers want to hang out with the respondent or avoid them). The first two responses were scored as disapproval by the group of friends or negative consequences (scores 1 and 2): “greatly disapprove” or “disapprove a little”, and “would avoid a lot” or “would avoid a little”. The next response was “wouldn’t care” (score 3), a neutral group response to the behavior. The final two responses were scored as approval by the group of friends or positive consequences (scores 4 and 5): “approve a little” or “greatly approve”, and “would hang out a little” or “would hang out a lot”. Items indicating disapproval or lack of peer group support for using social aggression were reverse scored and summed with each of the endorsement items, and an average score was calculated for each participant, where higher scores indicated a greater degree of group norms in support of using social aggression.

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The current measure was designed based on a scale originally used by Salmivalli and Voeten (2004) though it was significantly altered to measure *social* aggression norms in the peer group in this study, while the original measure primarily assessed bullying-related norms in a classroom setting. The psychometric evaluation of Salmivalli and Voeten's (2004) measure suggested that it was a relatively reliable measure, demonstrating a Cronbach's alpha of .74 for anti-bullying versus pro-bullying norms. As this group norms measure of social aggression had not been previously validated, internal reliability was assessed using Cronbach's alpha, for the overall measure and each of the subscales, and an exploratory factor analysis was done to determine how items loaded. The results of the factor analysis and reliability analysis are discussed in the results.

**Frequency of socially aggressive behaviour.** This measure was used to examine the incidence of using socially aggressive behaviours. Participants were asked to identify the frequency with which they initiated social aggression through behaviours such as ignoring, excluding, gossiping, or using non-verbal or negative body language to cause social harm to either a friend or a non-friend over the past year (see Appendices I and J for female and male versions of the scale). This measure was based on one designed by Reynolds and Repetti (2010), however 7 social aggression items were added that were derived from socially aggressive vignettes used by Galen and Underwood (1997). Foremost, these items were added to the original measure to reflect behaviours involving non-verbal body language (e.g. rolling eyes or giving a dirty look), and to elaborate on items reflecting ignoring, exclusion, and gossip (e.g. spread rumours or said something negative about someone). The revised measure consisted of the original 6-item scale by Reynolds and Repetti (2010) with items such as "intentionally ignored a girl or gave the

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silent treatment” separated into two items of ignoring and giving the silent treatment, in addition to original items derived from Galen and Underwood (1997) separated into individual items for eye rolling, glaring, making a mean face, and giving dirty looks. The final measure resulted in a total of 15 items, including 3 to 4 questions about each form of social aggression: ignoring, exclusion, gossip/rumours, and negative non-verbal body language. Participants were asked to rate how often they engaged in the behaviours over the past year on a scale from 0 (*never*) to 4 (*often*). Items were summed and averaged to create a score for how often each participant used socially aggressive behaviour over the last year, where higher scores reflected a greater degree of perpetrating social aggression.

The internal consistency reliability of the reports of aggression for the original measure used by Reynolds and Repetti (2010) had a Cronbach’s alpha of .76 (B. Reynolds, personal communication, April 11, 2011). The original 7 items also have good construct validity as they were developed based on interviews conducted by Owens and colleagues (2000) and were pilot tested in the Reynolds and Repetti (2010) study. As additional items were added to create this instrument, internal reliability was assessed for the present study using Cronbach’s alpha and was .92 for using social aggression against a friend and .93 for using social aggression against a non-friend, indicating excellent reliability for this measure.

### **Results**

Before any preliminary or main analyses were conducted, the data was screened for missing data and violations of the assumptions of multiple regression. Initial examinations for data entry and syntax errors resulted in no concerns. First, the pattern of missing data was examined using SPSS Missing Values Analysis. Secondly, the

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assumptions of multiple regression analyses were tested using descriptive analyses to examine the data for violations such as non-normality and heteroscedasticity, and to ensure that the results and conclusions drawn were accurate and reliable. Prior to the main analyses, the psychometric properties of the normative beliefs and peer group beliefs scales were evaluated using factor analyses and reliability analyses. Independent t-tests, chi-square analyses and correlation analyses were used to examine preliminary research questions. Subsequently, regression analyses examined the main research question about the degree to which individual and peer group beliefs predicted perpetrator emotions, and how this association might be influenced by gender. Finally, canonical correlation analyses were used to explore the relationship between perpetrator emotions and specific types of socially aggressive behaviours used.

### **Missing Values Analysis**

The pattern of missing data was tested using SPSS Missing Values Analysis. Little's MCAR omnibus test was significant for all items and variables,  $X^2(6121) = 6819.15, p < .001$ , indicating that the pattern of missing data was not missing completely at random (MCAR). Since participants were only requested to complete the items on emotional experience if they described a memorable incident of having been socially aggressive, it was expected that there would be a large proportion of data missing on these items, as not all participants would report having been aggressive. Additionally, only individuals in the second sample completed the item regarding "length of time since the memorable incident" since it was added for the second sample on the recommendation of the examining committee at the prospectus meeting. Even after excluding all of the emotion items and the length of time items, Little's MCAR omnibus

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test was still significant,  $\chi^2(1600) = 2158.18, p < .001$ , indicating that the overall amount of missing data was greater than 5% and was now missing at random (MAR). The remaining missing data was simply due to item non-response on the part of participants completing the questionnaires. Since this was an electronic survey, participants sometimes skipped over items at random therefore there was no pattern to the missing data. Importantly, none of the individual variables exceeded 5% missing data (ranged from 0 to 4.7% missing) therefore further analyses using separate variance t-tests were not required to examine patterns of missingness.

Generally in this situation some researchers (Tabachnick & Fidell, 2007) suggest listwise/casewise deletion of any case with missing data on any variable. In the current study however, this was not perceived as a desirable solution because 88.22% of cases (262 of 297 cases) had missing data on at least one item and would result in a substantial loss of subjects. Furthermore, imputation methods such as mean substitution, or multiple imputation have been recommended (Rubin, 1987). However, when a substantial amount of data is imputed for a given variable, it tends to result in regression coefficients for these predictors that have substantial biases toward zero (Landerman, Land, & Pieper, 1997). In the study of socially aggressive behaviours, extreme scores represent important information about the perpetration of SA, consequently, imputation methods were not perceived as a viable option for dealing with the present data. Thus, given the purpose of the current study and the fact that the overall amount of missing data was small and not systematically related to any particular item or variable, the available data was likely to produce little or no bias in the analyses conducted and the conclusions drawn, and a

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decision was made to conduct all subsequent analyses with the entire sample of  $N = 297$  subjects.

### **Assumptions of Multiple Regression**

**Linearity and homoscedasticity.** The assumptions of linearity and homoscedasticity were assessed using bivariate scatterplots of a randomly selected subset of all possible combinations of variables in the study. The majority of the pairwise scatterplots met assumptions of linearity and homoscedasticity (e.g., *normative beliefs vs. hostility*, and *positive emotions vs. sadness*), while a few moderately violated these assumptions (e.g., *frequency of social aggression against a friend vs. self-assurance*). While there were some clear, strong linear relationships (i.e. *peer group approval/disapproval vs. peer group consequences*), there were no distinctly curvilinear relationships to warrant concern for non-linearity. To further examine this assumption, studentized deleted residuals were computed and plotted against predicted values, in addition to partial regression plots for each of the outcome variables (i.e., *positive emotions* and *negative emotions*), and both demonstrated normal distributions. Collectively, these findings conclude that issues of nonlinearity and heteroscedasticity were of little concern in the given sample, particularly since bivariate relationships that are not completely homoscedastic are not fatal in the analysis of ungrouped data (Tabachnick & Fidell, 2007), and the sample size was large making the data robust to these violations. As minor violations may have been caused by non-normality of certain variables, assumptions regarding normality and outliers were examined next.

**Normality and univariate outliers.** Descriptive statistics indicated skewness and kurtosis on many of the variables in both positive and negative directions. An

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examination of histograms, boxplots, stem and leaf plots, detrended and normal Q-Q plots indicated that many variables were at least minimally non-normally distributed (e.g., *length of time since the incident*, *frequency of social aggression toward a friend*, *sadness*, etc.). Visual examinations were confirmed with Kolmogorov-Smirnov tests for normality and indicated that multiple variables (including many emotions variables, and the frequency of SA variables) were non-normal at  $p < .05$ . As this procedure tends to be overly sensitive to even slight deviations from normality when sample sizes are large (Tabachnick & Fidell, 2007), formal statistical tests of skewness and kurtosis were conducted and demonstrated several  $z$  scores beyond + or – 3.29 for 3 of the variables: *serenity*, *frequency of SA against a friend* and *frequency of SA against a non-friend* (Table 2).

To determine whether skewness was being affected by the presence of outliers, univariate outliers were also assessed using  $z$  scores. Across all variables, only 8 cases were found to contain scores with  $z$ -scores beyond  $\pm 3.29$  standard deviations (2 cases for *peer group beliefs consequences*, 3 cases for *frequency of SA against a friend*, and 3 cases for *frequency of SA against a non-friend*). Although these scores represented a very small proportion of the data given the sample size, to ensure that assumptions of normality were met, each of the univariate outliers was brought within + or – 3 standard deviations of the mean for the variable on which it was an outlier. Bivariate correlations were conducted for all variables before and after outliers were brought into range and indicated an insignificant amount of change in the strength of correlations. Therefore, adjusting the outliers to bring them within range did not have an effect on the normality of data. Although extreme cases could have been deleted (Tabachnick and Fidell, 2007),

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this would have done little to improve normality of the data therefore these cases remained in the dataset within +/-3.29 standard deviations so they were no longer outliers.

Transformations of the most skewed variable, *frequency of social aggression against a friend*, were examined to determine if normality would improve. Square root and log transformations produced no meaningful differences in frequency histograms or z scores from the original variable. However, inverse transformation of *frequency of SA against a friend* created a more normal distribution and brought the z scores for skewness within 3.29 standard deviations. When the Pearson correlation matrix was examined for *frequency of SA against a friend*, transformations of *frequency of SA against a friend*, and other variables in the study, the transformations did not produce any meaningful differences in the strengths of the correlations to warrant the use of these methods. Regression analyses were also tested using the transformed data versus the untransformed data, and the results using the transformed data were similar to those using the untransformed data. The original *frequency of SA against a friend* variable was retained for further analyses so interpretability would not be impeded, as was *serenity* and *frequency of SA against a non-friend*. Therefore, all subsequent analyses and results were based on untransformed data. As multivariate outliers can also affect normality, this assumption was addressed next.

**Multivariate outliers.** To determine the presence of multivariate outliers, Mahalanobis' distance values were calculated for all cases, using the  $\chi^2$  distribution critical value of 37.70 ( $df = 15, p < .001$ ). Using this critical value, 3 cases were identified as being multivariate outliers. Upon further inspection, two of these cases were

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Table 2

*Skewness and Kurtosis z Scores for Emotions, Normative Beliefs and Peer Group Beliefs*

*Variables*

Item	z Score	
	Skewness	Kurtosis
Fear	2.81	0.69
Hostility	0.70	-1.23
Guilt	1.39	-1.16
Sadness	2.38	-0.70
Joviality	3.06	1.18
Self-assurance	0.42	-1.50
Attentiveness	-0.41	-1.49
Serenity	3.61*	2.43
Negative emotions	1.23	-0.74
Positive emotions	0.55	-0.97
Normative beliefs	-0.49	-1.05
PGB – Approval/Disapproval	-1.49	0.91
PGB - Consequences	-2.31	2.58
Frequency of SA - Friends	4.71*	5.01*
Frequency of SA – Non-friends	4.56*	4.45*

\* indicates z score beyond + or – 3.29 standard deviations

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in fact univariate outliers according to their z-scores on *frequency of SA against a friend* and *frequency of SA against a non-friend*. These findings were confirmed by dummy coding the cases with and without multivariate outliers and using them as the outcome variable in a regression to identify the variables on which these outlying cases differed from the other variables. The cases with multivariate outliers had scores that were significantly different from the centroid on *attentiveness*, *positive emotions*, *peer group beliefs consequences*, and *frequency of SA against a non-friend*. Bivariate correlations and regression analyses were conducted (predicting emotions scores) with multivariate outliers both included and excluded, and the results demonstrated negligible differences. Furthermore, the influence of the outliers on the overall model was examined using Cook's distance for all residuals and was less than 1 for all cases. This indicated that although there were multivariate outliers, there were no significant issues with these outliers influencing the results (Field, 2005) therefore these 3 cases were retained for all future analyses.

Although there was evidence of violations of normality as well as univariate and multivariate outliers for a small proportion of the variables, multiple regression analyses are generally robust against non-normality (Tabachnick & Fidell, 2007) thus these minor deviations were not a major concern given the results of the formal tests of violations.

**Multicollinearity and singularity.** Multicollinearity was explored by examining bivariate correlations between variables of interest in a correlation matrix. Pearson correlations ranged from  $r = .00$  to  $r = .72$ , and thus none of the variables demonstrated bivariate correlations above .90 which would have been a concern and cause for deletion

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(Tabachnick & Fidell, 2007). Multicollinearity was further examined using tolerance values. Values ranged from .30 to .83, and no tolerance values were below .10 or .20. Despite some overlap, there was a considerable amount of unique variance. Variance inflation factors (VIF) were also tested for the predictors and all were below the cutoff of 10 (Field, 2005), further confirming the absence of multicollinearity among the variables of interest in the study. With respect to singularity, none of the variables were perfectly correlated, and as such, all variables were kept for further analyses.

**Adequate ratio of cases to variables.** The rule of thumb for testing multiple regression is that the sample size should be greater than or equal to  $50 + 8m$  (where  $m$  is the number of predictors), assuming a medium effect size, and alpha of .05, and a power level of .80 (Tabachnick & Fidell, 2007). Given the 3 predictors (normative beliefs, peer group approval/disapproval, and peer group social consequences), the minimum required sample size was  $N = 74$ , which was adequately surpassed by the present sample size ( $N = 297$ ) and thus not a concern for the present study.

**Independence of errors.** The assumption that error terms are not correlated across observations was tested using the Durbin-Watson statistic, which was 1.71 for the regression model predicting emotions from individual and peer group norms. Since the assumption is satisfied if the Durbin-Watson statistic is between 1.5 and 2.5 (Garson, 2009) no concerns were apparent, and the error terms were not highly correlated.

**Independence of cases.** Though this assumption could not be tested directly, it was assumed that cases were independent. Given the online and individual nature of the study, data from one participant could not influence the responses of others.

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Consequently, there was no reason to assume that the independence of cases assumption was violated.

**Homogeneity of error variances.** No variables were categorical and no data was grouped in the present analyses therefore the assumption of homogeneity of error variances was not a concern (Tabachnick & Fidell, 2007).

In summary, the assumptions of multiple regression analyses, including linearity, homoscedasticity, normality, outliers, multicollinearity and independence were all thoroughly tested and deemed acceptable to pursue further analyses. All violations were addressed and dealt with ensuring the accuracy and reliability of the results and conclusions drawn from the findings. Prior to conducting the main analyses, it was also important to ensure that the measures being used were psychometrically sound and reliable. Analyses of the psychometric properties of the measures of normative beliefs and peer group beliefs follow.

### **Psychometric Evaluation of Measures**

Two measures were used that required examination of the psychometric properties of the measures (using factor analysis and reliability analysis). The first measure, normative beliefs, was examined as it is not a well-researched instrument, and there was only one previous study validating its psychometric characteristics. The second measure, peer group beliefs, was developed specifically for the present study therefore psychometric evaluation of the empirical properties of this measure was needed.

Factor analysis was applied to the data from each of the measures to examine if the measures were psychometrically sound and the internal consistencies, and reliabilities of each of the measures was examined using Cronbach's alpha.

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### Exploratory Factor Analyses

**Normative beliefs.** An exploratory factor analysis was used to examine the psychometric properties of the perceptions of normalcy of social aggression measure. Exploratory procedures were considered appropriate given that there is no formal evidence of the factor structure of this measure having been analyzed. The aim of this analysis was to determine if all items were conceptually related to the same theoretical factor as had been previously hypothesized (Goldstein et al., 2008). To determine the component loadings of the items, principle axis factoring was conducted using direct oblimin rotation. As this method of rotation allows factors to correlate, it was assumed that if multiple factors were produced they would be related to the singular construct of normative beliefs about social aggression. The expectation of unidimensionality was incorrect, and two factors were extracted with eigenvalues greater than 1 to account for 52.8% of variance. The first factor, which accounted for 36.2% of variance, was comprised of 3 items reflecting the acceptability of social aggression when motivated by anger (e.g., in general, it is OK to stop talking to people if you are *mad* at them). The second factor accounted for 16.5% of variance and contained the remaining 3 items reflecting the acceptability of using social aggression without motivation (e.g., in *general*, it is OK to spread rumours about people). Pattern matrix loadings can be seen in Table 3.

