

**THE ROLE OF NARCISSISM AND SELF-ESTEEM IN PREDICTING PEER-  
ORIENTED AND DATING AGGRESSION IN A SAMPLE OF HIGH-RISK  
YOUTHS**

by

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## APPROVAL

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## **ABSTRACT**

In the psychological literature, low self-esteem has frequently been linked to aggressive behaviour in both youth and adults. These findings, however, have been challenged and it has been proposed that narcissism is actually the personality characteristic that gives rise to aggression towards others. Research investigating the relationship between narcissism, self-esteem and aggression in adolescents has emphasized the importance of examining both personality constructs to gain a better understanding of aggressive behaviour. The primary focus of this study was to expand on the literature examining narcissism, self-esteem and aggression in adolescents by investigating the relationship between these constructs in a sample of high-risk youth. Furthermore, this research not only investigated peer-oriented aggression, but extended the hypotheses to incorporate attitudes about dating aggression. Participants included 110 male and female youth between the ages of 12 to 18 years. Results indicated that narcissism predicts both peer-oriented aggression as well as attitudes towards aggression in a dating relationship for both male and female youth. Self-esteem was found to significantly predict peer-oriented aggression and attitudes towards dating aggression, but only when examined in conjunction with narcissism. No significant sex effects were found. Discussion focuses on the overlap between narcissism and self-esteem in predicting aggression, as well as an examination of different developmental trajectories which lead to aggressive behaviour.

## **DEDICATION**

I would like to dedicate this dissertation to my parents and my husband Erick, who have always provided me with unconditional support and encouragement throughout all of my academic endeavours. Thank you for fostering in me the perseverance, ambition, and drive needed to actualize this goal.

To Sophia, my beautiful baby girl, thank you for teaching me about what is most important, and for putting this accomplishment in perspective.

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## **INTRODUCTION**

In the psychological literature, low self-esteem has frequently been linked to aggressive behaviour in both youth and adults. These findings, however, have been challenged and it has been proposed that narcissism, sometimes conceptualized as unrealistically high self-esteem, is actually the personality characteristic that gives rise to aggression towards others (Baumeister, Smart, & Boden, 1996). Although the relationship between narcissism and aggression has been examined in undergraduate populations, there is little research examining this relationship in adolescents. Da Silva and Moretti (2003) investigated narcissism, self-esteem and relational and overt aggression in a group of secondary school youth. The authors found that narcissism and self-esteem together moderated the relationship between aggressive behaviour and hostile attribution bias. Their findings suggested that youth with high levels of narcissism in conjunction with high levels of self-esteem were more likely to aggress in response to perceived social rejection. Interestingly, youth with low narcissism and low self-esteem were also found to be more aggressive in response to social rejection. Barry, Frick and Killian (2003) also investigated the relationship between narcissism and self-esteem in moderating conduct problems in children. Their results indicated that the relationship between narcissism and conduct problems was moderated by the child's level of self-esteem, such that children with high levels of narcissism and low self-esteem showed the highest rates of conduct problems. These findings suggest that self-esteem and narcissism need to be examined in conjunction with one another in order to delineate the psychological roots of aggressive behaviour in adolescents.

A number of studies that have examined the constructs of narcissism and self-esteem in adult populations suggest that high levels of narcissism predict aggressive acting out in response to a perceived ego threat, while self-esteem has not been found to be predictive of aggression (Twenge & Campbell, 2003; Stucke & Sporer, 2002; Bushman & Baumeister, 1998). The nature of the relationship between these two constructs requires more in-depth examination in an adolescent sample to determine whether it is parallel to the patterns observed in the adult

literature. The primary focus of this study is to expand on the literature examining narcissism, self-esteem and aggression in adolescents by investigating the relationship between these constructs in a high-risk adolescent population. By utilizing a sample of adolescents who are at risk for engaging in aggression, we are offered the unique opportunity to determine whether relationships between variables observed in normative samples operate similarly in the most at-risk populations. Furthermore, this research not only investigated peer-oriented aggression, but extended the hypotheses to incorporate attitudes about dating aggression, an issue of increasing concern to school officials, parents and researchers alike.

### *Narcissism, Self-esteem and Aggression*

Traditionally, low self-esteem has been associated with aggressive behaviour. For example, it has been asserted that low self-esteem and “self-contempt” are powerful underlying causes of the violence in youth gangs. Similarly, studies examining domestic violence suggest that low self-esteem causes jealousy and insecurity, which in turn leads to violence (Baumeister, Smart, & Boden, 1996). These views imply that individuals with poor self-esteem are more likely to use aggression as a means of achieving social dominance and boosting their sense of self-worth. More recently, however, it has been argued that this view is widely asserted in the absence of empirical evidence to support it (Baumeister, Smart & Boden, 1996). A direct examination of the literature does not serve to clarify this argument, as the link between self-esteem and aggressive behaviour is inconsistent at best (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005).

First, it is important to provide a definition of self-esteem that best reflects the use of the construct in the research literature. According to Salmivalli (2001), the concept of self-esteem is most often used to refer to “a person’s global, overall evaluative view of his or her self.” (p.376). Based on this definition, Lochman and Lampron (1996) compared the self-esteem levels of aggressive and non-aggressive boys, and found that aggressive boys scored lower on a measure of overall self-esteem. Similarly, in a study examining self-esteem, parental attachment and aggression, increased self-esteem was associated with parental reports of lower aggression

and higher prosocial behaviour (Simons, Paternite, & Shore, 2001). Most recently, Donnellan and colleagues (2005) attempted to gain some insight into the role of self-esteem in predicting aggression by examining both narcissism and self-esteem across two culturally diverse samples (United States and New Zealand) and across different age groups (adolescents and college sample). They found a robust relationship between low self-esteem and externalizing problems, including aggression, both cross-sectionally and longitudinally. Furthermore, they found both self-esteem and narcissism to be predictive of aggressive behaviour independent of one another (Donnellan et al., 2005). According to the authors, "...our results support the concern about the dangers of narcissism but do not support the conclusion that low self-esteem is unrelated to externalizing problems" (Donnellan et al., 2005; p.333).

Conversely, Salmivalli et al. (1999) found no significant relationship between simple self-esteem and bullying behaviour in adolescents. In a study that investigated the relationship between bullying and scores on the Rosenberg Self-Esteem scale, no significant relationship was established between these two variables (Rigby & Slee, 1993). More recent studies examining self-esteem and narcissism in predicting aggressive behaviour have re-confirmed the above findings, with results consistently showing no significant correlation between self-esteem and aggressive behaviour (Twenge & Campbell, 2003; Bushman & Baumeister, 1998). Based on the evidence described in the literature, the role of self-esteem in predicting aggressive behaviour continues to remain unclear.