Surprisingly the correlation between factor 1 and factor 2 was moderate and negative ( $r = -.32$ ), indicating that increased endorsement for social aggression motivated by anger was associated with a decreased support for the general use of social aggression,

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Table 3

*Pattern Matrix for the Items of the Normalcy of Social Aggression Measure (6 items)*

Items	Factor 1	Factor 2
In general, it is OK to stop talking to people if you are mad at them	.82	
It is usually OK to give people the “silent treatment” if you are mad at them	.81	
It is usually OK to cancel plans with somebody if you are mad at them	.52	
In general, it is OK to spread rumours about people		-.79
It is usually OK to try to get other people to dislike somebody who you personally dislike		-.66
It is NOT wrong to talk about other people behind their backs		.62

*Note:* Cronbach’s alpha for overall measure = .50

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and that these factors were clearly distinct, which differs from the conceptual structure suggested by Goldstein et al. (2008).

Reliability analyses conducted on the overall measure resulted in a Cronbach's alpha of .50. When the reverse coded item "it is wrong to talk about other people behind their backs" was removed from the analysis, the Cronbach's alpha increased to .72 (Table 4). It is likely that because this question was the only reverse scored item on the measure, it was misinterpreted by many participants and not answered appropriately. The first and second factors were both reasonably reliable with respective Cronbach's alphas of .76 and .73, prior to the item being removed. However, when the reverse coded item was removed from the measure to increase the *overall* reliability, the reliability of factor 2 dropped to Cronbach's alpha of .68, because factor 2 was now comprised of only 2 items.

Given that the overall alpha for the two factor solution was low and that the original scale was postulated to be a one-factor solution by Goldstein et al. (2008), using principle axis factoring a one-factor solution was forced using 5-items (excluding the reverse scored item that reduced overall reliability) (Table 5), which was actually the strategy used by Goldstein and colleagues (S. Goldstein, personal communication, December 2012). The single factor accounted for 37.2% of the variance with factor loadings ranging from .27 (in general, it is ok to spread rumours about people) to .85 (it is usually ok to give people the "silent treatment" if you are mad at them). The overall variance accounted for by the one factor decreased by 15.6% from the two-factor solution, but the overall reliability of the measure increased from .50 to .72. Therefore, to maintain simplicity in interpretation of normative beliefs about using social aggression,

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Table 4

*Pattern Matrix for the Items of the Normalcy of Social Aggression Measure (5 items)*

Items	Factor 1	Factor 2
In general, it is OK to stop talking to people if you are mad at them	.83	
It is usually OK to give people the “silent treatment” if you are mad at them	.80	
It is usually OK to cancel plans with somebody if you are mad at them	.53	
In general, it is OK to spread rumours about people		.75
It is usually OK to try to get other people to dislike somebody who you personally dislike		.68

*Note:* Cronbach’s alpha for overall measure = .72

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Table 5

*Single Factor Solution for the Items of the Normalcy of Social Aggression Measure*

Items	Factor 1
It is usually OK to give people the “silent treatment” if you are mad at them	.85
In general, it is OK to stop talking to people if you are mad at them	.73
It is usually OK to try to get other people to dislike somebody who you personally dislike	.53
It is usually OK to cancel plans with somebody if you are mad at them	.51
In general, it is OK to spread rumours about people	.27

*Note:* Cronbach’s alpha for overall measure = .72

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the single factor solution was chosen. As motivation for using social aggression was not a variable of interest in the present study, only overall support for the use of social aggression, the decision was made to use the one factor solution. The 5 items were summed and averaged to create an overall score on individual normative beliefs regarding the use of social aggression and this score was used for all subsequent analyses. The limitations of this measure will be explored further in the discussion section.

**Peer group beliefs.** As the peer group beliefs instrument was developed and piloted on the present sample, an exploratory factor analysis was used to empirically examine the psychometric characteristics of the measure. The peer group beliefs measure was conceptually designed to assess two distinct components: approval or disapproval of the use of social aggression, and social consequences for the use of social aggression. Therefore, two separate exploratory factor analyses were performed to examine the conceptual factors formed by all items. The resulting subscales supported the construct validity of each of the factors produced.

***Approval/disapproval.*** Principal axis factoring of the 11 approval/disapproval items using direct oblimin rotation was used since factors were expected to be related to the same overall construct. The results yielded a two-component solution with eigenvalues greater than 1, comprised of (a) direct support of social aggression (e.g., choosing to participate in peer group social aggression) and (b) indirect support of social aggression (e.g., choosing not to do something when the peer group is being socially aggressive). Pattern matrix loadings are presented in Table 6. The first component, labelled “support of direct social aggression”, accounted for 33.41% of the total variance and contained 6 items describing intentionally engaging in peer group social aggression

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Table 6

*Pattern Matrix for the Approval/Disapproval Items of the Peer Group Norms Measure*

Approval/Disapproval Items	Factor 1	Factor 2
3. Gave a guy/girl the “silent treatment” because everyone else was doing it too	.77	
5. Did not like a guy/girl because your friends told you not to like him/her	.76	
1. Purposely ignored a guy/girl because others in your group were	.72	
9. Laughed when a friend gave another guy/girl dirty looks	.67	
7. Talked negatively with your group of friends about another guy/girl behind his/her back	.65	
11. Wrote something mean on a note that you and your friends were giving to another guy/girl (e.g., a note that says “no one likes you”)	.58	
4. Did not tell someone in your group “I’m not ok with being mean to that guy/girl” when your friends were being mean to him/her		.70
6. Did not walk away when you heard your friends talking mean about another guy/girl		.60
10. Did not ask a guy/girl to hang out that your friends purposely did not invite to a party		.48
8. Did not ask your friends to stop ignoring a guy/girl		.46
2. Did not make friends with a guy/girl your other friends were excluding		.36

*Note:* Cronbach’s alpha for overall measure = .84

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(e.g. gave a guy/girl the 'silent treatment' because everyone else was doing it too). The second component, labelled "support of indirect social aggression", accounted for 7.72% of the total variance (41.12%), and contained 5 items reflecting supporting peer group social aggression through inaction (e.g. did not walk away when you heard your friends talking mean about another guy/girl). The correlation between factors 1 and 2 was  $r = .52$ , indicating that the two factors were moderately correlated, which was expected. This relationship suggests that as peer group support for direct social aggression increases, there is a moderate increase in peer group support for indirect social aggression as well.

Reliability analysis of each of the subscales produced coefficient alphas (Cronbach's alphas) of .85 and .67 for direct support of social aggression and indirect support for social aggression subscales, respectively. Coefficient alpha for the overall peer group approval/disapproval measure was .84. The moderate correlations between the factors and the high internal consistency of the overall measure suggest that direct support of social aggression and indirect support of social aggression are different dimensions of the same underlying construct: group norms for the use of social aggression.

Items within each peer group approval/disapproval factor were summed and averaged to compute two subscales corresponding to the factors. To compare participants mean scores for direct and indirect support of social aggression, a paired samples t-test was used. Participants indicated significantly more peer group approval of indirect support of SA ( $M = 3.39$ ,  $SD = .69$ ) than for direct support of SA ( $M = 2.89$ ,  $SD = .91$ ),  $t(273) = 9.71$ ,  $p < .001$ , where 1 indicated the peer group would "greatly disapprove" and 5 indicated the peer group would "greatly approve".

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*Social consequences.* The second aspect of the peer group beliefs measure examined the social consequences from the peer group for using social aggression. Principal axis factoring of the 11 social consequence items was conducted using direct oblimin rotation since factors were assumed to be related to the same overall construct of peer group social consequences and this method of rotation allows resulting factors to correlate. The results yielded a two-component solution with eigenvalues greater than 1, comprised of (a) consequences for direct involvement in social aggression (e.g., participation in peer group social aggression) and (b) consequences for indirect involvement in social aggression (e.g., implicit participation in social aggression through inaction). Pattern matrix loadings are presented in Table 7. The first component, labelled “social consequences for direct social aggression”, accounted for 27.64% of the total variance and contained 6 items describing consequences for intentionally participation in peer group social aggression. The second component, labelled “social consequences for indirect social aggression”, accounted for 18.27% of the total variance (45.90%), and contained 5 items reflecting consequences for indirectly participating in peer group social aggression through inaction. The correlation between factors 1 and 2 was  $r = -.07$ , signifying that the factors were distinct as there was an almost negligible relationship between the two. This was surprising given that the factors were expected to be related subscales of the same overall construct of peer group social consequences.

Reliability analysis of each of the subscales produced coefficient alphas of .85 and .76 for consequences of direct involvement social aggression and consequences for indirect involvement in social aggression subscales, respectively. Reliability for the overall peer group social consequence measure was respectable with a Cronbach’s alpha

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Table 7

*Pattern Matrix for the Social Consequence Items of the Peer Group Norms Measure*

Social Consequence Items	Factor 1	Factor 2
3. Gave a guy/girl the “silent treatment” because everyone else was doing it too	.76	
5. Did not like a guy/girl because your friends told you not to like him/her	.76	
9. Laughed when a friend gave another guy/girl dirty looks	.74	
7. Talked negatively with your group of friends about another guy/girl behind his/her back	.69	
11. Wrote something mean on a note that you and your friends were giving to another guy/girl (e.g., a note that says “no one likes you”)	.66	
1. Purposely ignored a guy/girl because others in your group were	.62	
6. Did not walk away when you heard your friends talking mean about another guy/girl		.70
4. Did not tell someone in your group “I’m not ok with being mean to that guy/girl” when your friends were being mean to him/her		.70
8. Did not ask your friends to stop ignoring a guy/girl		.69
10. Did not ask a guy/girl to hang out that your friends purposely did not invite to a party		.54
2. Did not make friends with a guy/girl your other friends were excluding		.52

*Note:* Cronbach’s alpha for overall measure = .72

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of .72.

Items within each peer group social consequence factor were summed and averaged to compute the subscales corresponding to the factors. Participants did not indicate significantly different mean levels of social consequence for direct social aggression ( $M = 3.20, SD = .79$ ) than for social consequences of indirect social aggression ( $M = 3.15, SD = .68$ ),  $t(268) = .83, p = .408$ . As a score of 1 indicated the peer group would want to “avoid them a lot” and 5 indicated the peer group would want to “hang out with them a lot”, mean levels of social consequences for both direct and indirect aggression denote that the peer group was mostly indifferent to the use of social aggression but moderately supported its use in the peer group.

With the data screened for missing values, assumptions of multiple regression dealt with, and the soundness and reliability of normative beliefs now appraised, the preliminary analyses examining sample differences, gender differences and descriptive data were conducted next.

### **Preliminary Analyses**

Prior to conducting the main analyses of the study, the primary goal was to examine sample 1 and sample 2 to assess whether significant differences existed between them. Overall descriptive statistics were examined for all variables of interest, followed by correlation analyses for the major variables of future analyses. After that, differences in the emotional outcomes of perpetrators were investigated, as well as potential discrepancies between males' and females' scores on primary variables of interest including individual beliefs, peer group beliefs, emotions, and the frequency with which they perpetrated social aggression.

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**Comparing sample 1 and sample 2.** Of the 173 individuals in sample 1, 167 (96.5%) individuals described a memorable incident of having perpetrated an act of social aggression (6 described having never engaged in such a situation). In sample 2, the questionnaire was revised to include the option “I did not describe an incident because I have never done this”, on the recommendation of the examining committee at the prospectus meeting. This modification resulted in only 61 individuals (49.2%) of the 124 in sample 2 describing a memorable incident, while 63 individuals (50.8%) reported having never engaged in socially aggressive behaviours. Therefore, for the overall sample, 228 students (76.8%) reported a memorable time in which they used social aggression.

Samples 1 and 2 were compared for the individuals who reported their use of social aggression ( $n = 228$ ) to determine if there were differences in the types of behaviours, emotions or normative beliefs reported, or the frequency of using social aggression. First, to determine if sample 1 and sample 2 differed in the types of behaviours they reported when describing an incident of having been socially aggressive, the frequencies of the behaviours within each sample were calculated (Table 8). Based on these values, a chi-square analysis was performed to determine if the types of behaviours described differed as a function of the sample from which the data was derived.

The difference in proportions between these two samples was not significant,  $\chi^2(14, N = 651) = 14.55, p = .410$ , indicating that the samples did not differ in the types of behaviour reported as a function of the sample. For the subscales and overall scores for

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Table 8

*Observed and Expected Frequencies for Each of the Socially Aggressive Behaviours Described in the Memorable Incident for Sample 1 and Sample 2*

Incident type	Sample		Total
	Sample 1 (n=167)	Sample 2 (n=61)	
Ignored	61 (66.6)	28 (22.4)	89 (89.0)
Spread Rumours	37 (36.7)	12 (12.3)	49 (49.0)
Not accepted	37 (37.4)	13 (12.6)	50 (50.0)
Steal guy/girl	8 (8.2)	3 (2.8)	11 (11.0)
Silent treatment	60 (56.9)	16 (19.1)	76 (76.0)
Get others to not like	28 (29.9)	12 (10.1)	40 (40.0)
Talk behind back	63 (65.1)	24 (21.9)	87 (87.0)
Turn away	32 (27.7)	5 (9.3)	37 (37.0)
Dirty looks	26 (27.7)	11 (9.3)	37 (37.0)
Roll eyes	31 (30.7)	10 (10.3)	41 (41.0)
Mean note	5 (4.5)	1 (1.5)	6 (6.0)
Stop talking	36 (32.2)	7 (10.8)	43 (43.0)
Mean face	10 (11.2)	5 (3.8)	15 (15.0)
Glare	12 (15.7)	9 (5.3)	21 (21.0)
Not invite to party	41 (36.7)	8 (12.3)	49 (49.0)
<i>Total</i>	487 (487.0)	164 (164.0)	651 (651.0)

*Note.* Expected frequencies in parentheses below observed values.  $\chi^2 = 14.55, p = .41, \phi_c = .15$

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other variables of interest in the present study, independent sample t-tests were used to determine if the mean ratings reported by sample 1 and sample 2 differed on any of the variables (Table 9).

The results indicated that sample 1 and sample 2 were not significantly different on any of the variables of interest. Combined with the results of the chi square analysis, the results suggest that those reporting the experience of having perpetrated an act of social aggression in sample 1 and sample 2 did not significantly differ from one another in terms of their experiences as measured by mean levels of emotions, beliefs and frequency of behaviour, despite the fact when given the choice fewer reported having ever perpetrated in the second sample. In conclusion, the samples were combined to create a single sample of 228 subjects.

The sample of perpetrators of social aggression consisted of 69 males (30.3%) and 159 females (69.7%), ages 18 to 61 ( $M = 22.57$ ,  $SD = 5.66$ ). Participants in the second sample were asked, "How long ago did this incident happen?", and on average, most incidents reported by participants had occurred within the last year ( $M = 4.27$ ,  $SD = 1.21$ ). As the present study was only interested in those who reported having perpetrated an act of social aggression, all subsequent analyses were completed using this sample of 228 participants.

**Descriptive statistics.** When the reported memorable incidents were examined for the specific types of socially aggressive behaviours used, *ignoring* was the most commonly reported behaviour with 39.0% of the total sample reporting having done this in the most salient incident of perpetrating social aggression they described. This was

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Table 9

*Descriptive Statistics for all Subscales and Overall Scores and Independent Samples T-Test Results for Sample 1 and Sample 2*

Variable	Sample 1 (n=167)	Sample 2 (n=61)	<i>t</i>
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	
Normative Beliefs	2.70 (0.45)	2.70 (0.43)	0.08
PGB – Approval/Disapproval	3.18 (0.68)	3.04 (0.72)	1.62
PGB – Consequences	3.23 (0.50)	3.12 (0.53)	1.75
Emotions – Fear	1.92 (0.89)	1.96 (0.90)	-0.29
Emotions – Hostility	2.50 (0.84)	2.55 (0.90)	-0.39
Emotions – Guilt	2.38 (1.02)	2.38 (1.14)	-0.05
Emotions – Sadness	1.97 (0.80)	2.19 (1.04)	-1.50
Emotions – Joviality	1.85 (0.83)	2.08 (1.06)	-1.55
Emotions – Self-Assurance	2.34 (0.90)	2.60 (1.08)	-1.82
Emotions – Attentiveness	2.44 (0.84)	2.68 (1.03)	-1.65
Emotions – Serenity	2.02 (0.92)	2.19 (1.04)	-1.20
Emotions – Negative Overall	2.31 (0.75)	2.34 (0.92)	-0.24
Emotions – Positive Overall	2.18 (0.75)	2.46 (0.92)	-2.32
Frequency of SA – Friends	1.71 (0.70)	1.70 (0.66)	0.15
Frequency of SA – Non-friends	1.78 (0.83)	1.69 (0.74)	0.95

*Note.* *p*-values noted were compared to the Bonferroni corrected alpha level of *p* = .003, therefore none were significant

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followed closely by *talking behind a guy/girl's back* (38.2%) and *giving a guy or girl the 'silent treatment'* (33.3%). The most infrequently reported behaviours were *passing a note with something mean written on it* (2.6%), *trying to steal the guy/girl that someone else liked* (4.8%), and negative non-verbal behaviours like *making a mean face* (6.6%) and *glaring at someone meanly* (9.2%). Frequencies of categorical variables are displayed in (Appendix K) and mean scores and standard deviations for all variables used in the succeeding analyses in Table 10.