In contrast to the view that low self-esteem gives rise to defensiveness and hostility, Baumeister, Boden, and Smart (1996) proposed that narcissism, rather than low self-esteem, is at the heart of the problem. Although there are many ways to conceptualize narcissism, from Kohut's description of the narcissistic ego defense to the DSM-IV's definition of narcissistic personality disorder, a few common characteristics emerge. Individuals high on narcissism deny their personal weaknesses and negative characteristics as a defence to guard and maintain their self-image, resulting in a somewhat fragile self-view (Salmivalli, 2001; Stucke & Sporer, 2002). It is characterized by an exaggerated sense of self-importance as well as an unrealistic sense of

entitlement, and often results in the exploitation of others due to deficient empathy (American Psychiatric Association, 1994). According to Baumeister and colleagues (1996) individuals with an inflated sense of self feel threatened when their self-views are challenged, questioned, mocked or contradicted. This theory is founded on the self-appraisal literature, which hypothesizes that people seek to maintain consistent self-appraisals and therefore avoid adjusting their self-concept. With this in mind, individuals with an inflated self-view are reluctant to accept contradictory information that may result in decreased self-esteem. The aggressive or hostile reaction towards the source of the threat serves as a means of maintaining equilibrium in one's self-appraisal (Baumeister, Smart, & Boden, 1996).

A number of studies have been conducted to examine this theory. Twenge and Campbell (2003) rated male and female college students on measures of self-esteem, narcissism, and aggression. They created a laboratory experiment that was used to determine whether narcissists would be more likely than their non-narcissistic counterparts to react aggressively towards someone who had socially rejected them. Telling each participant that the two individuals they had chosen to be in their group had not chosen them created the illusion of social rejection. Participants were then asked to play a computer game with one of the nonexistent group members who had rejected them. The participant was told to press a button as quickly as possible at the end of each trial; the one who lost the trial would receive an unpleasant noise blast through the pressing of a button, with the participant adjusting the intensity and duration of the noise blast. The results indicated that aggressive responses, as assessed by the intensity and duration of the noise blast, were strongest in participants who rated high in narcissism. Furthermore, narcissists were rated as angrier than non-narcissists. Self-esteem did not predict aggression in response to social rejection. Stucke and Sporer (2002) also investigated narcissism and self-concept clarity in relation to aggressive behaviour in a group of undergraduate students. Self-concept clarity, which is associated with self-esteem, can be defined as the mental image or perception one has of oneself, and how cohesive and clear this image is. The researchers measured aggression based on the participants' evaluation of the experiment and the

experimenter. They found that narcissism and a lack of self-concept clarity predicted negative emotions and aggressive reactions after a lab manipulated failure on an assigned task, and that the aggression was always directed towards the source of the ego-threat.

In a similar experiment examining narcissism and aggression in college students, findings have indicated that the combination of personal insult and narcissism results in high levels of aggression towards the source of the insult (Bushman & Baumeister, 1998). Narcissism in men has also been found to predict rape-supported beliefs, lack of empathy for rape victims, and a higher level of punitive behaviour towards women who have rejected them sexually (Bushman et. al, 2003). In order to extend the narcissism theory of aggression to youth, Salmivalli and Kaukiainen (1999) examined bullying behaviour and its relation to three dimensions of self-esteem (self-evaluated, peer-evaluated, defensive egotism) in an eighth-grade adolescent sample. This study used self-report questionnaires to assess various dimensions of self-esteem as well as participation in bullying behaviour. Findings indicated that bullies could be differentiated from their peers based on ratings of defensive egotism, which was characterized as slightly above-average self-esteem combined with narcissistic, self-aggrandizing tendencies (Salmivalli & Kaukiainen, 1999).

The low self-esteem hypothesis and the narcissism hypothesis paint fundamentally different pictures regarding the types of personality issues underlying aggressive tendencies. In order to examine the discrepancy between the narcissism and self-esteem hypotheses, Da Silva and Moretti (2003) examined narcissism and self-esteem in conjunction with one another, with the assumption that, when these two constructs are combined, they may become more accurate in predicting aggression. This notion was supported, as it was the interaction between narcissism and self-esteem that was significant in predicting aggressive behaviour in adolescents. More specifically, individuals with genuinely high, healthy levels of self-esteem were differentiated from those with false self-esteem and narcissistic tendencies and those with fundamentally low self-esteem, distinctions that were impossible to make without mutual consideration of both constructs. With this distinction made, Da Silva and Moretti (2003) found that individuals with

high levels of narcissism and high levels of self-esteem, as well as those with low narcissism and low self-esteem, both demonstrated an increased likelihood to respond with aggressive behaviour when they perceived an event as hostile.

Barry, Frick and Killian (2003) also investigated the relationship between narcissism and self-esteem to conduct problems in children, to further unravel the discrepant findings regarding self-esteem as a causal factor in aggressive and delinquent behaviour. The researchers looked at 98 children, ages 9 to 15 years, who were considered at high risk for aggressive and antisocial behaviour problems. Findings indicated that the relation between narcissism and conduct problems was moderated by the child's level of self-esteem, such that children with high levels of narcissism and low self-esteem showed the highest rates of conduct-problems (Barry, Frick & Killian, 2003). Both of the aforementioned findings suggest preliminary evidence for the utility of looking at both narcissism and self-esteem in predicting maladaptive behaviour. However, the relationship between the two variables and aggressive behaviour in adolescence requires further investigation to elucidate the underlying mechanisms of aggression in youth.

#### *Attitudes About Dating Aggression in a High-Risk Adolescent Sample*

The developmental phase of adolescence is a particularly responsive period during which attitudes and practices concerning intimacy and control in romantic relationships are formed (Feiring, Deblinger, Hoch-Espada, & Haworth, 2002). The issue of dating aggression in adolescence is of increasing concern, as violence in adolescent relationships can establish patterns for the development of adult relationship violence (Wekerle & Wolfe, 1999; Wolfe, Wekerle, Reitzel-Jaffe, & Lefebvre, 1998). Although the many studies that have been conducted across the United States examining dating aggression in high school samples have produced varied results, one consistency is the significant percentage of youth who have experienced verbal and physical aggression within the context of a romantic relationship (James, West, Deters, & Armijo, 2000). Statistics and reports indicated that between 12-20% of high school youth had experienced abuse in one of their dating relationships (Henton & Cate, 1983; Bergman, 1992; Foshee et al., 1996). According to the Youth Risk Behavior Surveillance System

conducted by the Centre for Disease Control in the United States, 9.5 % of adolescents in the United States reported being physically assaulted in a dating relationship. This included being hit, slapped, pushed or shoved (CDC, 2001). Recently Sears, Byers, and Price (2006) examined the prevalence of psychological, sexual and physical abuse in dating relationships among Canadian boys and girls in Grades 7, 9 and 11. The researchers found that 19% of boys and 26% of girls admitted to using two or more forms of dating violence.

Although there is a steadily growing body of literature on domestic violence in adult relationships, research examining aggression in young adolescent relationships is still in its early stages (Chase, Treboux, O'Leary, & Strassberg, 1998). One reason for this may be the lack of serious intimate relationships in early adolescence, or the multiple, short-term dating relationships common among high school youth (Slep, Cascardi, Avery-Leaf, & O'Leary, 2001). This rationale, however, contradicts evidence that suggests a remarkable level of consistency in the perpetration of physical aggression across partners during the high school years (Cano, Avery-Leaf, Cascardi, & O'Leary, 1998). Regardless of whether a youth has been involved in an intimate relationship or not, it can be agreed that early adolescence is a period during which attitudes and ideas about relationships and the roles of both partners are beginning to form (Feiring et al., 2002; Chase et al., 1998).