On average, participants reported a moderate level of normative beliefs endorsing the use of social aggression ( $M = 2.30$ ,  $SD = .44$ ), and mostly indifference or very minimal peer group endorsement of social aggression for peer group approval/disapproval ( $M = 3.16$ ,  $SD = .68$ ) and social consequences of the peer group ( $M = 3.20$ ,  $SD = .51$ ). When participants reported a memorable incident of perpetrating an act of social aggression, the mean reported levels of emotions ranged from slight for joviality ( $M = 1.93$ ,  $SD = .88$ ) to moderate for hostility ( $M = 2.56$ ,  $SD = .83$ ). Finally, on average, participants reported mean levels of using socially aggressive behaviours against a friend ( $M = 1.74$ ,  $SD = .71$ ) and against a non-friend ( $M = 1.80$ ,  $SD = .84$ ) that represented using socially aggressive behaviours approximately once every few months.

**Correlational analyses.** To examine the nature of the relationships between all variables in the present study, Pearson correlation coefficients between all variables were examined. Correlations in this study primarily examined the association between the main variables (i.e. normative beliefs, peer group beliefs, emotions and frequency), but also the unique correlations between the subscales of some of the constructs (e.g. self-

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Table 10

*Mean Scores for Normative Beliefs, Peer Group Beliefs, Emotions Subscales and Frequency of SA for Entire Sample*

Variable	Raw Scores	
	<i>M</i>	<i>(SD)</i>
Normative Beliefs	2.30	.44
PGB – Approval/Disapproval	3.16	.68
Approval/Disapproval for Direct SA	2.95	.91
Approval/Disapproval for Indirect SA	3.41	.66
PGB – Social Consequences	3.20	.51
Social Consequences of Direct SA	3.22	.80
Social Consequences of Indirect SA	3.16	.66
Emotions – Fear	1.94	.89
Emotions – Hostility	2.56	.83
Emotions – Guilt	2.41	1.05
Emotions – Sadness	2.05	.88
Emotions – Joviality	1.93	.88
Emotions – Self Assurance	2.43	.94
Emotions – Attentiveness	2.52	.87
Emotions – Serenity	2.07	.95
Emotions – Positive Overall	2.26	.79
Emotions – Negative Overall	2.35	.78
Frequency of SA – Friends	1.74	.71
Frequency of SA – Non-friends	1.80	.84

*Note:* For normative beliefs (1 = It's really wrong, 2 = It's sort of wrong, 3 = It's sort of OK, 4 = It's perfectly OK), PGB approval/disapproval (1 = greatly disapprove, 2 = disapprove a little, 3 = wouldn't care, 4 = approve a little, 5 = greatly approve), PGB social consequences (1 = would avoid a lot, 2 = would avoid a little, 3 = wouldn't care, 4 = would hang out a little, 5 = would hang out a lot), emotions (1 = not at all, 2 = a little, 3 = moderately, 4 = quite a bit, 5 = extremely), frequency of SA (1 = never, 2 = about once a term, 3 = about once a month, 4 = a few times a month, 5 = about once a week, 6 = many times a week)

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assurance emotions and hostility emotions). As can be seen in the correlation table (Table 11), correlations ranged from .00 to .91 across all variables.

The primary predictor of normative beliefs regarding the use of social aggression was not significantly correlated with any of the emotional outcome variables except *self-assurance*,  $r(218) = .15, p = .03$ . This suggests that as individual normative beliefs about the acceptability of using social aggression increase, there will be a significant corresponding increase in feelings of self-assurance when an individual perpetrates an act of social aggression. *Normative beliefs* was significantly positively correlated with the other predictors of *peer group approval/disapproval*,  $r(209) = .22, p = .001$  and *peer group social consequences*,  $r(206) = .24, p < .001$ . *Normative beliefs* were also significantly correlated positively with *approval/disapproval of direct social aggression*,  $r(211) = .26, p < .001$ , and *social consequences for direct aggression*,  $r(212) = .28, p < .001$ , but not for indirect involvement participation in social aggression (*approval/disapproval of indirect social aggression* and *social consequences for indirect aggression*). These predictor variables were not too highly correlated to warrant concerns of multicollinearity in the regression analyses.

With respect to the secondary predictor of peer group beliefs, overall *peer group approval/disapproval*, shared a significant positive correlation with *self-assurance*,  $r(204) = .20, p = .005$ , but not with any of the other emotion categories, while the subscale *approval/disapproval for direct SA* was positively correlated with both *self-assurance*,  $r(206) = .22, p = .002$ , and *joviality*,  $r(205) = .16, p = .019$ . The other peer group beliefs construct of *peer group social consequences* was not significantly

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Table 11

*Intercorrelations Between Normative Beliefs, Peer Group Beliefs, Emotions and Frequency of Social Aggression Variables*

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Normative Beliefs	.22**	.26**	.05	.24**	.28**	.03	.00	.01	-.02	.12	.13	.15*	.03	.10	.01	.09	.32**	.27**
2. PGB – Approval/Disapproval	–	.91**	.74**	.83**	.65**	.46**	.02	.04	-.01	-.07	.13	.20**	-.03	.01	.01	.09	.17**	.24**
3. PGB – Direct Approval		–	.40**	.77**	.72**	.27**	.01	.05	-.05	-.07	.16*	.22**	-.01	.03	-.01	.11	.20**	.25**
4. PGB – Indirect Approval			–	.58**	.28**	.58**	.04	-.01	.06	-.04	.02	.08	-.03	-.02	.02	.03	.03	.10
5. PGB – Social Consequences				–	.80**	.53**	.03	.03	.02	-.02	.07	.14	-.02	-.05	.03	.06	.15*	.21**
6. PGB – Cons. for Direct SA					–	-.08	.03	.09	.07	.05	.12	.18*	.01	-.01	.08	.09	.15*	.19**
7. PGB – Cons. for Indirect SA						–	.05	-.05	-.03	-.07	-.07	-.03	-.05	-.08	-.03	-.04	.05	.09
8. Emotions – Fear							–	.45**	.59**	.68**	.17*	.18*	.31**	-.17*	.88**	.27**	.28**	.17*
9. Emotions – Hostility								–	.40**	.56**	.15*	.41**	.51**	-.15*	.69**	.39**	.19**	.14*
10. Emotions – Guilt									–	.65**	-.05	-.10	.04	-.28*	.76**	-.04	.22**	.14*
11. Emotions – Sadness										–	.07	.12	.31**	-.12	.78**	.20**	.29**	.21**
12. Emotions – Joviality											–	.71**	.52**	.59**	.07	.83**	.28**	.26**
13. Emotions – Self-Assurance												–	.66**	.45**	.15*	.85**	.17*	.17*
14. Emotions – Attentiveness													–	.33**	.31**	.83**	.16*	.14*
15. Emotions – Serenity														–	-.27*	.50**	.19**	.20**
16. Emotions – Negative Overall															–	.22**	.28**	.18**
17. Emotions – Positive Overall																–	.26**	.23**
18. Freq. of SA – Friends																	–	.82**
19. Freq. of SA – Non-friends																		–

\* $p < .05$  \*\* $p < .01$

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associated with any of the emotion variables, however, *social consequences for direct aggression* was significantly correlated with *self-assurance* at  $r(208) = .18, p = .011$ . The peer group belief subscales of *approval/disapproval for indirect SA* and *social consequences for indirect aggression* were not significantly associated with any of the emotions variables.

Both frequency variables (*frequency of SA against a friend* and *frequency of SA against a non-friend*) were significantly correlated with *normative beliefs*,  $r(221) = .32, p < .001$ , and  $r(221) = .27, p < .001$ , respectively. Furthermore, frequency variables were positively and significantly correlated with peer group variables *peer group approval/disapproval*, *approval/disapproval for direct SA*, *peer group social consequences*, and *social consequences for direct SA* ( $r$  ranging from .15 to .20), but not with *approval/disapproval for indirect SA* and *social consequences for indirect SA*,  $r = .03$  and  $.05$ , respectively. Finally, significant positive correlations were found between frequency of SA variables and all emotion subscales as well as overall *positive emotions*,  $r(215) = .26, p < .001$  and  $r(215) = .23, p = .001$ , and overall *negative emotions*,  $r(210) = .28, p < .001$  and  $r(215) = .18, p = .01$ .

In summary, the results suggest that individual beliefs and peer group beliefs in support of social aggression are not related to the emotional experiences of having perpetrated social aggression. However, individuals who report an increased frequency of using social aggression are more likely to have normative beliefs and peer group beliefs supporting the use of social aggression, and more positive and negative emotional experiences compared to those who use social aggression less.

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**Gender differences.** The first research question explored whether gender differences existed between males and females in their beliefs, emotions, and perpetration of social aggression. Initially, chi square analysis was used to examine differences in the number of males and females reporting perpetration of social aggression. Independent samples t-tests were used to compare gender differences on individual beliefs, normative beliefs, emotions, and frequency with which males and females use social aggression, and the results are reported below.

To examine potential differences between male and female samples, a chi-square analysis was performed to determine if the number of individuals reporting the various types of social aggression in their memorable incidents differed as a function of gender (Table 12). The chi-square test of independence was performed and the relationship between these variables was not significant,  $\chi^2 (14, N = 651) = 7.93, p = .893$  indicating that males and females did not significantly differ in the types of socially aggressive behaviours each reported. This was further supported by the Cramer's V of .11 indicating a weak association between gender and types of social aggression described.

Independent samples t-test were used to examine gender differences on all major variables of interest (Table 13). Males ( $M = 2.31, SD = .46$ ) and females ( $M = 2.30, SD = .44$ ) did not significantly differ in their reported mean levels of normative beliefs,  $t(223) = .22, p = .828$ . Furthermore, males and females reported similar mean levels of all peer group beliefs variables (*peer group approval/disapproval, approval/disapproval for direct SA, approval/disapproval for indirect SA, peer group social consequences, social consequences for direct aggression, and social consequences for indirect aggression*), as well as the frequency of using social aggression against a friend and against a non-friend

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Table 12

*Observed and Expected Frequencies for Each of the Socially Aggressive Behaviours  
Described in the Memorable Incident for Males and Females*

Incident type	Sample		Total
	Males (n=69)	Females (n=159)	
Ignored	29 (22.8)	60 (66.2)	89 (89.0)
Spread Rumours	13 (12.6)	36 (36.4)	49 (49.0)
Not accepted	14 (12.8)	36 (37.2)	50 (50.0)
Steal guy/girl	4 (2.8)	7 (8.2)	11 (11.0)
Silent treatment	17 (19.5)	59 (56.5)	76 (76.0)
Get others to not like	10 (10.3)	30 (29.7)	40 (40.0)
Talk behind back	20 (22.3)	67 (64.7)	87 (87.0)
Turn away	8 (9.5)	29 (27.5)	37 (37.0)
Dirty looks	8 (9.5)	29 (27.5)	37 (37.0)
Roll eyes	9 (10.5)	32 (30.5)	41 (41.0)
Mean note	3 (1.5)	3 (4.5)	6 (6.0)
Stop talking	11 (11.0)	32 (32.0)	43 (43.0)
Mean face	2 (3.8)	13 (11.2)	15 (15.0)
Glare	6 (5.4)	15 (15.6)	21 (21.0)
Not invite to party	13 (12.6)	36 (36.4)	49 (49.0)
<i>Total</i>	167 (167.0)	484 (484.0)	651 (651.0)

*Note.* Expected frequencies are in parentheses next to observed values.  $\chi^2 = 7.93, p = .89, \phi_c = .11$

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Table 13

*Mean Reported Normative Beliefs, Peer Group Beliefs, Emotions and Frequency of Social Aggression and T-Tests for Differences Between Males and Females*

Variable	Males	Females	<i>t</i>
	<i>M (SD)</i>	<i>M (SD)</i>	
Normative Beliefs	2.31 (.46)	2.30 (.44)	0.22
PGB – Approval/Disapproval	3.14 (.67)	3.17 (.72)	-0.27
Direct Approval/Disapproval	2.92 (.76)	2.96 (.97)	-0.28
Indirect Approval/Disapproval	3.42 (.53)	3.41 (.70)	0.13
PGB – Social Consequences	3.17 (.42)	3.21 (.54)	-0.54
Social Consequences of Direct SA	3.20 (.72)	3.23 (.83)	-0.24
Social Consequences of Indirect SA	3.14 (.67)	3.17 (.66)	-0.30
Emotions – Fear	1.86 (.64)	1.98 (.98)	-1.09
Emotions – Hostility	2.62 (.83)	2.53 (.83)	0.75
Emotions – Guilt	2.19 (.83)	2.49 (1.12)	-2.20
Emotions – Sadness	1.92 (.73)	2.10 (.93)	-1.62
Emotions – Joviality	2.22 (.87)	1.80 (.86)	3.24*
Emotions – Self Assurance	2.57 (.87)	2.38 (.97)	1.43
Emotions – Attentiveness	2.72 (.79)	2.44 (.89)	2.25
Emotions – Serenity	2.44 (.95)	1.92 (.91)	3.90*
Emotions – Positive Overall	2.44 (.76)	2.18 (.79)	2.28
Emotions – Negative Overall	2.26 (.62)	2.39 (.84)	-1.25
Frequency of SA – Friends	1.74 (.79)	1.74 (.67)	0.01
Frequency of SA – Non-friends	1.84 (.86)	1.79 (.83)	0.38

*Note.* *p*-values noted were compared to the Bonferroni corrected alpha level of  $p = .003$

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(see table for means and t-test values). However, a few gender differences were found in reported emotions such that males ( $M = 2.22, SD = 0.87$ ) reported significantly higher levels of joviality than females ( $M = 1.80, SD = .86$ ),  $t(216) = 3.24, p = .001$ , as well as serenity ( $M = 2.44, SD = .95$ ;  $M = 1.92, SD = .91$ , respectively),  $t(222) = 3.90, p < .001$ .

In sum, the results of the chi-square analysis and independent samples t-test indicate that the number of males and females reporting various types of SA behaviours did not differ, nor did the mean levels of individual or peer group beliefs, or the frequency of perpetrating SA differ as a function of gender. Nonetheless, males seemed to report more positive emotions, specifically joviality and serenity, than females when they perpetrated acts of social aggression, however, no significant differences were found on negative emotions.

**Positive versus negative emotions.** The second research question examined whether the emotional experiences of perpetrating social aggression involved more positive emotions or more negative. A paired sample t-test was used to examine this relationship and the results suggested that participants reported mean levels of positive emotions ( $M = 2.26, SD = .79$ ) and negative emotions ( $M = 2.35, SD = .78$ ) that were not significantly different,  $t(208) = 1.07, p = .287$ . These means represented mild to moderate levels of both positive and negative emotions in the perpetration of social aggression. These results suggest that the perpetration of social aggression was not a highly arousing emotional experience, and that restrained amounts of both positive and negative emotions are involved.

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### Main Analyses

**Hierarchical regressions.** The final research questions were: Among perpetrators of social aggression, how do individual normative beliefs and peer group norms regarding the acceptability of social aggression uniquely influence the emotional experiences of socially aggressive individuals? How well do peer group approval/disapproval and peer group social consequences predict to emotions after controlling for individual normative beliefs? Hierarchical multiple regressions were used to address these questions.

The hypotheses that peer group beliefs would contribute over and above individual normative beliefs to predict emotional reactions to social aggression were first tested using 2 hierarchical regression models, each with peer group beliefs predicting overall positive then overall negative emotions. In the first step of the model, overall normative beliefs were entered as the control variable, and in step two, overall scores for peer group approval/disapproval, and peer group social consequences were simultaneously entered. The results of the analyses are presented in Table 14. Neither of the regression models was significant,  $F(3, 191) = 0.24, p = .932$  and  $F(3, 197) = 0.76, p = .520$ , respectively.

Next, hierarchical regressions were used to examine the influence of peer group beliefs over and above individual normative beliefs in the prediction of each of the 8 emotional subscales. The results indicated that none of the regression models were significant (Appendix L), however, the model predicting self-assurance as the outcome variable did indicate significance (Table 15). The results of step 1 suggested that normative beliefs alone did not account for much variance (only 1.1%), and the model

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Table 14

*Hierarchical Multiple Regression Analyses Predicting Negative and Positive Emotions*

*From Individual Beliefs and Peer Group Beliefs (N = 228)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	$R^2$	Adj. $R^2$	$\Delta R^2$	<i>F</i>
<i>Negative</i>								
Step 1								
Normative beliefs	-.01	.10	-.01	-.09	.00	-.01		.01
Step 2								
Normative beliefs	-.02	.11	-.02	-.21	.00	-.01	.00	.24
PGB approval/disapproval	-.09	.15	-.08	-.64				
PGB social consequences	.17	.20	.11	.84				
<i>Positive</i>								
Step 1								
Normative beliefs	.02	.10	.02	.24	.00	-.01		.06
Step 2								
Normative beliefs	-.01	.10	-.004	-.05	.01	-.00	.01	.76
PGB approval/disapproval	.16	.14	.14	1.12				
PGB social consequences	-.07	.19	-.04	-.35				

*Note:* Neither model was significant

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Table 15

*Hierarchical Multiple Regression Analysis Predicting Self-Assurance From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	$R^2$	Adj. $R^2$	$\Delta R^2$	<i>F</i>
<i>Self-Assurance</i>								
Step 1								
Normative beliefs	.18	.12	.11	1.48	.01	.01		2.19
Step 2								
Normative beliefs	.12	.13	.07	.92	.05	.03	.04	3.11*
PGB	.33	.17	.24	1.91				
approval/disapproval								
PGB social consequences	-.11	.23	-.06	-.48				

\* $p < .05$

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was not significant,  $F(1, 196) = 2.19, p = .141$ . When peer group beliefs were entered in step 2, the overall model accounted only for 4.6% of the variance in self-assurance, but was significant,  $F(3, 194) = 3.11, p = .027$ . However, neither of the independent variables (peer group approval/disapproval and peer group social consequences) made a statistically significant independent contribution to the explanation of self-assurance in social aggression, and it was only the overall model that was significant. The fact that none of the other regression models were significant was not surprising given the results of the correlation analysis that demonstrated there were weak correlations between the predictor and outcome variables, with the exception that self-assurance was moderately but significantly correlated with normative beliefs and peer group approval/disapproval.