Adolescence is a period of development marked by both cognitive and social changes. Adolescents move from concrete operational thinking to more abstract reasoning, allowing them to take into account multiple perspectives (Moretti & Holland, 2002). Their primary relationships begin to shift from family to friends, and dating relationships are introduced and steadily increase in their importance. For these reasons, adolescence is an ideal developmental period for addressing issues surrounding dating relationships, and for intervening and encouraging healthier lifestyle choices (Wekerle & Wolfe, 1999). Further, patterns of violence and abuse in youth may be less rigid and do not yet parallel adult-like patterns, making them more amenable to change (Slep et al, 2001).

The literature consistently shows that high-risk youth are at increased risk of developing violent patterns in their dating relationships (Wekerle & Wolfe, 1999; Wolfe et al., 1998; Chase et al, 1998). Youth whose childhoods have been marked by instability in family structure, maltreatment, or social disadvantage have been shown to move towards dating relationships earlier than their more fortunate counterparts, perhaps as a means of having their needs for attachment and intimacy met in a different realm (Mueller & Silverman, 1989). In a study by Wekerle and Wolfe (1996), over half of the 14-16 year old female sample (all receiving child protective services) experienced sexual and physical violence from a dating partner. O'Keefe (1997) found that male high school students were more likely to be aggressive with a dating partner when they came from families where they witnessed domestic violence, when they used substances, and when they believed that male-female dating aggression was justifiable. In a sample of 95 high-risk adolescents, Chase and colleagues (1998) found that 33% of males and 68% of females reported using physical aggression against their romantic partner. In regards to long-term effects of dating aggression on its victims, Silverman and colleagues (2001) found that physical and sexual dating violence was a significant risk factor for later substance abuse, unhealthy weight control behaviours, unplanned pregnancy, and suicidality. Based on these findings, we felt it integral to address the issue of dating violence in a high-risk adolescent sample, in the hopes of further delineating predictor variables that could aid in better prevention and intervention programs.

### *The Present Study*

The first goal of this research is to replicate and extend previous studies that have identified narcissism as a key factor in predicting aggressive behaviour by investigating this relationship in a high-risk adolescent sample. It has been found that examining narcissism and self-esteem in conjunction with one another allows one to differentiate between healthy self-esteem and a more grandiose, inflated self-view. Furthermore, looking at these two variables simultaneously allows for specific groupings to be established (e.g., high narcissism/high self-esteem; low narcissism/high self-esteem, etc.), providing more detail and clarification as to the

role of self-esteem and narcissism in predicting aggression (Da Silva & Moretti, 2003). Both relational and overt forms of aggression will be examined in this study, as it has been found that both of these styles of aggression are salient across genders and across adolescence (Prinstein, Boergers, & Vernberg, 2001). Based on previous research, we hypothesize that:

1. When included in a regression model with self-esteem and sex, narcissism will significantly predict both overt and relational aggression in this sample of youth.
2. Self-esteem will not significantly predict overt or relational aggression (no main effect) when included in a regression with narcissism.
3. Narcissism and self-esteem will interact to predict the degree to which a youth engages in peer-oriented aggressive behaviour (both overt and relational).

A further aim of this research is to extend the aforementioned examination of narcissism and self-esteem beyond peer-oriented aggression to incorporate aggression within the context of a romantic relationship. Because of the concern that some youth have yet to experience serious dating relationships, a measure of attitudes towards dating aggression will be used in order to ensure the inclusion of all participants. Attitudes and beliefs about the justification of violence in relationships have been identified as key risk factors in dating aggression, and have been found to predict future dating violence (Riggs & O'Leary, 1996; O'Keefe, 1997; Slep et al., 2001).

We therefore hypothesize that:

1. When included in a regression equation with self-esteem and sex, narcissism will significantly predict the degree to which a youth believes dating violence is acceptable,
2. Self-esteem will not significantly predict the increased acceptance of dating aggression (no main effect), and
3. Narcissism and self-esteem will interact to predict the degree to which a youth believes dating violence is acceptable.

Last, we will be examining sex-related patterns by including sex as an independent variable in the analysis. Based on previous findings we predict that no significant sex differences will be found in predicting peer-oriented aggression (overt and relational) or overall attitudes towards dating aggression.

## METHODOLOGY

### *Participants and Procedure*

Data was collected across two sites in Burnaby, British Columbia as part of a larger research project funded by the Canadian Institutes for Health Research (CIHR-Grant #54020) to Dr. M. Moretti. This research was also supported by the National Science and Engineering Research Council (NSERC). The data used in the present study was collected from 2003 to 2005. The first site (Maples Adolescent Treatment Centre) specializes in the provision of community delivered services to adolescents referred for severe conduct problems. The second site was a youth custody centre, and included youth in both open and secure settings. Guardian and youth consent was required to participate in the study, which involved three 1.5 hour sessions, each of which included an interview portion and a series of self-report questionnaires. Youth were provided with a small monetary reward upon completion of all three research sessions. The study received ethics approval from the university ethics review board as well as that of the custodial institutions. All youth were treated in accordance with ethical standards set forth by the American Psychological Association.

Data was collected for 149 male and female youth, ranging in age from 12-18 years. Participants missing more than 10% of data on a particular scale were not included in the analysis. Of the youth who completed 90% or more of the research protocol, missing item scores were replaced with the subject's mean item score for each scale. Based on these criteria, 30 subjects were eliminated from the study due to incomplete measures. Because we were accessing these youth during their stays either in a custody centre or in a mental health facility, incomplete measures were often due to a youth being transferred to a different facility or obtaining early release and being unable to complete the protocol in its entirety.<sup>1</sup>

Participants were 110 adolescents (50 males; 60 females) between the ages of 12 and 18 years ( $M = 15.27$ ,  $SD = 1.39$ ). Of the 110 participants, 63.6% identified themselves as Caucasian,

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<sup>1</sup> In order to maintain the anonymity of the participants, youth who did not complete items on individual questionnaires were not followed up or required to provide a reason for non-completion.

25.5% as Aboriginal, .9% as African Canadian, 8.2% as “other”, and 1.8% as bi-racial. Due to the mandate of the larger research project, females were oversampled and matched with same-aged males in order to achieve a balanced representation of both sexes.

### *Assessment of Self-Esteem*

Self-esteem was assessed using the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965), a 10-item self-report instrument of global self-esteem ( $\alpha=.87$ ). This measure remains the most widely used measure of global self-esteem due to its brevity, simple language, and one-dimensional factor structure (Corwyn, 2000; Fleming & Courtney, 1984). It has also been found to have a relatively stable internal consistency and factor structure across a wide variety of cultures and languages (Schmitt & Allik, 2005). Sample items include “I feel that I have a number of good qualities” and “I take a positive attitude toward myself”. Each item is answered on a 4-point scale where a score of 0 is given when the youth ‘strongly disagrees’ with the item, a score of 1 indicates that they ‘disagree’, a score of 2 indicates they ‘agree’, and a score of 3 indicates they ‘strongly agree’ with the item. Responses were summed to create a global self-esteem score, with high scores indicating a high level of self-esteem. Scores ranged from a minimum of 1 to a maximum of 30.

### *Assessment of Narcissism*

Narcissism was measured using items from a subscale of the Millon Adolescent Clinical Inventory (MACI; Millon, 1993). The MACI is a widely used self-report personality inventory designed to correspond with DSM nosology for both Axis I and II disorders. It is comprised of 160 yes/no items that provide scores on 31 scales describing personality characteristics, clinical syndromes, and personal problems. The Egotism personality subscale is comprised of 39 items that are designed to measure six components of narcissistic personality as it appears in the DSM-IV: admirable self-image, social conceit, confident purposefulness, self-assured independence, empathic indifference, and superiority feelings (McCann, 1997). The abbreviated Egotism scale used in this study was created by selecting the items with the highest weighted loadings

as outlined in the manual (items were rated as 1, 2, and 3 based on their weighting when calculating the total subscale score). This revised scale consists of 20 “I” statements that are answered on a dichotomous, true/false scale. Items on this scale tap characteristics associated with narcissistic personality disorder as defined by the DSM-IV, such as arrogance, an inflated sense of self-worth and the tendency to exploit others to one’s own advantage (e.g., I like being the centre of attention; I find it easy to control other people). An analysis of internal consistency revealed acceptable reliability ( $\alpha=.76$ ). Responses were summed to create a total narcissism score, with scores ranging from a minimum of 0 to a maximum of 20.

Recently Penney, Da Silva, and Moretti (2006) examined the factor structure of the Egotism subscale of the MACI in a group of high-risk youth, and found a three-factor solution. Factor 1 (Confident) contained items reflecting an admirable self-image and confident independence, while Factor 2 (Exhibitionism/Superiority) was characterized by exhibitionistic tendencies and feelings of superiority compared to others. Factor 3 (Conceit/Assuredness) was comprised primarily of items reflecting social conceit and an exaggeratedly secure sense of the future. When investigating the concurrent validity of the scale, Penney et al. (2006) found that Factor 2 was significantly related to outcome scores for delinquency and aggression, while Factor 3 scores were inversely related to the same outcome scores, suggesting a protective component of narcissism for high-risk adolescents. It is important to note that the abbreviated egotism scale used in the current study consists of items from across all three factors.

### *Assessment of Aggression*

The Integrated Measurement Framework of Aggression developed by Little, Jones, Henrich, & Hawley (2003) was used to assess aggression in peer relationships. The scale consists of 25 items used to measure overt and relational aggression. The measure contains six subscales, with three pertaining to overt aggression (pure overt, overt-reactive, overt-instrumental) and three pertaining to relational aggression (pure relational, relational-reactive, relational-instrumental). Participants rate how true each statement is for them on a 4-point scale (not at all, somewhat, mostly, completely). A sample item tapping overt aggression is “If others have

angered me, I often hit, kick, or punch them". For each participant, items comprising the three overt aggression subscales were summed to produce a total overt aggression score ( $\alpha=.92$ ), and items comprising the three relational aggression subscales were summed to produce a total relational aggression score ( $\alpha=.91$ ). Scores for the overt aggression scale ranged from a minimum of 12 to a maximum of 48. For the relational aggression scale, scores ranged from a minimum of 13 to a maximum of 52. Little and colleagues (2003) found strong internal validity for the measure, as well as support for differentiating between these dimensions of aggressive behaviour in youth.

#### *Assessment of Attitudes about Dating Aggression*

Attitudes towards dating aggression were measured using the Attitudes about Aggression in Dating Situations Scale (AADS; Slep, 2001). This measure consists of 12 items which describe acts of physical dating aggression within particular contexts. Five items describe a female aggressing against her male partner, and five items describe a male aggressing against his female partner. In addition, two items describe physically aggressive acts towards a same-sex peer (one male, one female) in a context that involved the opposite-sex dating partner. Participants are asked to rate the degree to which the aggressive response is acceptable on a 6-point Likert scale (strongly agree to strongly disagree). A sample of an item depicting female to male aggression is, "Michelle gets really angry at Carlos for ignoring her, so she hits him to get his attention." For each participant, scores were calculated for acceptability of male to female aggression, female to male aggression, and overall aggression (subscales coefficient  $\alpha=.78$  to  $.80$ ). A total aggression score was calculated by summing the responses from all items, with scores ranging from a minimum of 12 to a maximum of 72. The AADS was found to have reasonable reliability and validity when compared to other commonly used measures of attitudes towards interpersonal violence (Slep et al., 2001)

## RESULTS

### *Descriptive Statistics*

Table 1 displays the means and standard deviations for measures of narcissism, self-esteem, overt and relational aggression, and attitudes towards aggression in dating situations for the two sites at which data was collected: the Maples Adolescent Treatment Centre and the Burnaby Youth Custody Centre. In order to determine if it was appropriate to combine the samples, independent samples t-tests were conducted to examine mean differences for predictors and dependent variables across these two sites. Results indicated that the participants from the youth custody centre endorsed a significantly higher level of acceptance of female to male aggression than their counterparts at the Maples Adolescent Treatment Centre,  $t(108)=-1.954$ ,  $p=.026$ ,  $d=0.372$ . The means across the other predictor and dependent variables did not differ significantly from one another.

**TABLE 1**  
**Means and Standard Deviations of Variables Across Sites**

<i>Variable</i>	<i>Maples Adolescent Centre (n=55)</i>		<i>Youth Forensic (n=55)</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Narcissism scale	11.02	4.12	11.45	3.72
Rosenberg scale	18.56	6.08	19.54	4.68
Overt aggression	22.25	6.84	26.93	9.30
Relational aggression	22.31	6.64	22.11	7.98
AADS (total score)	37.56	10.34	41.34	9.87
AADS (male to female aggression)	11.54	4.91	12.62	5.61
AADS (female to male aggression)	19.64	5.82	21.54	4.32

The means and standard deviations for measures of narcissism, self-esteem, overt and relational aggression, and attitudes towards aggression in dating situations are presented for males and females separately in Table 2. For males, scores on the narcissism scale ranged from 6 to 19, with a mean of 11.54 and a standard deviation (SD) of 3.44. This was higher than typically found in normative samples, such as the high-school sample examined by Da Silva and Moretti (2003), where the mean score for male youth was 9.85 using the same measure. Female scores on the same scale ranged from 19 to 2, with a mean of 10.98 and an SD of 4.28. Again, this was higher than scores found in a normative sample (mean=8.07; Da Silva & Moretti, 2003) but expected given the nature of this clinical sample of youth with significant externalizing and behavioural issues.