It is possible that attitudes, values and beliefs might not predict to emotions as was hypothesized, but perhaps they do predict to the behaviour, as in the study by Salmivalli and Voeten (2004) where they examined the contributions of norms in predicting participation in bullying behaviour. To examine this potential association, hierarchical regressions were used again to examine the unique contribution of overall negative and overall positive emotions at the time of perpetration in the explanation of frequency of social aggression. Emotions were entered in step one, and individual and peer group norms were entered in step 2 to examine whether they contributed to the prediction of using social aggression in general, above and beyond what emotions predict. For the first model with negative emotions as a predictor, the results of step 1 indicated that negative reactions to the perpetration of social aggression significantly predicted the general frequency of using social aggression,  $F(1, 189) = 13.81, p < .001$ , and accounted for 6.3% of the variance in the model (Table 16). When norms were

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Table 16

*Hierarchical Multiple Regression Analysis Predicting Frequency of SA Against a Friend for Negative Emotions and Norms (N = 228)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	$R^2$	Adj $R^2$	$\Delta R^2$	<i>F</i>
<i>Frequency of SA Against Friend</i>								
Step 1								
Negative emotions	3.16	.85	.26	3.72**	.07	.06		13.81**
Step 2								
Negative emotions	3.16	.81	.26	3.91**	.17	.16	.11	9.74**
Normative beliefs	4.74	1.20	.27	3.92**				
PGB approval/disapproval	1.14	1.64	.08	.70				
PGB social consequences	.82	2.22	.04	.37				

\* $p < .05$ , \*\*  $p < .001$

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entered in step 2, the overall variance explained increased to 15.5% and the model was significant,  $F(4, 186) = 9.74, p < .001$ . However, the only statistically significant independent variable beyond negative emotions was individual normative beliefs,  $\beta = .27, p < .001$ . Neither peer group belief variables contributed to the prediction of using social aggression.

When the second model with positive emotions as a predictor was examined, the results of step 1 indicated that positive emotions accounted for 3.0% of the variance and significantly predicted the frequency of using socially aggressive behaviours,  $F(1, 194) = 6.94, p = .009$  (Table 17). With the addition of individual and peer group beliefs in step 2, the variance accounted for increased to 11.2%. The overall model was significant,  $F(4, 191) = 7.17, p < .001$ , but once again, only normative beliefs made a significant independent contribution to the prediction,  $\beta = .25, p = .001$ , beyond the already significant positive emotions. Between the two models, peer group beliefs did not meaningfully contribute to the prediction of using social aggression when individual normative beliefs were already accounted for. In sum, emotions can be significantly involved in the use of social aggression, but they generally cannot be determined based on norms and beliefs alone.

### **Canonical Correlation Analysis**

The final exploratory research question was: How do the emotional experiences of perpetrators relate to the specific types of socially aggressive behaviours they report using? Since the independent variable of frequency of social aggression was not categorical, multivariate analysis of variance could not be used. Therefore, canonical correlation was used as it allows the relationship between multiple continuous

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Table 17

*Hierarchical Multiple Regression Analysis Predicting Frequency of SA Against a Friend for Positive Emotions and Norms (N = 228)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	Adj <i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>
<i>Frequency of SA Against Friend</i>								
Step 1								
Positive emotions	2.34	.89	.19	2.63*	.04	.03		6.94*
Step 2								
Positive Emotions	2.13	.85	.17	2.50*	.13	.11	.10	7.17**
Normative beliefs	4.31	1.23	.25	3.52**				
PGB approval/disapproval	.44	1.66	.03	.27				
PGB social consequences	2.04	2.24	.11	.91				

\**p* < .05, \*\* *p* < .001

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independent variables and multiple dependent variables to be measured. Canonical correlation analysis is a “multivariate statistical model that facilitates the study of interrelationships among sets of multiple dependent variables and multiple independent variables” (Hair, Anderson, Tatham & Black, 1998). In this situation, it was used to explain the nature of the relationship between the frequency of using specific socially aggressive behaviours reported and ratings of certain emotions.

The analysis was conducted using the fifteen Frequency of Socially Aggressive Behaviour variables as predictors of the 8 emotion variables to evaluate the multivariate shared relationship between types of SA and emotions. The analysis resulted in eight functions with squared canonical correlations ( $R^2_c$ ) of .312, .150, .132, .095, .062, .034, .025 and .011 for each successive function. The overall model for all functions was statistically significant, Wilks's  $\lambda = .40$ ,  $F(120, 1172.71) = 1.34$ ,  $p = .01$ , and explained a considerable portion, about 60%, of the shared variance between the variables. Although the full model was statistically significant, functions 2 through 8 were not and therefore did not explain a significant amount of the variance between variable sets.

Using the  $R^2_c$  values, only the first 4 functions were considered for further exploration (each respectively explained 31.2%, 15%, 13.2% and 9.5% of the shared variance), while functions 5 through 8, after extracting variance from the preceding functions, explained only 6.2 to 1.1% of the variance, respectively. The standardized canonical function coefficients, structure coefficients, as well as the overall squared structure coefficients and communalities ( $h^2$ ) of functions 1 through 4 are presented in Table 18.

For the first function, the most relevant criterion variable related to emotions was

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**Table 18**

*Canonical Solution for Frequency of Social Aggression Predicting Emotions for Functions 1, 2, 3 and 4*

Variable	Function 1			Function 2			Function 3			Function 4			$h^2$ (%)
	Coef	$r_s$	$r_s^2$ (%)										
Fear	-.16	-.36	12.67	.24	.63	39.69*	.57	-.06	0.31	.55	.03	0.07	52.74
Hostility	-.23	-.15	2.16	-.17	.36	12.74	.25	.07	0.46	-.36	-.48	23.33*	38.69
Guilt	.42	-.03	0.08	.81	.82	67.73*	-.24	-.44	19.10	-.26	-.21	4.24	91.15
Sadness	-.56	-.41	16.56	.12	.68	45.83*	-.51	-.31	9.80	-.20	-.16	2.53	74.72
Joviality	-.97	-.73	53.88*	-.75	-.12	1.49	-.87	.13	1.64	-.33	-.37	13.69	70.70
Self Assurance	.68	-.28	7.90	.38	.08	0.58	.78	.52	26.52*	-.97	-.61	36.72*	71.72
Attentiveness	.19	-.31	9.73	.18	.23	5.11	-.28	.23	5.29	.72	-.05	0.22	20.35
Serenity	-.40	-.57	32.49*	.45	-.004	0.00	.85	.62	38.19*	.42	.13	1.59	72.27
$R_c^2$			31.27			15.03			13.21			9.51	
Ignored	-.43	-.50	24.60	-1.27	.28	7.84	-.13	.04	0.17	-.69	-.41	16.56	49.17
Spread rumours	.30	-.01	0.02	.72	.57	32.95*	-.69	-.51	25.81*	-.13	-.33	11.09	69.87
Prevent acceptance	-.11	-.66	43.43	-.16	.26	6.60	.12	.04	0.19	-.06	-.13	1.80	52.02
Steal guy/girl	-.19	-.71	50.55*	.07	.27	7.02	.39	.24	5.52	.62	.17	2.96	66.05
Silent treatment	.35	-.33	10.89	1.11	.49	23.62	.01	.15	2.22	.22	-.30	9.06	45.79
Get friends to dislike	.05	-.58	34.11	.16	.41	16.56	.42	.22	4.93	-.27	-.19	3.42	59.02
Talk behind back	.15	.05	0.29	-.26	.38	14.67	-.004	-.12	1.32	.15	-.20	4.00	20.28
Turn away	-.38	-.69	47.47*	.24	.46	21.44	-.64	-.07	0.55	.04	-.03	0.06	69.52
Dirty looks	-.28	-.45	20.07	-.21	.35	12.32	-.14	.18	3.39	-.35	-.51	25.50*	61.28
Roll eyes	.27	-.12	1.35	.32	.49	23.62	.73	.33	10.89	-.24	-.57	32.60*	68.46
Mean note	-.52	-.79	62.25*	-.25	.25	6.35	-.44	-.08	0.69	-.31	-.04	0.17	69.46
Stop talking	.04	-.49	24.11	.49	.56	31.81*	.16	.10	1.06	.48	.14	1.90	58.88
Mean face	.04	-.56	31.47	-.03	.17	2.82	-.01	.05	0.20	.30	.06	0.31	34.80
Glare	-.17	-.58	33.41	-.07	.32	10.11	-.18	.02	0.05	-.39	-.51	26.01*	69.58
Not invite to party	.19	-.56	30.91	.19	.41	16.97	.48	.32	9.92	-.12	-.12	1.32	59.12

*Note:* Coef = standardized canonical function coefficient;  $r_s$  = structure coefficient;  $r_s^2$  = squared structure coefficient;  $h^2$  = communality coefficient; \*indicates the most variance accounted for by each variable in function

*joviality*, based on the squared structure coefficients and the larger canonical function coefficient, with a secondary contribution from *serenity*. Both *joviality* and *serenity* had negative structure coefficients, indicating that they were positively related to each other, which was not surprising given that both emotions involved positive affective states. Among the predictor variable of socially aggressive behaviours, the socially aggressive behaviour that contributed most to function 1 was passing a *mean note*, followed by trying to *steal a guy/girl* and *turn away* from someone when they approach. These predictor variables also had negative structure coefficients, indicating that they were positively related to the emotion variables of *joviality* and *serenity*.

With respect to function 2, the most substantial emotional criterion variable was *guilt*, followed by considerable contributions from *sadness* and *fear*. The structure coefficients of these emotion variables were all positive and therefore they all positively correlated with each other, which was expected given that they were all forms of negative affect. As for socially aggressive behaviours, *spreading rumours* and *stop talking* equally contributed most to this function, with slighter inputs from giving the *silent treatment*, *roll eyes* and *turn away*. The structure coefficients of these predictor variables were positive and therefore were correlated with the emotion criteria for this factor, such that increases in these socially aggressive behaviours would be associated with a corresponding increase in these negative affective states. Given these results, it was surprising that rumour spreading was most highly associated with feeling sad and guilty. The finding that behaviours such as eye rolling, turning away, and giving the silent treatment were strongly related to feeling guilty and fearful was also unexpected given that these are more intentional behaviours aimed at excluding or berating someone else,

not likely done out of fear of becoming the next target.

The most significant criterion variables of the third function were *serenity* and *self-assurance*, which were positively correlated and both had positive structure coefficients. Similar to function 1, these variables both relate to positive emotional states therefore it was anticipated that they would be associated. The socially aggressive behaviour predictor with the most sizeable contribution to the factor was *spread rumours*, which had a negative structure coefficient, and thus was inversely related to feelings of serenity and self-assurance. This relationship suggests that when rumour spreading and gossiping increases, feelings of confidence and composure are likely to decrease.

For the fourth and final function, the most relevant criterion variables related to emotions were primarily *self-assurance*, followed by *hostility*. Both *self-assurance* and *hostility* had negative structure coefficients, indicating that they were positively related to each other, which was unanticipated given that one involved positive affectivity and the other was a negative affective state. Among the socially aggressive behaviours, the behaviour that contributed most to the function 4 was primarily *roll eyes*, with secondary contributions by *glare* and *dirty looks*. These predictor variables also had negative structure coefficients, which was not surprising given that they were all forms of negative non-verbal body language. Furthermore, the results indicated that these behaviours were positively related to feelings of *self-assurance* and *hostility*.

Collectively, the unique factors suggested by the relationships between emotions and types of social aggression shed light on some theoretically interesting associations. Firstly, socially aggressive behaviours that involve exciting group dynamics, such as passing a mean note or flirting with someone your friend likes, are affectively positive

and likely to induce excitement and happiness, while others such as gossiping and giving the silent treatment stimulate feelings of sadness, remorse and worry. Furthermore, spreading rumours leads to decreased confidence and increased anxiety, however confidence and aggression are likely to be involved when negative non-verbal behaviours are used.

### **Discussion**

The primary goal of this study was to determine the roles individual and peer group norms and attitudes play in the use of socially aggressive behaviour, and how these factors influence the emotional experiences of perpetrators who use socially aggressive behaviours. In doing so, this study was conducted to replicate and elaborate on some of the results found in previous research examining the roles of norms and emotions in social forms of aggression (Owens et al., 2000; Reynolds & Repetti, 2010; Werner & Nixon, 2005; Werner & Hill, 2010). Emerging adults are a relatively new population in psychology research (Arnett, 2000) and more notably in social aggression research. Importantly, in the present study participants reported on their own use of socially aggressive behaviours, providing a more unique perspective for studying the nature of social aggression than has traditionally been examined in children and adolescent using vignettes or peer nominations. This study was novel in its thorough examination of the emotional experiences and specific affective states involved in the use of relational forms of aggression. In addition, while much is known about the roles of norms in overt or physical aggression, the present study was the first to empirically examine individual and peer group norms and the specific role they play in the use of these more social forms of aggression. Finally, while both individual and group norms have been examined

independently regarding the use of social forms of aggression, in the present study they were examined concurrently to consider how they contribute to the use of these behaviours.

This study has explored new ideas within the study of social aggression. First, the role of emotions in the use of social aggression is more complex than has previously been suggested, and involves both positive and negative feelings. Second, the norms of the peer group might not be as influential as individual beliefs when social aggression is used in adulthood, shedding light on how social aggression among emerging adults differs from these behaviours in childhood and adolescence. These results contribute to the empirical and theoretical literature on indirect/relational/social forms of aggression, offering insight into the usefulness of some current measures of endorsement of social aggression, extending our understanding of the role of emotions and norms in the perpetration of social forms of aggression, and providing novel and essential directions for future work on prevention and intervention. Before discussing the main findings of the study, an initial focus of the study was to examine potential gender differences in socially aggressive behaviours. The results of these analyses are discussed next.

### **Gender Differences**

One of the preliminary research questions explored whether gender differences existed between young adult males and females in their beliefs, emotions, and forms and frequencies of perpetrating social aggression. It was of interest to examine whether differences existed between males and females on these variables to further explore the previously held notions that social aggression is primarily a “female” behaviour (Bjorkqvist et al., 1992; Crick & Grotpeter, 1995; Crick et al., 1996; Lagerspetz et al,

1988). The results of the present study suggest that although a few minor differences were found between males and females in the types of social aggression they reported, these differences were not significant, and the relative trends in the types of behaviours used were quite similar. Furthermore, males and females did not differ in the frequency with which they used social aggression against a friend, or against a non-friend. These findings are consistent with research by Archer and Coyne (2005) and Card et al. (2008) who found that mean differences in gender were minimal for indirect forms of aggression, as well as Underwood et al. (2001) who stated that females may engage in more *social* aggression than *physical* forms typical of males, but do not necessary engage in more indirect/relational/social aggression *overall* than their male counterparts. Moreover, Bjorkqvist et al. (1992) have suggested that males and females seem to show similar levels of indirect form of aggression once they reach adulthood, lending additional support for the lack of gender difference found in the current study.

The mean levels of self-reported individual beliefs and peer group beliefs condoning the use of social forms of aggression in this young adults sample also did not differ for male or female samples, which confirms recent research by Werner and colleagues (2005, 2010) and Zelli et al. (1999) that there are no gender differences in the endorsement of social forms of aggression. In the present study, both males and females reported that it was “somewhat OK” to use social aggression, which actually differed from the results of Goldstein et al., (2008) where their sample indicated that using social aggression was “somewhat wrong”. With respect to peer group beliefs, notably, for both males and females, the peer group was not disapproving of being socially aggressive, but tended to be relatively neutral about it.

Interestingly, there were minor gender differences in reported emotional experiences of perpetrating social aggression. Males reported elevated levels of joviality and serenity when they acted in a socially aggressive manner, however these effect sizes were quite small. There were no differences between males and females negative emotional experiences in the use of social aggression despite past research demonstrating that females report being fearful or anxious (Crick et al., 1995; Loudin et al., 2003; Paquette & Underwood, 1999, Werner & Crick, 2004), jealous (Owens et al., 2000; Parker et al., 2005), guilty, hurt or sad (Reynolds & Repetti, 2010), when in fact males seem to report the same emotional experiences.

These results provide important information on the general lack of gender differences in the emotional experiences of perpetrators of social aggression, and contribute much needed data regarding the socially aggressive experiences of men. While the present study sought to address the issue of gender in the study of social aggression, another considerable issue in the study of these behaviours concerns the frequency with which people use these behaviours. While a great deal of research on this issue has examined children and adolescents, the next section examines the findings of the present study on the most frequently reported behaviours and general frequency of using socially aggressive behaviours among young adults.