Scores on the RSE for males ranged from 28 to 10, with a mean of 20.38 and an SD of 4.55. For females, scores ranged from 29 to 1, with a mean of 17.95 and an SD of 5.86. As compared with both American and Canadian high-school youth (Moore & Laflin, 1996; Da Silva & Moretti, 2003), the scores of the current clinical sample are lower than typically found in normative samples and expected given the nature of this clinical sample.

**TABLE 2**  
**Means and Standard Deviations of Dependent Variables**

<i>Variable</i>	<i>Girls (n=60)</i>		<i>Boys (n=50)</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Narcissism scale	10.98	4.28	11.54	3.44
Rosenberg scale	17.95	5.86	20.38	4.55
Overt aggression	24.37	9.00	24.86	7.84
Relational aggression	22.55	8.29	19.60	5.75
AADS (total score)	39.17	11.67	39.56	8.31
AADS (male to female aggression)	12.80	5.60	11.22	4.77
AADS (female to male aggression)	20.23	5.55	21.02	4.74

### *Preliminary Analysis*

Independent samples t-tests were conducted to examine mean differences for predictors and outcome measures for sex. There were no significant sex differences found for narcissism ( $p=.464$ ), however girls (mean=17.95) scored significantly lower than boys (mean=20.38) on self-esteem,  $t(108)=2.390$ ,  $p=.019$ ,  $d=0.463$ . No sex differences were found on the total score for the attitudes towards dating aggression measure ( $p=.623$ ), for male to female aggression ( $p=.118$ ) or female to male aggression ( $p=.431$ ).

For correlational analyses, bivariate scatterplots were examined for the presence of curvilinear relationships and none were evident (Tabachnick & Fidell, 2001). In order to investigate the moderating role of narcissism and self-esteem on peer-oriented aggression and the acceptability of dating aggression, the data was analyzed via hierarchical multiple regression analysis. For regression analyses examining the moderational model, predictor variables were centered (i.e., the mean of each variable was subtracted from the individual observations) before conducting the regression analyses to reduce collinearity between the individual variables and their cross products (Cohen, Cohen, West, & Aiken, 2003).

### *Correlational Analyses*

Zero-order correlations between narcissism, self-esteem, overt aggression, relational aggression, and attitudes towards aggression in a dating situation are presented in Table 3. An alpha level of .05 was used to determine statistical significance for all correlations. As expected and consistent with other research (Da Silva & Moretti, 2003; Barry et al., 2003) narcissism correlated significantly with overt and relational aggression for the overall sample. When the sample was divided by sex, results suggested that narcissism was significantly correlated with overt aggression for girls, and for overt and relational aggression for boys. A look at the AADS indicates that, for the overall sample, narcissism was found to be significantly correlated with an increased acceptance of aggression within a dating context, as well as increased acceptance of female to male aggression within a dating context. These relationships were significant for both male and female participants when the group was divided by sex.

Self-esteem was not correlated with any of the dependent variables for either sex. It is also important to note that narcissism and self-esteem were significantly yet moderately correlated in our sample, indicating that they are distinct, yet overlapping constructs.

**TABLE 3**  
**Inter-correlations among Independent and Dependent Variables**

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1. Narcissism scale							
Male	--	.187	.396**	.511**	.291*	.038	.253
Female	--	.523**	.344**	.213	.242	-.015	.371**
Overall	--	.413**	.364**	.285**	.257**	-.006	.331**
2. Rosenberg scale							
Male		--	-.058	.034	-.080	-.211	-.049
Female		--	.010	-.145	-.109	-.070	-.084
Overall		--	-.008	-.131	-.095	-.149	-.052
3. Overt aggression							
Male			--	.638**	.164	-.105	.194
Female			--	.721**	.327**	.302*	.343**
Overall			--	.669**	.270**	.071	.287**
4. Relational aggression							
Male				--	.199	.033	.092
Female				--	.302**	.195	.307**
Overall				--	.265**	.166	.214*
5. AADS (total score)							
Male					--	.629**	.733**
Female					--	.816**	.854**
Overall					--	.741**	.809**
6. AADS (male to female aggression)							
Male						--	.054
Female						--	.448**
Overall						--	.284**
7. AADS (female to male aggression)							
Male							--
Female							--
Overall							--

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

### *Hierarchical Regression Analyses*

Hierarchical regression analyses were performed in order to explore whether narcissism and self-esteem predicted overt aggression, relational aggression, and attitudes towards aggression in dating situations. Sex differences were examined by including participant sex as a predictor variable in the analysis. In each of these analyses, narcissism, self-esteem, and sex were entered in the first step, the two-way interactions between narcissism, self-esteem, and sex were entered in the second step, and the three-way interaction between narcissism, self-esteem and sex was entered in the third step. Based on this approach, the main effects will be removed from the two-way interactions, and the two-way interactions will be removed from the three-way interaction (Cohen et al., 2003).<sup>2</sup>

### *Narcissism and Self-Esteem as Predictors of Peer-Oriented Aggression*

Results from these hierarchical regression analyses are presented in Tables 4 and 5. As expected based on previous research and the study's hypotheses, a significant main effect for narcissism was found for both overt aggression,  $t(106)=4.544$ ,  $\beta=.443$ ,  $p<.01$  and relational aggression,  $t(106)=4.195$ ,  $\beta=.404$ ,  $p<.01$ . No main effect of sex was found ( $p=.640$ ) for overt aggression, however a significant trend was noted for sex in predicting relational aggression ( $p=.061$ ). A between-groups ANOVA to examine this finding revealed that girls were more inclined than their male counterparts to use relational aggression.

Although self-esteem was not significantly correlated with relational or overt aggression, it was found to be a significant predictor of both overt aggression,  $t(106)=-2.006$ ,  $\beta=-.200$ ,  $p=.047$  and relational aggression,  $t(106)=-2.627$ ,  $\beta=-.259$ ,  $p=.010$  when entered into the regression model. This suggests that self-esteem acts as a suppressor variable when examined in conjunction with narcissism. That is, the variable of self-esteem appears to be suppressing the variance in narcissism with which it overlaps, leaving a more 'purified' narcissism variable in the regression

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<sup>2</sup> Hierarchical regression analyses were conducted for each site and results indicated that the relationships between the predictors and the dependent variables were comparable across sites.

(Tabachnick & Fidell, 1996). Further interpretation and implications of this pattern will be considered in the discussion section.

No interaction effect was found for overt aggression ( $p=.262$ ) or relational aggression ( $p=.516$ ). These findings demonstrate that youth who frequently endorse narcissistic traits are more likely than youth with low narcissism to use both relational and overt forms of aggression against their peers.

**TABLE 4**  
**Summary of Hierarchical Regression Analysis for Variables Predicting Overt Aggression (n=110)**

<i>Variable</i>	$\beta$	<i>t</i>	<i>Sig.</i>	<i>spr2</i>	<i>r</i>
Step 1					
Narcissism (NA)	.443	4.544	.000	0.1632	.364**
Self-Esteem (SE)	-.200	-2.006	.047	0.0365	-.008
Sex	-.043	-.470	.640	0.0021	
Step 2					
Narcissism	.537	1.545	.126	0.0225	
Self-esteem	-.052	-.141	.888	0.0002	
Sex	.018	.112	.911	0.0001	
NA x SE	-.138	-1.128	.262	0.0121	
NA x Sex	-.128	-.336	.738	0.0011	
SE x Sex	-.158	-.437	.663	0.0018	
Step 3					
Narcissism	.549	1.547	.125	0.0228	
Self-Esteem	.148	.237	.813	0.0005	
Sex	.015	.096	.924	0.0001	
NA x SE	-.260	-.402	.688	0.0016	
NA x Sex	-.134	-.350	.727	0.0012	
SE x Sex	-.248	-.417	.677	0.0017	
3-way interaction	.115	.191	.849	0.0004	

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

Note:  $R^2 = .164$  for Step 1 (significant);  $\Delta R^2 = .011$  for Step 2 (non-significant),  $\Delta R^2 = .000$  for Step 3 (non-significant).

**TABLE 5**  
**Summary of Hierarchical Regression Analysis for Variables Predicting**  
**Relational Aggression (n=110)**

<i>Variable</i>	$\beta$	<i>t</i>	<i>Sig.</i>	<i>spr2</i>	<i>r</i>
<i>Step 1</i>					
Narcissism (NA)	.404	4.195	.000	.1421	.285**
Self-esteem (SE)	-.259	-2.627	.010	.0610	-.131
Sex	.171	1.896	.061	.0328	
<i>Step 2</i>					
Narcissism	.577	1.695	.093	.0272	
Self-esteem	.319	.889	.376	.0076	
Sex	.240	1.541	.126	.0225	
NA x SE	-.078	-.651	.516	.0041	
NA x Sex	-.179	-.480	.632	.0022	
SE x Sex	-.544	-1.539	.127	.0225	
<i>Step 3</i>					
Narcissism	.541	1.559	.122	.0234	
Self-Esteem	.027	.045	.964	.0000	
Sex	.248	1.579	.117	.0237	
NA x SE	.287	.455	.650	.0020	
NA x Sex	-.159	-.423	.673	.0018	
SE x Sex	-.274	-.473	.638	.0022	
3-way interaction	-.348	-.590	.557	.0034	

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

Note:  $R^2 = .183$  for Step 1 (significant);  $\Delta R^2 = .026$  for Step 2 (non-significant);  $\Delta R^2 = .003$  for Step 3 (non-significant).

#### *Narcissism and Self-Esteem as Predictors of Attitudes towards Dating Aggression*

Results from this hierarchical regression analysis are presented in Table 6. In support of our hypothesis, a significant main effect for narcissism was found for attitudes about aggression in dating situations (total score),  $t(106)=3.576$ ,  $\beta=-.358$ ,  $p=.001$ . This indicates that higher scores on narcissism are related to endorsing aggressive behaviour in the context of a dating relationship. No main effect for sex was found ( $p=.664$ ). Similar to the pattern noted with peer-oriented aggression, self-esteem was found to be a significant predictor of attitudes about aggression in dating situations (total score),  $t(106)=-2.461$ ,  $\beta=-.253$ ,  $p=.015$ , despite not being significantly correlated with the dependent variable. No interaction effect was found between narcissism and self-esteem ( $p=.887$ ).

**TABLE 6**  
**Summary of Hierarchical Regression Analysis for Variables Predicting Attitudes about Aggression in Dating Situations-total score (n=110)**

<i>Variable</i>	$\beta$	<i>t</i>	<i>Sig.</i>	<i>spr2</i>	<i>r</i>
<i>Step 1</i>					
Narcissism (NA)	.358	3.576	.001	.1076	.257**
Self-Esteem (SE)	-.253	-2.461	.015	.0543	-.095
Sex	-.041	-.435	.664	.0018	
<i>Step 2</i>					
Narcissism	.170	.474	.636	.0022	
Self-esteem	.089	.236	.814	.0005	
Sex	-.110	-.672	.503	.0044	
NA x SE	-.018	-.143	.887	.0002	
NA x Sex	.222	.568	.571	.0031	
SE x Sex	-.361	-.972	.334	.0090	
<i>Step 3</i>					
Narcissism	.188	.514	.608	.0026	
Self-esteem	.234	.363	.717	.0013	
Sex	-.114	-.689	.492	.0046	
NA x SE	-.200	-.301	.764	.0009	
NA x Sex	.212	.538	.592	.0028	
SE x Sex	-.496	-.812	.419	.0064	
3-way interaction	.176	.279	.781	.0008	

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

Note:  $R^2 = .117$  for Step 1 (significant);  $\Delta R^2 = .009$  for Step 2 (non-significant);  $\Delta R^2 = .001$  for Step 3 (non-significant).

In order to examine sex-specific relationships between narcissism, self-esteem and aggression in dating relationships, hierarchical regression analyses were performed with subscales of the AADS which tap males dating aggression toward females (Table 7), and females dating aggression toward males (Table 8). Interestingly, narcissism was not significantly predictive of condoning male dating aggression toward females ( $p = .546$ ). However, narcissism was significantly related to condoning female dating aggression toward males,  $t(106) = 4.386$ ,  $\beta = .428$ ,  $p < .01$ . No sex differences were found for male to female aggression ( $p = .218$ ) or for female to male aggression ( $p = .265$ ).

Self-esteem was not found to be predictive of the acceptance of male aggression towards females in a dating context ( $p=.169$ ), but it was found to be a significant predictor of the acceptance of female to male aggression in the context of a dating situation,  $t(106)=-2.522$ ,  $\beta=-.252$ ,  $p=.013$ . These results suggest that both male and female youth with low self-esteem were more likely to condone female aggression toward males in the context of a romantic relationship.

**TABLE 7**  
**Summary of Hierarchical Regression Analysis for Variables Predicting Attitudes about Aggression in Dating Situations-male to female aggression (n=110)**

<i>Variable</i>	$\beta$	<i>t</i>	<i>Sig.</i>	<i>spr2</i>	<i>r</i>
<i>Step 1</i>					
Narcissism (NA)	.063	.605	.546	.0035	-.006
Self-Esteem (SE)	-.148	-1.386	.169	.0177	-.149
Sex	.121	1.239	.218	.0142	
<i>Step 2</i>					
Narcissism	.178	.477	.634	.0022	
Self-esteem	-.353	-.896	.372	.0077	
Sex	.179	1.046	.298	.0106	
NA x SE	.058	.436	.664	.0018	
NA x Sex	-.155	-.379	.706	.0014	
SE x Sex	.268	.690	.462	.0046	
<i>Step 3</i>					
Narcissism	.198	.519	.605	.0026	
Self-esteem	-.195	-.291	.772	.0008	
Sex	.175	1.014	.313	.0100	
NA x SE	-.255	-.367	.714	.0013	
NA x Sex	-.166	-.402	.689	.0016	
SE x Sex	.122	.191	.849	.0004	
3-way interaction	.188	.290	.773	.0008	

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

Note:  $R^2 = .040$  for Step 1 (non-significant);  $\Delta R^2 = .006$  for Step 2 (non-significant);  $\Delta R^2 = .001$  for Step 3 (non-significant).