### **Types and Frequency of Social Aggression Perpetrated**

It was found that young adults could report a most salient incident of social aggression and that for the large majority such an incident had occurred within the last year. When the socially aggressive behaviours reported by participants in their memorable incident were examined, ignoring was the most commonly reported

behaviour in the sample, followed by talking behind a guy/girl's back and giving a guy or girl the "silent treatment", findings that were consistent with other research on the frequency and forms of social aggression (Nelson, et al., 2008; Reynolds & Repetti, 2010). The most infrequently reported behaviours were passing a note with something mean written on it, trying to steal the guy/girl that someone else liked, and negative non-verbal behaviours like making a mean face and glaring at someone meanly.

When considering the sample from which the data was obtained, these findings were not surprising since young adults are less likely to pass mean notes and make malicious faces than child or adolescent populations that are traditionally examined when researching these social forms of aggression. In fact, research by Bjorkqvist, Osterman and Lagerspetz (1994) found that *indirect* forms of relational aggression occur far more frequently among emerging adults than more *direct* socially aggressive behaviours. Furthermore, among young adults, perhaps socially aggressive behaviours are slightly different than in childhood or adolescence and take the form of malicious text messages or social network posting, however, these behaviours were not included in the present study and therefore could not be evaluated. Nonetheless, if future studies should examine the frequencies of certain forms of social aggression among a sample of young adults, it would be beneficial and interesting to include behaviours that would be more age and context appropriate. For example, in a review by Archer and Coyne (2005), they cite examples of behaviours more typical in adult forms of social aggression such as, "openly dismissing the opinions of others" and "putting undue pressure on someone", or "withdrawing attention/love" in adult dyadic or romantic relationships.

When participants were asked to report their frequency of using social aggression, overall, the reported frequencies of using socially aggressive behaviours against a friend and against a non-friend were both quite low, indicating that these behaviours occurred on average only once every few months. The generally low frequency reported by participants might have been due to social desirability bias, however, past research has indicated that, relational and indirect forms of aggression generally increase in adolescence from the ages of approximately 8 to 11 years of age, and decline thereafter (Bjorkqvist et al., 1992). Therefore, the low frequency of reported social aggression in this sample of young adults could have reflected previously reported age trends in the use of social aggression. Nonetheless, although the frequency of social aggression was low, it still remained a relevant behaviour that participants were willing to describe and report on, which is consistent with other research on social aggression in emerging adults that has reported this form of aggression to still be perceived as salient at this age (Nelson et al., 2008).

When people were asked to report on their most salient incident of being socially aggressive, they were also asked about the emotions they experienced when they acted in this way. What follows is a discussion of the role of positive and negative emotions, and specific emotional states associated with the socially aggressive experiences of perpetrators.

### **Emotions**

One of the initial research questions was: Do the emotional experiences of perpetrating social aggression involve more positive emotions or more negative? It was hypothesized that because the sample consisted solely of self-reported perpetrators,

participants would describe higher levels of positive emotions in the incidents they described, however, the results did not support this hypothesis. When participants were asked to recall a memorable incident of perpetrating an act of social aggression, both positive and negative affective subscales represented mild to moderate levels of emotionality (e.g. feeling “a little bit” positive or “a little bit” negative) and the difference between the categories was not significantly different. With respect to the specific affective states examined, the most intensely reported positive and negative emotions were hostility (e.g. angry, disgusted) and attentiveness (e.g. alert, determined), while fear (e.g. afraid, scared) and joviality (e.g. happy, enthusiastic) were the least reported.

When one considers the developmental trends in studies of emotional development and emotion regulation, the low levels of emotionality were not surprising. Research has found that emotional arousal can improve behavioural performance and social functioning with peers if managed appropriately, or it can damage effective functioning by being over or under arousing and hinder constructive social functioning (Thompson, 1994). Adults are more likely to have greater emotional competence and be more skilled at emotion regulation strategies that have developed and become integrated into their behaviours in social contexts. In other words, it is likely that emotionality was not high in the present sample due to more skilled emotion regulation among the young adults, therefore, it is probable that emotional arousal in socially aggressive behaviours would be higher among children or adolescents. Another potential reason for the moderate levels of reported emotionality was that the memorable incidents described by participants occurred, on average, approximately one year prior. Recalling these incidents might not have evoked the same intensity of emotions as would have been

found had the incidents occurred more recently. Alternatively, high levels of emotion might have been experienced at the actual time of the incident, but adults tend to be better at regulating those emotions and the recall of these experiences might not have completely captured the range and intensity of what might have actually been felt.

From these results, it was concluded that the perpetration of social aggression was not a highly arousing emotional experience when overall positive and negative emotions were considered, or when specific emotional states were examined. However, the findings of the present study highlighted that the use of socially aggressive behaviours involves a combination of both positive and negative affective experiences. This conclusion is consistent with the literature on the influence of emotions that describes a complex association of positive emotions (e.g. excitement and happiness) (Arsenio & Lover, 1997; Owens et al., 2000) and negative emotions (e.g. anger and fear) (Crick et al., 1996; Loudin et al., 2003) in the use of socially aggressive behaviours. The next research interest was to explore the individual and peer group norms that might influence the use of socially aggressive social strategies. However, prior to discussing the main findings, it is important to discuss and evaluate the usefulness and reliability of the normative instruments used in the present study.

### **Psychometric Evaluation of the Measures**

**Normative beliefs.** It was of interest to examine the psychometric properties of the measure of normative beliefs, which was used to examine the degree to which participants thought it would be acceptable for someone to perpetrate socially aggressive behaviours. While the NOBAGS (Huesmann & Guerra, 1997) on which this measure was developed is a well-established and well-validated measure, the revised measure

used in the study by Goldstein et al. (2008) has not been examined beyond their study, therefore an evaluation of the psychometric properties and reliability of the measure was needed. Contrary to the single factor solution used by Goldstein et al. (2008), the factor analysis in the current study did not replicate the one factor solution they used, but revealed two distinct factors of normative beliefs. Upon closer examination of the items within each scale, it was recognized that items in the first factor suggested that social aggression was acceptable when motivated by anger, whereas factor 2 items described the acceptability of using social aggression in general, without justification. The wording of the items used by Goldstein et al. (2008) and in the current study made a distinction between general beliefs about using social aggression and retaliation beliefs, and this distinction may have contributed to the two-factor solution produced. Furthermore, the overall reliability of the measure when the two-factor solution was used was quite low, as a function of item 3 “It is wrong to talk about other people behind their backs”. This item was phrased in such a way as to reject social aggression, while the rest of the items were worded to reflect support for the use of social aggression. It is possible that subjects did not notice this and answered the question in a similar response style. The poor internal consistency of the measure also suggests that participants had difficulty answering how they felt about being socially aggressive.

The fact that item 3 was reverse scored, coupled with the possibility that participants may have struggled to answer the question appropriately in the context of the other items, led to the decision to remove this item and utilize the original single-factor solution proposed by Goldstein et al. (2008) to increase overall reliability. Although the measure demonstrated satisfactory validity and reliability for the purposes of the present

study, future use of the measure would benefit from revisions and modifications, including increasing the number of items, and either adding more reverse scored items, or excluding them all together. Additionally, the original NOBAGS (Huesmann & Guerra, 1997) theoretically differentiated between general beliefs and retaliation beliefs for general aggression, as did the revision by Goldstein et al. (2008). However, the relevance of this differentiation is called into question when applying it to social forms of aggression. Research on social aggression has demonstrated that there are many motivations behind the use of social aggression besides revenge or retaliation, including creating fun and excitement (Owens, Shute & Slee, 2000), increasing popularity (Galen et al., 2001), or building group cohesion or fostering belongingness (Murray-Close et al., 2007; Paquette & Underwood, 1999). For this reason, a measure of *general* normative beliefs regarding social forms of aggression would be most relevant for future measurement of these attitudes and norms, so as not to confound general beliefs about the acceptability of using social aggression with measures of the motivations that might be involved.

While the normative beliefs measure examined individual attitudes towards the use of social aggression, the other measure of norms in the present study examined the influence of peer group beliefs and how they might endorse the use of socially aggressive behaviours. A discussion of the psychometric evaluation of this peer group measure, and the results found from this newly developed measure follow.

**Peer group beliefs.** The second measure examined for the present study was the peer group beliefs (PGB) measure, intended to assess the extent to which the peer group would approve of, or support the use of socially aggressive behaviours. It has been

established in the literature that the peer group plays an important role in the use of aggressive behaviours among children and adolescents (Duffy & Nesdale, 2010; Huesmann & Guerra, 1997; Nesdale et al., 2009), but measures of this are scarce and previous studies have primarily relied on peer nomination (Espelage et al., 2003), social cognitive mapping (Ellis & Zarbatany, 2007) or mean scores from the individuals within a group (Werner & Hill, 2010). Therefore, the present study developed and tested a self-report measure of peer group beliefs that specifically examined social forms of aggression within the peer group.

The psychometric properties of the peer group beliefs measure were assessed to determine the validity and reliability of the piloted measure, and to better understand the variables measured by this instrument. Although the approval/disapproval scale was theoretically designed to assess overall peer group endorsement of social aggression, the exploratory factor analyses clearly produced two factors representing peer group support for direct participation in social aggression, and peer group support for participating in social aggression through inaction.

Similar to the approval/disapproval scale of the peer group beliefs measure, the peer group social consequences scale also produced two factors reflecting social consequences for direct involvement in social aggression, and peer group consequences for indirect involvement in socially aggressive behaviours. On both the approval/disapproval scale and the peer group social consequences scale, the factor analyses distinguished items as two distinct constructs, though it was hypothesized and intended to assess a single overall construct. It was expected that all items on the approval/disapproval scale would load on a single factor, but in fact the items loaded on

two discrete factors. The distinct factors produced by the analyses were actually theoretically meaningful, such that it is reasonable to assume that norms for direct involvement or participation in aggression would differ (e.g. would be less endorsed by the peer group) from indirect involvement or inaction when the peer group is being socially aggressive (e.g. would be more endorsed because it is perceived as less harmful).

Despite the results of the factor analyses, the overall scales and resulting subscales demonstrated good reliabilities and were quite acceptable for the preliminary use of this measure. Participants indicated significantly more peer group approval for indirectly supporting socially aggressive behaviours among the peer group (e.g. *not* befriending a guy/girl your other friends were excluding) than for direct participation in peer group social aggression (e.g. laughing when a friend gave another guy/girl a dirty look). Respondents thought that their peer group would somewhat approve of being indirectly socially aggressive, but would moderately disapprove of being directly involved social aggression. Conversely, the social consequences for participating in social aggression did not significantly differ for direct versus indirect involvement in peer group social aggression. Participants indicated that the peer group was mostly indifferent, but would approve of social aggression to some extent and continue to hang out with them, regardless of whether they participated directly or were on the periphery of the socially aggressive interaction. Overall, though peer group beliefs were not assessed within the actual peer group of the respondent in the present study (as participants subjectively evaluated the beliefs of the peer group) the results were still very informative and proved to be quite reliable.

In sum, the important role of attitudes and beliefs has been demonstrated first by Salmivalli and Voeten (2004) in the perpetration of bullying and now in the current study in the perpetration of social aggression. Further validating and improving the measurement of both individual norms and peer group level norms endorsing the use of social aggression should be the focus of future studies, as well as understanding other attitudes and beliefs (i.e. specifically for indirect versus direct involvement in social aggression) that might be involved in social forms of aggression. In particular, items should be added to the normative beliefs measure and should strictly examine general beliefs so as not to confound motivations and norms. Additionally, in future uses of the peer group beliefs measure, it would be interesting and beneficial to directly ask participants how acceptable indirect and direct involvement in social aggression is, rather than reverse scoring items to get these results. Now, that the utility of the measures has been discussed, the main findings regarding the roles of individual and peer group beliefs in the use of social aggression will be reviewed.

### **Individual Beliefs and Peer Group Beliefs**

Participants were asked to rate the normality of using socially aggressive behaviours in social interactions, and also the extent to which the peer group would endorse the use of such behaviours. On average, participants reported only slight to moderate levels of normative beliefs endorsing the use of social aggression (they thought it was “somewhat OK”), and peer group endorsement of social aggression for peer group beliefs (the peer group was mostly indifferent but would somewhat approve of these behaviours). This indicated that participants, to a small extent, thought that it was

relatively acceptable to be socially aggressive, though overall levels of acceptability for using social aggression were not high.

The correlation analyses revealed that individual normative beliefs were significantly and positively correlated with peer group beliefs as measured by their approval/disapproval and the social consequences of the peer group for engaging in social aggression, supporting the idea that individual beliefs and group norms often coincide when aggressive behaviours are examined (Salmivalli & Voeten, 2004). For example, in the study by Henry et al. (2000), the results suggested that the norms of the larger group had a direct influence on individuals' beliefs about the acceptability of aggression.

One of the main research questions asked: Among perpetrators of social aggression, how do individual normative beliefs and peer group norms regarding the acceptability of social aggression uniquely influence the emotional experiences of socially aggressive individuals? As predictor variables, peer group beliefs and individual normative beliefs were not significantly correlated with emotional reactions to perpetrating social aggression, with the exception of significant positive correlations with self-assurance. Furthermore, for peer group beliefs, there was also a small but significant correlation with joviality. Thus, it seems that when individual attitudes endorse the use of social aggression, and socially aggressive acts are perpetrated, individuals are likely to feel confident about their actions, however, when peer group attitudes also condone using social aggression, individuals are likely to feel self-assured and also be in high spirits when they act aggressively. It is important to note that although the correlations between norms and self-assurance were significant, they were quite small which was not surprising given research that has demonstrated only modest associations between

normative beliefs or emotions, and aggressive behaviour (Huesmann & Guerra, 1997; Sullivan, Helms, Kliewer & Goodman, 2010), and additional evidence that correlations between attitudes and behaviour are generally weak and only explain about 10% of variance in behaviour (Salmivalli & Voeten, 2004).

It was surprising that norms about the acceptability of using social aggression were not significantly related to the emotional experiences of perpetrating socially aggressive behaviours. However, some research has indicated that aggressive children, much like non-aggressive children, endorse the belief that it is wrong for an individual to intentionally inflict physical or emotional pain on another person (Arsenio & Lemerise, 2001), yet these children still act aggressively. In fact, in the study by Arsenio et al. (2009), actual aggressive behaviour was not at all associated with individual beliefs or reasoning about aggression. Additionally, as was discussed, there were some concerns regarding the reliability and validity of the normative beliefs measure, therefore, the weak correlation with emotional variables might have been due to issues with the normative beliefs instrument.

In sum, though it was expected that norms would be associated with emotional reactions to perpetrating social aggression, the associations were few and insignificant. It appears from this study that in young adults, normative beliefs and attitudes may not affect the emotional experiences of being aggressive as much as anticipated. With these correlations in mind, the results of the main regression analyses are discussed next.

### **Do Norms Predict Emotional Experiences of Using Social Aggression?**

The primary goal of the present study was to examine the influence of individual attitudes and peer group beliefs on the emotional experiences of perpetrating social

aggression. It was of interest to examine whether peer group norms could predict to emotions above and beyond what individual normative beliefs accounted for. The results of the present study suggested that individual and group norms could not predict to general positive or negative affectivity when perpetrating an act of social aggression.

When the same models were used to predict to specific emotional states, norms and beliefs were only able to predict feeling self-assured when using social aggression. However, neither individual beliefs nor peer group beliefs independently contributed to feeling confidence when acting aggressively, and it was only the collective combination of both individual and peer group norms condoning the use of social aggression that contributed to feeling self-assured. These findings were not surprising given the weak and insignificant correlations found between norms and emotions in the present study, and the evidence that norms and emotions are generally weakly associated (Arsenio et al., 2009). In summary, emotions might be involved in the use of social aggression, but they generally cannot be determined based on norms and beliefs alone.

#### **Do Emotions and Norms Predict Socially Aggressive Behaviour?**

Since it was concluded that attitudes, values and beliefs did not predict to emotional experiences when perpetrating socially aggressive acts as was initially hypothesized, the hypothesis that norms might better predict to actual behaviour was explored, as in the model examined by Salmivalli and Voeten (2004) where they used norms to predict to bullying behaviours. Added to this model, positive and negative emotions were included as predictors of using socially aggressive behaviour, and the role of norms were examined above and beyond the contributions of emotional states. When this model was tested, the results were quite interesting. Participants who felt positively

about acting in a socially aggressive manner were significantly more likely to use social aggression more frequently. This finding provides support for recent evidence that certain individuals are likely to feel more positively when they engage in aggressive or victimizing acts (Arsenio et al., 2000, 2009; Owens et al., 2000; Reynolds & Repetti, 2010). Furthermore, when normative beliefs and peer group beliefs were added, surprisingly only normative beliefs significantly predicted the increased use of social aggression. Peer group beliefs were not significantly related to the use of social aggression in this young adult sample.