**TABLE 8**  
**Summary of Hierarchical Regression Analysis for Variables Predicting Attitudes about Aggression in Dating Situations-female to male aggression (n=110)**

<i>Variable</i>	$\beta$	<i>t</i>	<i>Sig.</i>	<i>spr2</i>	<i>r</i>
<i>Step 1</i>					
Narcissism (NA)	.428	4.386	.000	.1537	.331**
Self-Esteem (SE)	-.252	-2.522	.013	.0566	-.052
Sex	-.102	-1.120	.265	.0117	
<i>Step 2</i>					
Narcissism	-.062	-.181	.857	.0003	
Self-esteem	.080	.220	.827	.0005	
Sex	-.304	-1.929	.056	.0350	
NA x SE	.093	.763	.447	.0056	
NA x Sex	.585	1.552	.124	.0228	
SE x Sex	-.454	-1.266	.208	.0154	
<i>Step 3</i>					
Narcissism	-.028	-.079	.937	.0001	
Self-esteem	.359	.580	.563	.0032	
Sex	-.312	-1.961	.053	.0365	
NA x SE	-.257	-.402	.688	.0016	
NA x Sex	.566	1.490	.139	.0213	
SE x Sex	-.713	-1.213	.228	.0142	
3-way interaction	.333	.558	.578	.0030	

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

Note:  $R^2 = .163$  for Step 1 (significant);  $\Delta R^2 = .026$  for Step 2 (non-significant);  $\Delta R^2 = .002$  for Step 3 (non-significant).

## DISCUSSION

The primary focus of this study was to expand on the literature examining narcissism, self-esteem and aggression in adolescents by looking at the relationship between these constructs in a high-risk adolescent population. By investigating this question in a sample of youth at risk for engaging in aggressive behaviour, we had the opportunity to determine whether the relationships between these constructs, which have been observed in normative samples, operate similarly in at-risk populations. This study not only looked at the role of narcissism and self-esteem in peer-oriented aggression, but extended the research to incorporate dating aggression among adolescents.

### *Narcissism as a Predictor of Peer-Oriented and Dating Aggression*

Although aggression has been correlated with many different constructs, narcissism appears to be a consistent and robust predictor of aggressive behaviour in both adults and youth (Barry, Frick, & Killian, 2003; Salmivalli & Kaukiainen, 1999; Baumeister, Smart, & Boden, 1996). In laboratory studies as well as schoolyard and classroom observations, individuals with narcissistic traits, characterized by a grandiose sense of self, are more likely to respond to perceived ego threats with aggression. Based on previous research findings, we hypothesized that narcissism would predict both relational and overt forms of peer-oriented aggression (Da Silva & Moretti, 2003). This prediction was confirmed, supporting our earlier findings that boys and girls with elevated scores on a measure of narcissism were more likely to report using both relational and overt aggression. We also hypothesized that narcissism would be predictive of attitudes reflecting the acceptance of aggression in the context of romantic relationships. Again, this prediction was supported; youth who scored highly on narcissism were more inclined to approve of the use of aggression to deal with conflict between dating partners. Narcissism was related to the increased acceptance of physical aggression in response to ridicule, as well as verbal threats or physical threats on behalf of a male or female partner.

As the debate between the narcissism hypothesis and low self-esteem model of aggression continues to drive research in both forensic and developmental areas, our results support the view that an inflated and false sense of self worth is associated with the increased likelihood of aggressive behaviour in both adult and youth samples (Baumeister, Smart, & Boden, 1996; Salmivalli & Kaukiainen, 1999; Stucke & Sporer, 2002; Twenge & Campbell, 2003; Donnellan et al., 2005). These findings also parallel forensic literature examining psychopathic traits and their ability to predict antisocial and aggressive behaviour. The personality construct of narcissism mirrors many of the interpersonal and affective traits thought to lie at the “core” of the adult psychopathy syndrome (e.g., grandiosity, interpersonal exploitativeness, a lack of empathy; Cleckley, 1941). Moreover, these traits are thought by some to account for the bulk of variance in the relation between psychopathy and violence (Blackburn, 1998). Recent work examining psychopathy in youth has found that the interpersonal and affective traits that are predictive for adults are also strongly predictive in youth. Salekin and colleagues (2003) outlined a psychopathy scale (P-16) comprised of 16 MACI items, the same measure from which we derived our narcissism scale. The P-16 was presented as a scale that more clearly demarcates the interpersonal and affective features of the syndrome as compared to the Psychopathy Content Scale (PCS), a 20-item self-report measure also developed from items on the MACI. In their study, Salekin and colleagues found the P-16 to be more strongly associated with indicators of violent recidivism than the PCS, and emphasized the importance of considering egocentric, callous, and unemotional traits in the assessment of psychopathy and prediction of youth violence.

Another important implication of the current results is the extension of the narcissism hypothesis to a high-risk adolescent sample, suggesting that narcissism acts as an underlying mechanism that predicts aggressive behaviour across normal samples as well as those at increased risk for engaging in aggression. Based on our findings, we believe that narcissistic traits exist on a continuum, with stronger traits resulting in an increased vulnerability towards maladaptive coping. Rather than viewing normal and clinical samples as fundamentally distinct, our findings suggest that each sample reflects a different distribution of narcissistic traits, with the behaviour

itself (aggression) originating from a common process. Our findings also demonstrate that narcissism appears to be strongly predictive of aggression, or at least aggressive problem-solving, across different relationship contexts, further implicating narcissism as fundamental to aggressive acting out regardless of differences in the nature of relationships. In other words, individuals with narcissistic traits are more inclined to respond to ego threats with aggressive behaviour, regardless of who delivers the threat (e.g., peer, romantic partner, etc.).

As predicted, the effects of narcissism on the proclivity to aggression did not differ for male and female youth in our sample. Sex was pertinent, however, in predicting relational aggression, as noted by a significant trend in our regression results. This suggests that sex may determine how aggression is expressed. A between-groups ANOVA confirmed that girls were more inclined to use relational aggression than their male counterparts. These findings are in line with the vast majority of studies that have examined gender and aggression in normal samples and found clear gender-related preference for type of aggressive behavior: girls were reported to prefer relational aggression, whereas boys were found to favour overt forms of aggression (Salmivalli, Kaukiainen, & Lagerspetz, 2000; Crick & Grotpeter, 1995; Crick & Werner, 1998, Crick, 1995).

Our results suggest that the more narcissistic traits a youth possesses, the more inclined he/she is to use aggressive problem-solving. If narcissistic traits exist on a continuum, an interesting question arises. How pathological is 'narcissism' in adolescence? In addition to the increased cognitive sophistication and reasoning observed in adolescence, it is also a developmental period in which identity formation occurs and personality traits solidify. Narcissism is often seen as a healthy trait exhibited by many adolescents. The notion of adolescent egocentrism is described in the developmental literature as a more general set of beliefs and ideas that reflect an increasingly narcissistic self-view. For example, the concepts of the "imaginary audience", - where teens imagine their behaviour is the focus of everyone else's concern and attention - or the "personal fable" - where adolescents are convinced their personal experiences are unique from those around them (Steinberg, 1999, p.60), are suggestive of an

unrealistic and inflated view of self observed in many teenagers. Considering this, and in light of our current findings, one may question whether narcissistic traits are entirely maladaptive, or if there is a healthy component to narcissism. The results of the factor analysis performed by Penney and colleagues (2006) indicate that narcissism, as measured by the Egotism subscale of the MACI, is a multidimensional construct, and can be best understood as being comprised of three factors. Of these factors, Factor 3 (Conceit/Assuredness) was found to be a protective factor against aggressive/delinquent behaviour in high-risk adolescent boys and girls.