Similar results were found for negative emotions: feeling negatively when acting in a socially aggressive manner significantly predicted an increased frequency of socially aggressive behaviours, and individual attitudes and beliefs further contributed to the prediction of using social aggression, but not peer group beliefs. The finding that peer group beliefs did was not highly involved in the use of social aggression among young adults was not consistent with previous research on children and adolescents indicating that individual norms generally do not explain future relational aggression once group norms are considered (Duffy & Nesdale, 2010; Nesdale & Lawson, 2011; Nesdale et al., 2009; Werner & Hill, 2010) and that endorsement of aggression by the peer group plays a central role in predicting future perpetration and attitudes towards the use of social aggression. As well, the results of the study by Salmivalli and Voeten (2004) indicated that group norms contributed to bullying behaviour beyond the beliefs of the individual. The hypothesis that peer group beliefs would be an important factor in the experiences of perpetrating social aggression was based on the social identity approach used by Duffy & Nesdale (2010), whereby it was expected that membership in a group that endorsed the

use of social aggression would make the norms of that group influential in predicting the use of social aggression, however this hypothesis was not supported in the present sample of young adults.

Perhaps for the young adults used in the present study, peer group beliefs were not as salient in the experiences of perpetrators of social aggression once individual beliefs were accounted for. Previous research on the influence of peer group norms in aggression has primarily examined child and adolescent populations between the ages of 6 and 13-years-old (Ellis & Zarbatany, 2007; Nesdale et al., 2009, 2011; Werner & Crick, 2004; Werner & Hill, 2010), however the present sample consisted mainly of young adults from a university sample. In childhood and adolescence, the peer group tends to be more defined due to social constrictions of being in elementary or high school. Salmivalli and Voeten (2004) have noted that the peer group exerts an increasing influence on aggressive behaviour as one enters preadolescence and adolescence. However, it is probable that the peer group becomes less defined and more diverse in the number and array of individuals one considers “peers” once an individual reaches young adulthood. This suggests that perhaps peers may exert less of an influence in early adulthood than in earlier stages of development. Furthermore, the present study only examined norms within what was described as “groups”. However, peer groups can be distinguished into two separate entities: peer networks/cliques and crowds. Peer networks or cliques include three or more individuals who associate with each other regularly and share a common environment or set of norms, while crowds are usually larger and are created based on some commonality or reputation (Ellis & Zarbatany, 2007). Future research could examine how group norms might differ according to these

more specific classifications, and how the influence of the peer group changes through different developmental stages.

Overall, negative emotions accounted for slightly more variance in the frequency of using social aggression than positive emotions did, even after attitudes and norms were considered. Given past research that demonstrates females tend to feel more guilty, sad and hurt when they perpetrate relational forms of aggression (Reynolds & Repetti, 2010), and the gender inequality of more females in the present sample, it is possible that these might have accounted for the higher variance in social aggression accounted for by negative emotions. Additionally, the goal of the present study was to establish that positive emotions played a more significant role than the early and limited research on emotions in social aggression had suggested. Therefore, while perpetrators of aggression do not always feel excited or happy about victimizing or targeting others, the present study did demonstrate that using socially aggressive behaviours is associated with pleasure (e.g. self-assurance and excitement) to a certain extent. However, acting in a socially aggressive manner is more likely to be associated with negative feelings, whether it be more aggressive anger or hostility, or more passive guilt and sadness at the time of perpetrating social aggression.

Beyond the role of emotions in the general frequency of using social aggression, the final goal of the present study was to examine how the emotional experiences of perpetrators differed as a result of the *specific* type of socially aggressive behaviour used. A discussion of the results of these exploratory analyses follows.

### **Association Between Subtypes of SA and Emotions**

This study elaborated on the recent research of Reynolds and Repetti (2010) to examine the potential associations between forms of social aggression and emotional states. Canonical correlation analyses for the relationship between subtypes of social aggression and emotions were exploratory and consequently there were no specific hypotheses made to predict associations.

The results of the analysis revealed interesting and enlightening associations between emotions and specific types of socially aggressive behaviours. Many of the results were supportive of the theoretically expected relationship between emotions and types of social aggression, while others were contrary to what was expected. First, the strongest association between these variables was that when participants passed mean notes among friends and flirted with someone (regardless of whether a friend liked them), they were more likely to feel happy and excited. This supports the findings of Owens, Shute and Slee (2000) who found that girls reported engaging in relational aggression to alleviate boredom and create excitement. In addition, this association fits well into Carver and Scheier's (1990) theory of affectivity and approach/avoidance behaviour such that behaviours involving motivation towards an incentive (e.g. to steal a guy/girl, to create fun) and success resulted in feeling positively (e.g. happiness).

When individuals engaged in passive aggressive acts such as turning away from someone, it was related more to serenity. Based on Carver and Scheier's theory this may be because it involved successfully excluding someone else and thereby avoiding being excluded oneself, leading to feeling relieved and calm (Carver, 2001). Spreading rumours, giving the silent treatment, and negative non-verbal behaviours like eye rolling

and turning away were all associated with negative feelings, specifically guilt, sadness and fear. Furthermore, participants who reported engaging in rumour spreading and gossiping were less likely to feel composed and confident when they acted aggressively. This might relate back to the early research by Feshbach and colleagues (1969, 1971) on the indirect nature of gossiping, whereby harm is delivered “behind-the-back” and the victim is unaware of the identity of the perpetrator. Therefore, it is likely that the fear of being identified as the perpetrator in rumour spreading, lead to feeling nervousness and insecure about being involved in the aggressive behaviour. This theoretical association also fit well into the emotion theory proposed by Carver and Scheier (1990), such that the goal would be to avoid being found out as the aggressor, but failure at keeping others from knowing what you’ve done would likely lead to fear or anxiety.

The finding that behaviours such as eye rolling, turning away, and giving the silent treatment were strongly related to feeling guilty and fearful was unexpected given that these are generally more intentional behaviours aimed at excluding or berating someone else. However, these behaviours most closely resembled what Crick and Grotpeter (1995) referred to as relational aggression as they included both indirect aggression (like giving the silent treatment) and *direct* behaviours (like eye rolling) to damage feelings of inclusion. It was also surprising that rumour spreading was highly associated with feeling sad or insecure, given the findings by Reynolds and Repetti (2010) that girls who reported gossiping did not report as much sadness as they did for other types of social aggression. However, these researchers did find that ignoring was most associated with feeling sad, which confirms the present findings that giving the silent treatment and turning away are associated with feeling sad and guilty.

Finally, negative non-verbal behaviours such as eye rolling, giving dirty looks, and glaring were most associated with feeling hostile and self-assured. These types of aggression fit most closely with Galen and Underwood's (1997) notion of social aggression and specifically the direct nature of giving negative facial expression or body movements. Since these behaviours are non-verbal in nature, it was not surprising that these forms of aggression were related to feeling confident and aggressive, as one needs to be very direct and assured in the message being given and to whom it is being given, when using these types of behaviours to cause harm to someone. Also, in considering Carver and Scheier's (1990) theory of affectivity, the directness of these behaviours would most likely fit into an approach behaviour motivated by the goal of causing direct harm to another, therefore successfully hurting someone's feelings through giving dirty looks theoretically makes sense with feelings positive and confident.

Collectively, the associations found regarding the specific emotional experiences involved in the various types of socially aggressive behaviours shed light on some theoretically interesting and empirically novel associations, that have interesting associations with theories of emotion and the unique factors associated with indirect, relational, and social forms of aggression. Thus, while it was assumed that social aggression was an overarching construct that encompassed both indirect and relational definitions of aggression, when the specific behaviours are examined, it seems that the categories can be viewed as discrete entities when differences are highlighted such as the emphasis on anonymity (indirect aggression), the direct versus indirect nature (relational aggression), and the role of non-verbal behaviour (social aggression) (Nelson, Springer, Nelson & Bean, 2008). In summary, similar to the results of Reynolds and Repetti

(2010), the emotional responses of perpetrators seem to vary as a function of the specific type of socially aggressive behaviour used, accounting for why social aggression involves both positive and negative emotions.

### **Limitations and Future Directions for Research**

One of the most evident limitations in the present study concerned the sample. First, if participants did not identify their gender, they were unable to complete the majority of the questionnaires due to the requirement of a gender specific questionnaire. Though only 37 (11%) of the initial 334 subjects had to be eliminated due to this error, this still represented a substantial amount of lost data that could not be used for the present analyses. Furthermore, a related limitation was the relatively small number of participants in the second sample that reported having been socially aggressive. This reduced reporting was most certainly due to the addition of the option “I did not describe an incident because I have never done this” in the response set. Rather than taking the time to report an incident in which they were socially aggressive, the inclusion of this item influenced the reporting such that, when given the option, participants opted to not describe having participated in socially aggressive behaviours. Therefore, the main analyses for the present study were based only on the sample of self-reported perpetrators of social aggression and thus consisted of only 228 individuals, reflecting 68% of the original sample. If the second sample had not been given the option to respond in this manner, the final sample would likely have been considerably larger. For future replications or extensions of the present study, it is recommended that participants not be given an option “I have never done this” and simply allow them to state such instead of describing a memorable incident.

Another issue related to the sample studied in this research was that it was relatively homogeneous and somewhat older in age than most studies of social or relational aggression, therefore this limited the ability to generalize these findings to a more diverse population, and to most previous studies of this form of aggression. For example, the present sample was not very diverse in terms of ethnicity or age, and consisted only of university students limiting applicability to other developmental periods or cultures. However, the lack of cultural diversity in the sample might be less of a concern given evidence that has demonstrated that across ethnicities, there is little variation in relational aggression (Herrenkohl, Catalano, Hemphill & Toumbourou, 2009). These results need to be replicated in a longitudinal and more diverse cross-sectional study.

There were also considerable methodological limitations involved in the self-report methodology used for the present study due to the issue of shared method variance in the results. Though overall correlations were moderate between variables, correlations might have been inflated due to all the measures being self-report questionnaires. Therefore findings should be replicated using additional methodology to assess the association between emotions and norms, such as observation or peer nominations.

The intrinsically harmful nature of social aggression was also a sensitive topic for participants to report on, therefore the fact that the self-report method of data collection relied on the accurate reporting of participants' own frequency of using social aggression and individual/peer group beliefs about using social aggression could have been problematic. An inherent risk involved in all forms of surveys of this nature is the social desirability bias, in which people tend to respond to questions based on how they think

they *should* respond, and not actually how they truly feel or what they actually believe. The results indicated only modest amounts of individual and peer group endorsement of social aggression, as well as restrained levels of emotionality and frequency of using social aggression, therefore social desirability may have been a factor in the low levels reported for each of these variables. According to Lagerspetz et al. (1988) self-report methods may result in difficulties establishing reliability, as it may not be easy for individuals to “admit” or acknowledge that their actions are actually aggressive. Given that most participants (particularly those in sample 1) were willing to describe an incident in which they were aggressive, it was not likely a serious problem, but certainly something to consider.

In an attempt to reduce this bias, participants in the present study were assured complete anonymity and confidentiality in their questionnaires which hopefully reduced any bias in reporting, and thus the self-report method proved valuable for the present study and significant results were found despite the cautious reporting of endorsing or using social aggression by many subjects. It is interesting to note that there were a few scores reported with some subjects reporting normative beliefs, emotions or frequency of using social aggression in the extreme range, but these extreme scores were infrequent. In the future, it would be beneficial to see how results might vary when other reporters (such as other members of the peer group) are examined, or other methodology (such as observation or peer nomination) is used in combination with the self-reports, as the conclusions drawn from the present study would be strengthened by other research methods with converging results.

Another methodological issue was that the memorable incidents recounted by participants about their aggressive behaviour were retrospective. As a result, the feelings and emotions reported might not have been as accurate or intense as hoped. This was unexpected given the findings by Watson and Clark (1994) that when participants recall emotions, as the rated time frame lengthens, there is a trend towards an associated increase in the amount of emotions reported. Given that most incidents of aggression recalled by participants had occurred approximately a year prior, it was surprising that affectivity was not higher, and particularly because it was expected that the particular incidents reported were expected to be the most memorable and intense. Related to this problem was that participants were asked to describe only a single incident of social aggression, a limitation that was also an issue in the study by Reynolds and Repetti (2010). The difficulty with this method was that it was unknown how well the reports of the incidents actually characterized most occurrences of all forms of social aggression for the individual. However, this method did benefit from having a detailed description about a single incident, which is much better than previous research that has used socially aggressive vignettes that were not perpetrated by the subjects themselves, and it was assumed that these incidents were the most salient and memorable to the participant, thereby improving the external validity of participant reports.

With respect to the measures used in the present study, given that young adulthood is an important developmental age group to study in social aggression, it would be ideal for future studies of social aggression to develop an instrument specific to a young adult sample, as most existing measures in social aggression research, including the ones used in this study, focus on children or adolescents and do not ask about the

forms of social aggression more common for adults. Besides the social aggression measure, group norms were only assessed within a large general social context, and we did not examine features of the peer group or intra-group position (e.g. what role or how the individual fit into the peer group on which he/she reported) in the influence of group norms (Duffy & Nesdale, 2010). Social demands change in emerging adulthood such that the focus shifts from peers to both friends and romantic relationships (Goldstein, et al., 2008; Nelson et al., 2008), and shifts from classroom or school environments to also include the workplace and a variety of social settings. Future research would benefit from exploring the role of group norms and within more defined social contexts and the different influence of best friend dyads, intimate social groups and larger social networks among young adults.

This study was cross sectional in nature and therefore we could not infer cause and effect between normative beliefs peer group beliefs and the emotional reactions to perpetrating social aggression, and though the results indicated that individual beliefs and emotional states could account for a significant proportion of the variance in the use of socially aggressive behaviours, this relationship was not causal and the correlational design ultimately prevented the ability to make conclusions about causal links between these variables of interest. Although there is evidence for a bidirectional influence between these constructs, the causal directions between emotions, norms, and behaviours still await further research. Additionally, given the feedback theory of emotion by Baumeister et al. (2007) and Carver and Scheier (1990), there might not be direct causation between emotions and behaviour. Behavioural outcomes might lead to emotional reactions, which are affectively evaluated, and influence future behaviour

based on the desired emotional outcome (or avoidance of an undesirable emotional outcome), however this theory still requires future studies to determine if it applies to the use of socially aggressive behaviours.

In addition to the future research directions already suggested by the limitations of the study, the findings of the present study suggest potential research avenues for future studies. First, future replications of the present study should compare the sample of self-reported perpetrators of social aggression to a sample of non-socially aggressive individuals to examine how their individual and peer group beliefs, and emotional experiences differ. Underwood (2003) has suggested that it might be interesting to examine the effect that refraining from social aggression might have on affect, perhaps increasing positive emotions like optimism, therefore it might be that individuals who belong to a peer group that do not support the use of social aggression and do not support the behaviour themselves will be less likely to report being socially aggressive and more positive about their lack of participation.

It would also be interesting to investigate how the use of social aggression is affected when individual beliefs and peer group beliefs are incongruent, for example, when the individual does not approve of the use of social aggression, but the peer group highly supports these behaviours, or vice-versa. These associations should be examined in more detail in order to gain a better understanding of the individual and group dynamics that lead to the use of these aggressive behaviours. Further examination of the social networks of socially aggressive individuals would provide important information regarding the extent to which the individual and peer group provide mutual support for

the use of social aggression resulting in the maintenance of socially aggressive behaviours in social interactions.

Another goal of future research would be to replicate the existing findings in child and adolescent samples, or to examine the longitudinal changes in norms and emotions involved in the use of these aggressive social strategies. Research has provided evidence that social aggression increases in late childhood to early adolescence and tapers off thereafter (Bjorkqvist et al., 1992) therefore it would be interesting to see how the variables of interest change from childhood through to adulthood. For example, individual attitudes and norms might be less established in childhood and children might not support the use of social aggression to the same extent as an adolescent and then this may decline again in young adulthood. Furthermore, the role of peer group beliefs might be most salient in adolescence when teens are highly motivated by establishing popularity and belongingness, but the social network might play less of a role in childhood when social status is less important. Therefore, future longitudinal research would be beneficial to examine how norms, beliefs and emotions change through different developmental phases, and how each of these might lead to the reinforcement and maintenance of socially aggressive behaviours over time.

In summary, the limitations were considered in the interpretation of the findings, but did not substantially detract from the value of the present study. Contrary, the limitations, combined with the result of the current study, provided excellent avenues for future research directions and suggestions for potential replications and extensions of the findings from the current research.

### **Implications**

The results of the present study have significant and practical implications. The most important finding of the present study has been that the use of social aggression among young adults seems to be influenced more so by one's own attitudes and beliefs, than by the norms of the social group. This is an important consideration in the development of intervention programs for social forms of aggression. The current perspective in terms of addressing these behaviours is to intervene with the peer group and improve peer relations. For example, many intervention programs have been designed to target peers and improving peer relations (e.g. The Social Aggression Prevention Program (Capella & Weinstein, 2006), The Olweus Bullying Prevention Program (Olweus, 2005), Steps to Respect (Frey, Edstrom & Hirschstein, 2010), KiVa (Salmivalli, Karna & Poskiparta, 2010) which are all researched social skills training programs for adolescents and young adults to manage bullying and peer victimization. While these programs might provide excellent results for reducing peer victimization in the child and adolescent populations in which the programs are implemented, the results of the present study indicate that among young adults, peers do not play a significant role in the use of social, and this highlights the need for differential intervention strategies at different ages. Therefore, if we were interested in adult interventions (such as workplace bullying or social aggression) then we would need to look at a different approach than we have in the past with child or adolescent interventions.

The second significant finding of the present study was that both positive and negative emotions at the time of perpetrating social aggression are associated with an increased frequency of using socially aggressive behaviours. Increases in both

pleasurable affect and negative feelings significantly predicted an increased frequency of acting in a socially aggressive way. Given these findings, intervention strategies should focus on training in prosocial peer interactions and positive emotional experiences. For individuals who find pleasure in being socially aggressive or who believe it is normative behaviour, they need to be taught appropriate means in which to find pleasure in their social group that are not at the expense of other people. For example, activities that foster positive peer interactions in the social network could be beneficial and provide youth with the “opportunities to deal with difficult social situations, solve social problems, and learn what qualities are most important in the friends they keep or in the new friends they choose (Committee for Children, 2001), the goal of which would be to change peer group norms and behaviours (Craig & Pepler, 1999). Furthermore, when individuals feel negatively (guilty or sad) about their socially aggressive actions, an approach that recognized the negative feelings and thereby reduces the behaviour must be taught to try to stop the use of social aggression. Studying emotions could be important in designing intervention and prevention programmes that promote coping and communication strategies for assisting both perpetrators and victims with managing the emotional triggers leading to social aggression, as well as residual affective problems following victimization. Again, these strategies need to be implemented in childhood and adolescence so that education can occur early on, and later aggression in adulthood will be diminished.

Finally, the results of the present study emphasized the considerable role of individual beliefs endorsing the use of social aggression, in the general frequency with which individuals act in this aggressive way. The attitudes towards the use of social

aggression among young adults seem to moderately condone the use of these behaviours, however endorsement might be higher in adolescence when frequency of using these behaviours is also at its peak. Changing the beliefs of individuals could be a good way to start. In fact, Henry et al. (2000) suggest that efforts should focus on changing personal normative beliefs through social responsibility training and education. The theory is that education on socially responsible means of interacting will lead to changes in aggressive behaviour by first changing the personal beliefs of the individual, and in turn influencing the beliefs of others. However, as Salmivalli and Voeten (2004) pointed out, changing attitudes would be beneficial but would not likely eradicate social forms of aggression because most students already endorse more anti-bullying or anti-aggression attitudes.

Nonetheless, effective intervention would require sufficient facts, education and knowledge dissemination, particularly a focus on normative beliefs and the emotionality involved in socially aggressive behaviours. Adequate training would be needed on how to identify these socially aggressive behaviours, and how to effectively respond to these scenarios. Many programs currently focus on those who have been victimized, but the present study emphasizes the importance of including aggressors and peer affiliates as well. The results of the present study could be important and useful in the design of programs and interventions to help professionals, practitioners, teachers, and parents develop strategies for handling socially aggressive individuals and their peers. Better understanding the nature of social forms of aggression among young adults will further our knowledge and understanding of these behaviours, and in turn, lead to action and creation of ways to assist individuals through development as they learn to positively interact with others and become socially responsible individuals.

### **Conclusion**

Despite the limitations, the findings of the present study contribute to the present research on social aggression in a number of important ways. Numerous studies have established the importance of the peer group in influencing involvement in socially aggressive behaviours (Duffy & Nesdale, 2010; Nesdale & Lawson, 2011; Werner & Hill, 2010), however, the results of this study further our understanding of how things change developmentally as one matures, such that peers might not be as central in the use of social aggression once an individual reaches young adulthood. Together with recent research on normative beliefs and peer group norms (Henry et al., 2000; Nesdale & Lawson, 2011; Werner & Hill, 2010) and the little research on emotions (Owens et al., 2000; Reynolds & Repetti, 2010), the findings of the present study confirm that social aggression remains a salient experience in the lives of young adults (Nelson et al., 2008), and an important construct to research. Furthermore, this study has contributed to the small body of research on social forms of aggression and examined dimensions of aggression (i.e. emotions and norms) that have not been well examined in the past in this area. No previous research has examined how individual attitudes and beliefs interact with peer group norms specifically in social forms of aggression, and particularly the extent to which emotions are involved in these types of aggression. The results of the present research further our understanding of the complexity of emotions in the use of social aggression and how these behaviours involve a combination of both positive and negative feelings, and how the emotional experiences of perpetrating social aggression vary as a function of the specific behaviours used. Additionally, in the use of social aggression among young adults, the endorsement of social aggression by the peer group

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is not as influential as individual beliefs in predicting the frequency of using socially aggressive social strategies. This suggests that among emerging adults, the experiences of those who use social aggression are distinct in some ways (e.g. the influence of the peer group) from the experiences of these behaviours in childhood and adolescence. Examining social forms of aggression among this young adult sample has highlighted the importance of this unique developmental period, and that social aggression at this age might involve unique characteristics that is valuable for future research to examine.

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## Appendix A

### Recruitment Information

#### **Study Name: What's behind our interactions with friends and frenemies?**

*Dear Carleton University students using SONA,*

We are conducting research that examines the association between beliefs about relationships, perceptions of normal responses to social events and feelings about what underlies commonly enacted socially unkind behaviours between friends and peers. Anyone who is enrolled in PSYC 1001, 1002, 2001, or 2002, and has access to SONA, may participate. In exchange for your participation, 0.5% will be added to your final mark in your psychology course (**one of PSYC 1001, 1002, 2001, or 2002**; you must be currently enrolled in the course to receive participation percentage). Participation in this study is voluntary and surveys will take approximately 30 minutes to complete.

#### **What is this study about?**

The questionnaires you complete will ask about your beliefs about behaviours like gossiping, excluding someone, and using body language that expresses these sentiments. We also ask you to provide information on the reasons that you think might underlie the use of these behaviours, the emotions that surround them and how often you have experienced these events. The study has been designed to minimize any anxiety or distress after answering questions that concern your experiences; however, if this occurs you may omit questions without penalty. Additional information and resources will also be provided upon completion of the study for those who need it.

You will not be asked for your name or any other identifying information. You will be given a unique numeric code, which protects all identifying information, including your name. Your answers will be kept strictly confidential. This study has received clearance by the Carleton University Psychology Research Ethics Board (Reference #12-256).

#### **Why participate?**

- You will be contributing to the developing field of social behaviour research
- You will earn 0.5% toward your final grade in psychology by completing the questionnaire
- When the research is complete, we would be glad to share a summary of the results with you, and these conclusions may inspire your thoughts about your potential future research projects!

Appendix B

**Informed Consent**

The purpose of an informed consent is to insure that you understand the purpose of the study and the nature of your involvement. The informed consent must provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

**Study Name: What's behind our interactions with friends and frenemies?**

**Research personnel.** The following people are involved in this research project, and may be contacted at any time if you have questions or concerns: Danielle Quigley (dquigley@connect.carleton.ca), Kat Magner (kmagner1@connect.carleton.ca), and the Faculty Sponsor, Dr. Tina Daniels (tina\_daniels@connect.carleton.ca). Should you have any ethical concerns about this research, please contact Dr. Monique Sénéchal, at monique\_senechal@carleton.ca (613-520-2600 ext. 1155). For any other concerns, please contact the Chair of the Department of Psychology, Dr. Anne Bowker (613-520-2600, ext. 8218 or psychchair@carleton.ca).

**Purpose.** The purpose of this study is to investigate the relationship between personal beliefs about relationships and what underlies common social interactions between friends and peers. We are interested in examining how these personal beliefs influence the sometimes unkind behaviours people use when in different social contexts.

**Task requirements.** In this study, you will be asked to fill out various questionnaires online through the University's data collection system, SONA. The questionnaires will take about 30 minutes to complete. Questionnaires will ask questions about peer to peer conflict, what you think underlies this conflict, your beliefs about social situations, your emotions around these situations, and how often you are involved in these types of events.

**Duration and location.** This study will take approximately 30 minutes to complete and it will be available to online through Carleton University's data collection service, SONA. Please ensure that you have enough time to complete the survey once you start answering questions; i.e., allow yourself approximately 30 minutes to complete all sections of the survey.

**Remuneration.** For your participation in this study, you will be given a 0.5 percent credit towards your PSYC 1001, 1002, 2001 or 2002 final grade.

**Potential risk/discomfort.** There are no physical risks to participating in this study. Some individuals might feel uncomfortable when asked to think about some of the social situations about peer conflict. If you feel any discomfort or distress, you may choose not to answer specific questions, and will not be penalized in any way if you choose to do so.

## NORMS AND EMOTIONS IN SOCIAL AGGRESSION

The debriefing form at the end of the study provides contact information for local support services that you may contact if you need or want help.

**Anonymity and confidentiality.** Your participation in the study is both anonymous and confidential. You will be assigned a unique numeric code, by the SONA system, which will not be associated with your name. This code will be linked to your SONA account; this unique code will not be linked to your name or any other identifying information. The researchers involved with this project have no access to your name or any other identifying information. When you consent to participate in the study, the SONA system will automatically grant you course credit for your participation. The online data remains secure on the Carleton University server site.

**Right to withdraw.** Your participation in this study is entirely voluntary. At any point during the study, you have the right to not answer any questions or to withdraw with no penalty whatsoever. Course credit is not contingent upon completion of the survey. You will see a button on each page that says “Withdraw” that you can use if you would like to withdraw from the study. Whether or not you decide to participate in this research will have no impact on your course performance. Participation, lack of participation or withdrawal from the study will not be disclosed to your course instructor.

**Data protection and disposal.** Data collected for this research will be accessible only to the researchers associated with this project. As the data will be collected online, security measures have been put into place to protect your anonymity and confidentiality. All data will be made anonymous through assignment of your unique numeric code and will be transferred through web browsers to the secure server using a secure database. Finally, only approved researchers of this project will be able to access submitted questionnaires, and will be unable to identify participants based on any of their responses throughout the survey.

This study has received clearance by the Carleton University Psychology Research Ethics Board (Reference #12-256).

By clicking “yes”, you have given your consent to participate and can begin the survey.  
Click “no” if you do not wish to complete the survey.

Appendix C

**Debriefing form**

**What are we trying to learn in this research?**

We're interested in knowing more about our beliefs about relationships and feelings about what makes us act certain ways with friends and non-friends.

**Why is this important to scientists or the general public?**

Previous research in this area is based on interview data, which has given us a good sense of why children and youth say they use social aggression. Although we have this information, we still don't know much about which reasons are the most important motivators for social aggression and knowing this will be helpful for healthy relationships training. We also do not know how important these reasons are to young adults.

**What are our hypotheses and predictions?**

We predict that the more normal people believe socially aggressive responses to events are, the more frequently people will report having used socially aggressive behaviours. We also think that people who think social aggression is pretty normal will feel OK about using it, while people who think it's not that normal will feel less OK about using it.

**Where can I learn more?**

- Social Aggression Among Girls (2003) by Marion K. Underwood is a popular academic book about social aggression used by girls.
- Odd Girl Out: The Hidden Culture of Aggression in Girls (2002) by Rachel Simmons is a popular and very accessible book about social aggression used by girls.
- PREVNet.ca (The Promoting Relationships and Elimination Violence Network) is a website that has many downloadable resources for parents and teachers.

**Is there anything I can do if I found this experiment to be emotionally upsetting?**

Yes! If you feel any distress or anxiety after participating in this study, please feel free to contact the Carleton University Health and Counselling Services (613-520-6674 or online at <http://www1.carleton.ca/health/counselling-services/>) or the Distress Centre of Ottawa and Region at 613-238-3311 (<http://www.dcottawa.on.ca>).

**What if I have questions later?**

If you have any remaining concerns, questions, or comments about the experiment, please feel free to contact Danielle Quigley ([dquigley@connect.carleton.ca](mailto:dquigley@connect.carleton.ca)) or Kat Magner ([kmagner1@connect.carleton.ca](mailto:kmagner1@connect.carleton.ca)) or Dr. Tina Daniels (Faculty Sponsor), at: [tina\\_daniels@carleton.ca](mailto:tina_daniels@carleton.ca). If have any ethical concerns about this research, please contact Dr. Monique Sénéchal (Chair, Psychology Ethics Board, [monique\\_senechal@carleton.ca](mailto:monique_senechal@carleton.ca), 613-520-2600 ext 1155. For other concerns, please contact Dr. Anne Bowker (Chair, Department of Psychology, [psychchair@carleton.ca](mailto:psychchair@carleton.ca), 613-520-2600, ext. 8218).



Appendix E

**Primer**

Here is an example of something that a lot to guys/girls your age have done:

*Jo is an average student and has a group of close friends. Jo's friend Sam has been annoying lately. In the morning, Sam walks up to Jo and their group of friends, but when Sam tries to talk, the group gives Sam responses that are unfriendly. Sam looks at Jo, but Jo avoids Sam's look. In first period, Sam sits in the seat next to Jo as usual, but Jo gets up and moves across the room to another seat.*

What Jo did is really common and that's why we're trying to learn more about it. Can you think of a time when you did something like Jo did?

Think about *one memorable time* when you **did** something like Jo did and briefly describe it below. This is only to help you remember the incident, so write whatever you need to help you remember it. If you can remember, write down who was involved, what happened, how long it lasted, and how things are now. To ensure this survey is anonymous, please don't write down anyone's name.

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| NORMS AND EMOTIONS IN SOCIAL AGGRESSION

Which of these is closest to what you described?

- Ignored a girl with the intention of excluding, alienating, or embarrassing her
- Spread rumours or said something negative about a girl who wasn't there at the time (i.e., gossiped)
- Kept a girl from being accepted by your group of friends
- Tried to steal the guy another girl liked
- Gave a girl the silent treatment
- Tried to get others not to like a particular girl
- Talked behind a girl's back
- Turned away and kept talking to someone else when a girl came over to say something to you
- Gave a girl dirty looks
- Rolled your eyes at a girl
- Passed a girl a mean note (e.g., that says "no one likes you")
- Stopped talking when a girl came over to you and a friend so she couldn't join the conversation
- Made a mean face when partnered with a girl in class
- Glared at a girl
- Not invited a girl to a party or event you knew she'd want to come to

Appendix F

**Emotions Associated with Social Aggression**

Next we're asking about different feelings and emotions. This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way on **each** emotion as a result of the memorable incident of social aggression you describe above. Think back to the memorable incident in which you were the **initiator** of one of the behaviours. During this experience how did you feel? Rate each of the following emotions.

| NORMS AND EMOTIONS IN SOCIAL AGGRESSION

	Not at all	A little	Moderately	Quite a bit	Extremely
Cheerful	<input type="checkbox"/>				
Disgusted	<input type="checkbox"/>				
Attentive	<input type="checkbox"/>				
Daring	<input type="checkbox"/>				
Strong	<input type="checkbox"/>				
Scornful	<input type="checkbox"/>				
Relaxed	<input type="checkbox"/>				
Irritable	<input type="checkbox"/>				
Delighted	<input type="checkbox"/>				
Inspired	<input type="checkbox"/>				
Fearless	<input type="checkbox"/>				
Disgusted at self	<input type="checkbox"/>				
Angry at self	<input type="checkbox"/>				
Determined	<input type="checkbox"/>				
Interested	<input type="checkbox"/>				
Energetic	<input type="checkbox"/>				
Jealous	<input type="checkbox"/>				
Confused	<input type="checkbox"/>				
Sad	<input type="checkbox"/>				
Calm	<input type="checkbox"/>				
Afraid	<input type="checkbox"/>				
Shaky	<input type="checkbox"/>				
Happy	<input type="checkbox"/>				
Alone	<input type="checkbox"/>				
Alert	<input type="checkbox"/>				
Upset	<input type="checkbox"/>				
Angry	<input type="checkbox"/>				
Bold	<input type="checkbox"/>				
Blue	<input type="checkbox"/>				
Enthusiastic	<input type="checkbox"/>				
Distressed	<input type="checkbox"/>				
Frightened	<input type="checkbox"/>				
Loathing	<input type="checkbox"/>				
Concentrating	<input type="checkbox"/>				

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

	Not at all	A little	Moderately	Quite a bit	Extremely
Powerful	<input type="checkbox"/>				
Hurt	<input type="checkbox"/>				
Active	<input type="checkbox"/>				
Guilty	<input type="checkbox"/>				
Joyful	<input type="checkbox"/>				
Nervous	<input type="checkbox"/>				
Lonely	<input type="checkbox"/>				
Excited	<input type="checkbox"/>				
Hostile	<input type="checkbox"/>				
Proud	<input type="checkbox"/>				
Jittery	<input type="checkbox"/>				
Lively	<input type="checkbox"/>				
Ashamed	<input type="checkbox"/>				
At ease	<input type="checkbox"/>				
Scared	<input type="checkbox"/>				
Downhearted	<input type="checkbox"/>				
Blameworthy	<input type="checkbox"/>				
Confident	<input type="checkbox"/>				
Dissatisfied with self	<input type="checkbox"/>				
In control	<input type="checkbox"/>				
Indifferent	<input type="checkbox"/>				

Appendix G

**Normative Beliefs About Social Aggression**

Next we're going to ask you some questions about how you feel about some common things people do. Remember, there are no right or wrong answers to these questions, so just fill in the circle next to the answer that seems right to you.

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

	It's perfectly ok	It's sort of ok	It's sort of wrong	It's really wrong
In general, it is OK to stop talking to people if you are mad at them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is usually OK to try to get other people to dislike somebody who you personally dislike.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is wrong to talk about other people behind their backs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is usually OK to give people the "silent treatment" if you are mad at them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, it is OK to spread rumours about people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is usually OK to cancel plans with somebody if you are mad at them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix H

**Peer Group Beliefs**

Next, imagine that you behaved in the ways described below, and think about what would happen. What would be the consequences? What would other students in your peer group think of that, and how would they respond? Do not respond according to how you think others *should* respond, but according to what you think would *actually* happen in your peer group if someone acted in this manner.

Evaluate each of these situations, and check ONE of the following responses that you think would be the most likely reaction of a friend/friends in your group:

1 = they would really disapprove of your behaviour and there would be a highly negative consequence (i.e. they would avoid you a lot)

2 = they would disapprove of your behaviour only a little and there would be some negative consequences (i.e. they would only avoid you a little)

3 = they wouldn't care

4 = they would approve of your behaviour a little bit and there would be some positive consequences (i.e. they would hang out with you only a little)

5 = they would really approve of your behaviour and there would be highly positive consequences (i.e. they would hang out with you a lot)

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

<b>How would your friends or other people in your group react if you...</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<p>Purposely ignored a guy/girl because others in your group were?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				
	<p>Would avoid a lot <input type="radio"/></p>	<p>Would avoid a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Would hang out a little <input type="radio"/></p>	<p>Would hang out a lot <input type="radio"/></p>
<p>Made friends with a guy/girl your other friends were excluding?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				
	<p>Would avoid a lot <input type="radio"/></p>	<p>Would avoid a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Would hang out a little <input type="radio"/></p>	<p>Would hang out a lot <input type="radio"/></p>
<p>Gave a guy/girl the "silent treatment" because everyone else was doing it too?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				
	<p>Would avoid a lot <input type="radio"/></p>	<p>Would avoid a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Would hang out a little <input type="radio"/></p>	<p>Would hang out a lot <input type="radio"/></p>
<p>Told someone in your group "I'm not ok with being mean to that guy/girl" when</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
<p>Greatly</p>	<p>Disapprove</p>	<p>Wouldn't</p>	<p>Approve a</p>	<p>Greatly</p>	

**NORMS AND EMOTIONS IN SOCIAL AGGRESSION**

your friends were being mean to him/her?	disapprove <input type="radio"/>	a little <input type="radio"/>	Care <input type="radio"/>	little <input type="radio"/>	Approve <input type="radio"/>
	What would the consequences be? How much would your friends want to avoid/hang out with you?				
	Would avoid a lot <input type="radio"/>	Would avoid a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Would hang out a little <input type="radio"/>	Would hang out a lot <input type="radio"/>
Did not like a guy/girl because your friends told you not to like him/her?	How much would your friends approve or disapprove of your behaviour?				
	Greatly disapprove <input type="radio"/>	Disapprove a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Approve a little <input type="radio"/>	Greatly Approve <input type="radio"/>
	What would the consequences be? How much would your friends want to avoid/hang out with you?				
	Would avoid a lot <input type="radio"/>	Would avoid a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Would hang out a little <input type="radio"/>	Would hang out a lot <input type="radio"/>
Walked away when you heard your friends talking mean about another guy/girl?	How much would your friends approve or disapprove of your behaviour?				
	Greatly disapprove <input type="radio"/>	Disapprove a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Approve a little <input type="radio"/>	Greatly Approve <input type="radio"/>
	What would the consequences be? How much would your friends want to avoid/hang out with you?				
	Would avoid a lot <input type="radio"/>	Would avoid a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Would hang out a little <input type="radio"/>	Would hang out a lot <input type="radio"/>
Talked negatively with your group of friends about another guy/girl behind his/her back?	How much would your friends approve or disapprove of your behaviour?				
	Greatly disapprove <input type="radio"/>	Disapprove a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Approve a little <input type="radio"/>	Greatly Approve <input type="radio"/>
	What would the consequences be? How much would your friends want to avoid/hang out with you?				
	Would avoid a lot <input type="radio"/>	Would avoid a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Would hang out a little <input type="radio"/>	Would hang out a lot <input type="radio"/>

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

<p>Asked your friends to stop ignoring a guy/girl?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				
	<p>Would avoid a lot <input type="radio"/></p>	<p>Would avoid a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Would hang out a little <input type="radio"/></p>	<p>Would hang out a lot <input type="radio"/></p>
<p>Laughed when a friend gave another guy/girl dirty looks?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				
	<p>Would avoid a lot <input type="radio"/></p>	<p>Would avoid a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Would hang out a little <input type="radio"/></p>	<p>Would hang out a lot <input type="radio"/></p>
<p>Asked a guy/girl to hang out that your friends purposely did not invite to a party?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				
	<p>Would avoid a lot <input type="radio"/></p>	<p>Would avoid a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Would hang out a little <input type="radio"/></p>	<p>Would hang out a lot <input type="radio"/></p>
<p>Wrote something mean on a note that you and your friends were giving to another guy/girl (e.g., a note that says "no one likes you")?</p>	<p>How much would your friends approve or disapprove of your behaviour?</p>				
	<p>Greatly disapprove <input type="radio"/></p>	<p>Disapprove a little <input type="radio"/></p>	<p>Wouldn't Care <input type="radio"/></p>	<p>Approve a little <input type="radio"/></p>	<p>Greatly Approve <input type="radio"/></p>
	<p>What would the consequences be? How much would your friends want to avoid/hang out with you?</p>				

| NORMS AND EMOTIONS IN SOCIAL AGGRESSION

	Would avoid a lot <input type="radio"/>	Would avoid a little <input type="radio"/>	Wouldn't Care <input type="radio"/>	Would hang out a little <input type="radio"/>	Would hang out a lot <input type="radio"/>
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Appendix I

**Frequency of Socially Aggressive Behaviour (Female Version)**

Next, we are going to ask you to think about some experiences you may have had with other girls at your school. These types of experiences happen to almost all girls, so we think they are very important for psychologists to understand. Your answers to these questions are completely anonymous, so please try to be as honest as you can when you answer them and remember, there are no right or wrong answers. This is just a questionnaire about how you feel. Fill in the circle that best describes how you feel.

First we'll ask you about these things as they relate to someone you consider a friend. Then we'll ask about them as they relate to someone you don't consider a friend.

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

IN THE PAST YEAR, how often have you **done** each of the following to a girl you consider a friend who hangs out in your group of friends at your school:

	Never	About once a term	About once a month	A few times a month	About once a week	Many times a week
Deliberately ignored a girl in order to exclude, alienate, or embarrass her	<input type="radio"/>					
Spread rumors or said something negative about a girl who wasn't there at the time (i.e., gossiped)	<input type="radio"/>					
Kept a girl from being accepted by your group of friends	<input type="radio"/>					
Tried to steal the guy another girl liked	<input type="radio"/>					
Gave a girl the "silent treatment"	<input type="radio"/>					
Tried to get your friends not to like a particular girl	<input type="radio"/>					
Talked behind a girl's back	<input type="radio"/>					
Turned away or kept talking to someone else when a girl came over to say something to you	<input type="radio"/>					
Gave a girl dirty looks	<input type="radio"/>					
Rolled your eyes at a girl	<input type="radio"/>					
Passed a girl a note with something mean written on it or written the note and gotten someone else to pass it (e.g., a note that says "no one likes you")	<input type="radio"/>					
Stopped talking when a girl came over to you and a friend so she couldn't join the conversation	<input type="radio"/>					
Made a mean face when asked to be partners with a girl for a school project	<input type="radio"/>					
Glared or stared at a girl meanly	<input type="radio"/>					
Not invited a girl to a party even though you knew she wanted to come	<input type="radio"/>					

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

IN THE PAST YEAR, how often have you **done** each of the following to a girl who is not in your group of friends at your school:

	Never	About once a term	About once a month	A few times a month	About once a week	Many times a week
Deliberately ignored a girl in order to exclude, alienate, or embarrass her	<input type="radio"/>					
Spread rumors or said something negative about a girl who wasn't there at the time (i.e., gossiped)	<input type="radio"/>					
Kept a girl from being accepted by your group of friends	<input type="radio"/>					
Tried to steal the guy another girl liked	<input type="radio"/>					
Gave a girl the "silent treatment"	<input type="radio"/>					
Tried to get your friends not to like a particular girl	<input type="radio"/>					
Talked behind a girl's back	<input type="radio"/>					
Turned away or kept talking to someone else when a girl came over to say something to you	<input type="radio"/>					
Gave a girl dirty looks	<input type="radio"/>					
Rolled your eyes at a girl	<input type="radio"/>					
Passed a girl a note with something mean written on it or written the note and gotten someone else to pass it (e.g., a note that says "no one likes you")	<input type="radio"/>					
Stopped talking when a girl came over to you and a friend so she couldn't join the conversation	<input type="radio"/>					
Made a mean face when asked to be partners with a girl for a school project	<input type="radio"/>					
Glared or stared at a girl meanly	<input type="radio"/>					
Not invited a girl to a party even though you knew she wanted to come	<input type="radio"/>					

Appendix J

**Frequency of Socially Aggressive Behaviour (Male Version)**

Next, we are going to ask you to think about some experiences you may have had with other guys at your school. These types of experiences happen to almost all guys, so we think they are very important for psychologists to understand. Your answers to these questions are completely anonymous, so please try to be as honest as you can when you answer them and remember, there are no right or wrong answers. This is just a questionnaire about how you feel. Fill in one of the circles that best describes how you feel.

First we'll ask you about these things as they relate to someone you consider a friend. Then we'll ask about them as they relate to someone you don't consider a friend.

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

IN THE PAST YEAR, how often have you **done** each of the following to a guy you consider a friend who hangs out in your group of friends at your school:

	Never	About once a term	About once a month	A few times a month	About once a week	Many times a week
Deliberately ignored a guy in order to exclude, alienate, or embarrass him	<input type="radio"/>					
Spread rumors or said something negative about a guy who wasn't there at the time (i.e., gossiped)	<input type="radio"/>					
Kept a guy from being accepted by your group of friends	<input type="radio"/>					
Tried to steal the girl another guy liked	<input type="radio"/>					
Gave a guy the "silent treatment"	<input type="radio"/>					
Tried to get your friends not to like a particular guy	<input type="radio"/>					
Talked behind a guy's back	<input type="radio"/>					
Turned away or kept talking to someone else when a guy came over to say something to you	<input type="radio"/>					
Gave a guy dirty looks	<input type="radio"/>					
Rolled your eyes at a guy	<input type="radio"/>					
Passed a guy a note with something mean written on it or written the note and gotten someone else to pass it (e.g., a note that says "no one likes you")	<input type="radio"/>					
Stopped talking when a guy came over to you and a friend so he couldn't join the conversation	<input type="radio"/>					
Made a mean face when asked to be partners with a guy for a school project	<input type="radio"/>					
Glared or stared at a guy meanly	<input type="radio"/>					
Not invited a guy to a party even though you knew he wanted to come	<input type="radio"/>					

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

IN THE PAST YEAR, how often have you **done** each of the following to a guy who is not in your group of friends at your school:

	Never	About once a term	About once a month	A few times a month	About once a week	Many times a week
Deliberately ignored a guy in order to exclude, alienate, or embarrass him	<input type="radio"/>					
Spread rumors or said something negative about a guy who wasn't there at the time (i.e., gossiped)	<input type="radio"/>					
Kept a guy from being accepted by your group of friends	<input type="radio"/>					
Tried to steal the girl another guy liked	<input type="radio"/>					
Gave a guy the "silent treatment"	<input type="radio"/>					
Tried to get your friends not to like a particular guy	<input type="radio"/>					
Talked behind a guy's back	<input type="radio"/>					
Turned away or kept talking to someone else when a guy came over to say something to you	<input type="radio"/>					
Gave a guy dirty looks	<input type="radio"/>					
Rolled your eyes at a guy	<input type="radio"/>					
Passed a guy a note with something mean written on it or written the note and gotten someone else to pass it (e.g., a note that says "no one likes you")	<input type="radio"/>					
Stopped talking when a guy came over to you and a friend so he couldn't join the conversation	<input type="radio"/>					
Made a mean face when asked to be partners with a guy for a school project	<input type="radio"/>					
Glared or stared at a guy meanly	<input type="radio"/>					
Not invited a guy to a party even though you knew he wanted to come	<input type="radio"/>					

Appendix K

**Frequency of Socially Aggressive Behaviours Described in the Memorable Incident**

Table K-1

*Frequency of Socially Aggressive Behaviours Described in the Memorable Incident*

Incident type	Frequency (n)	Percentage (%)
Ignored	89	39.0
Talk behind back	87	38.2
Silent treatment	76	33.3
Not accepted	50	21.9
Spread Rumours	49	21.5
Not invite to party	49	21.5
Stop talking	43	18.9
Roll eyes	41	18.0
Get others to not like	40	17.5
Turn away	37	16.2
Dirty looks	37	16.2
Glare	21	9.2
Mean face	15	6.6
Steal guy/girl	11	4.8
Mean note	6	2.6

*Note:* Total frequencies do not equal sample size (n = 228) and percentages do not equal 100% as some participants described more than one type of behaviour used in their memorable incident of using social aggression

Appendix L

**Hierarchical Multiple Regression Analyses Predicting Emotions From Normative Beliefs and Peer Group Beliefs**

Table L-1

*Hierarchical Multiple Regression Analysis Predicting Fear From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	B	SE B	$\beta$	t	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	F
<i>Fear</i>								
Step 1								
Normative beliefs	-.05	.12	-.03	-.46	.001	-.004		.21
Step 2								
Normative beliefs	-.07	.12	-.05	-.60	.004	-.011	.003	.26
PGB approval/disapproval	-.07	.17	-.05	-.39				
PGB social consequences	.16	.22	.09	.69				

Table L-2

*Hierarchical Multiple Regression Analysis Predicting Hostility From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	B	SE B	$\beta$	t	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	F
<i>Hostility</i>								
Step 1								
Normative beliefs	.03	.11	.02	.25	.000	-.005		.06
Step 2								
Normative beliefs	.01	.11	.01	.12	.001	-.014	.001	.20
PGB approval/disapproval	.02	.16	.02	.15				
PGB social consequences	.03	.21	.02	.14				

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

Table L-3

*Hierarchical Multiple Regression Analysis Predicting Guilt From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	$R^2$	Adj. $R^2$	$\Delta R^2$	<i>F</i>
<i>Guilt</i>								
Step 1								
Normative beliefs	-.02	.14	-.01	-.12	.000	-.005		.02
Step 2								
Normative beliefs	-.03	.14	-.02	-.20	.006	-.010	.006	.38
PGB approval/disapproval	-.19	.19	-.13	-.99				
PGB social consequences	.26	.26	.13	1.02				

Table L-4

*Hierarchical Multiple Regression Analysis Predicting Sadness From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	$R^2$	Adj. $R^2$	$\Delta R^2$	<i>F</i>
<i>Sadness</i>								
Step 1								
Normative beliefs	.12	.11	.07	1.05	.01	.001		1.11
Step 2								
Normative beliefs	.14	.12	.09	1.17	.02	.006	.015	1.41
PGB approval/disapproval	-.27	.16	-.21	-1.71				
PGB social consequences	.25	.21	.15	1.15				

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Table L-5

*Hierarchical Multiple Regression Analysis Predicting Joviality From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	B	SE B	$\beta$	t	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	F
<i>Joviality</i>								
Step 1								
Normative beliefs	.18	.11	.11	1.57	.01	.007		2.46
Step 2								
Normative beliefs	.14	.12	.09	1.18	.03	.015	.018	2.01
PGB approval/disapproval	.27	.16	.21	1.66				
PGB social consequences	-.18	.22	-.11	-.84				

Table L-6

*Hierarchical Multiple Regression Analysis Predicting Self-Assurance From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	B	SE B	$\beta$	t	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	F
<i>Self-Assurance</i>								
Step 1								
Normative beliefs	.18	.12	.11	1.48	.01	.006		2.19
Step 2								
Normative beliefs	.12	.13	.07	.92	.05	.031	.035	3.11*
PGB approval/disapproval	.33	.17	.24	1.91				
PGB social consequences	-.11	.23	-.06	-.48				

\*p < .05

NORMS AND EMOTIONS IN SOCIAL AGGRESSION

Table L-7

*Hierarchical Multiple Regression Analysis Predicting Attentiveness From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	B	SE B	$\beta$	t	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	F
<i>Attentiveness</i>								
Step 1								
Normative beliefs	-.08	.11	-.05	-.72	.003	-.002		.52
Step 2								
Normative beliefs	-.08	.12	-.05	-.68	.003	-.013	.000	.18
PGB approval/disapproval	-.02	.16	-.01	-.11				
PGB social consequences	.02	.22	.01	.07				

Table L-8

*Hierarchical Multiple Regression Analysis Predicting Serenity From Normative Beliefs and Peer Group Beliefs (N = 228)*

Variable	B	SE B	$\beta$	t	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	F
<i>Serenity</i>								
Step 1								
Normative beliefs	.16	.12	.09	1.32	.01	.004		1.73
Step 2								
Normative beliefs	.18	.12	.11	1.45	.02	.007	.013	1.46
PGB approval/disapproval	.24	.17	.17	1.39				
PGB social consequences	-.37	.23	-.20	-1.62				