Da Silva and Moretti (2003) found that individuals with high self-esteem and low levels of narcissism did not respond to relational and overt provocations with aggressive behaviour even when they endorsed hostile intent attributions. It is possible that the overlap between the constructs of self-esteem and narcissism lies in the healthy component of narcissism, which, like high self-esteem, acts as a protective factor against aggression. It is also feasible that the healthy component of narcissism is high self-esteem. This further emphasizes the need to examine the two constructs in conjunction with one another when trying to understand aggressive behaviour.

#### *Self-esteem as a Predictor of Peer-Oriented and Dating Aggression*

Based on previous findings (Da Silva & Moretti, 2003; Barry, Frick, & Killian, 2003) we did not expect that self-esteem alone would be predictive of aggression in the current study. As hypothesized, self-esteem did not correlate significantly with any of the dependent variables. However, when entered into the regression model, self-esteem was found to be significantly predictive of both peer-oriented aggression (overt and relational) and attitudes towards aggression in dating situations. This pattern of findings indicates that self-esteem overlaps with a component of narcissism and removes the shared variability of the narcissism construct, leaving a 'purified narcissism' in the regression. An applied understanding of this pertains directly to the issue of healthy versus maladaptive narcissism, and the importance of examining self-esteem in conjunction with narcissism in relation to aggression.

Penney and colleagues (2006) found that Factor 3 (Conceit/Assuredness) of the narcissism construct, as measured by the Egotism subscale of the MACI, reflected an exaggerated sense of security about the future, as well as excessive social confidence. Items which loaded onto this factor included being confident about one's self and goals, being a leader among peers, having a sense of purpose in life, and feeling more mature than peers. As compared to the other items which reflect more maladaptive narcissistic traits, the items on Factor 3 could be viewed as reflective of a healthy, if not slightly exaggerated, sense of self. In fact, many of the items from the Egotism subscale of the MACI that load on Factor 3 are similar to the items on the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). For example, items from the RSE such as "I take a positive attitude towards myself," or "I feel I am a person of worth at least on an equal level with others." are also reflective of a healthy sense of self-assuredness. Importantly, it has been suggested that not all components of narcissism are inherently maladaptive or predictive of aggression; rather, certain features of the construct may work to facilitate positive outcomes such as autonomy, individuation, and self-reliance in adolescents as they navigate their transition into adulthood (Stolorow, 1986; Washburn et al., 2004).

Our findings strengthen the stance that the role of self-esteem in predicting aggressive behaviour should not be ignored, and that narcissism and self-esteem are closely related when trying to understand maladaptive coping in the form of aggressive acting out. Barry et al. (2003) and Da Silva and Moretti (2003) attempted to elucidate the relationship between self-esteem and narcissism by examining both constructs together to determine their unique and joint relationships with aggression. While self-esteem was not found to predict aggressive behaviour in either study, a trend towards statistical significance, with low self-esteem being associated with conduct problems, was noted by Barry et al (2005). Similarly, Da Silva and Moretti (2003) noted that low self-esteem, in conjunction with low narcissism, was related to increased aggression. Together these findings underscore the fact that self-esteem and narcissism are not synonymous with one another and that each appears to play an important and perhaps complimentary role in assessing the risk for aggression.

Of interest are the results of Da Silva and Moretti's (2003) study, in which self-esteem was not found to be independently predictive of aggression in a normative adolescent sample when entered into a regression equation with narcissism. This is a marked discrepancy from our current findings, in which self-esteem alone was found to be significantly predictive of aggression. One probable explanation lies in the comparison of clinical and non-clinical samples, and the differences between them. The distribution of self-esteem scores observed in Da Silva and Moretti's (2003) sample as compared to that observed in our current sample revealed two interesting differences: first, higher average as well as modal RSE scores were found in the normative sample; and second, the distribution of scores in the normal sample was more restricted and strongly skewed towards higher levels of self-esteem than was observed in the clinical sample. This restricted range of scores in the normative sample may have resulted in an attenuation of main effects for self-esteem. Alternatively, it may be that, due to the relatively high level of self-esteem in a normal population, the construct is not an independent predictor of aggression when entered into a regression with other variables.

There is another possible explanation as to why self-esteem was not found to be significantly predictive in a normative sample (Da Silva & Moretti, 2003) while it was found to be significantly predictive in our high-risk sample. This is based on the theory that youth with low self-esteem are more likely to be identified as high-risk, engage in aggressive or delinquent behaviour, and follow a more pathological trajectory. Fergusson and Horwood (2002) examined a wide range of factors to better understand variations in adolescent offending trajectories. They identified five trajectory groups: low-risk offenders, early, intermediate, and late onset adolescent-limited offenders, and a group of chronic offenders. The group of low-risk offenders were described as, "...very clearly a group of non antisocial young people who very occasionally lapsed into offending" (p.167). This description was based on their rates of conduct problems and offences in both middle childhood and adolescence. On the opposite end of the spectrum were chronic offenders, a group of youth with early conduct problems, who endorsed high rates of offending in adolescence. Interestingly, they found that low-risk offenders did not exhibit low

self-esteem as compared to the group of chronic offenders. The authors' suggest that low self-esteem may be a significant risk factor that differentiates high-risk youth. This could explain why low self-esteem was a significant factor in predicting aggressive behaviour in the current study's high-risk sample, whereas it was not a significant predictor when examined in a normal or low-risk sample (Da Silva & Moretti, 2003). A similar pattern was noted by Barry et al. (2003), as they did not find self-esteem to be predictive of conduct problems in a normative sample of school-aged children.

#### *The Interaction Between Narcissism and Self-Esteem in the Prediction of Peer-Oriented and Dating Aggression*

Based on previous findings (Barry et al., 2003; Da Silva & Moretti, 2003) we predicted an interaction effect between narcissism and self-esteem; specifically, high narcissism combined with high self-esteem and low narcissism combined with low self-esteem were expected to be associated with elevated peer-oriented aggression as well as increased acceptance of aggression in a dating relationship. Contrary to this prediction, no interaction effects were found. One reason for this discrepancy may be statistical in nature; that is, interaction effects which explain a significant portion of the variance of a dependent variable are difficult to find in field research due to reduced power and increased residual error which is brought on by including the product of two independent variables in a regression (McClelland & Judd, 1993). Another possibility is the clinical nature of the sample results in a restricted range of scores across the independent variables (self-esteem and narcissism) as compared to that found in a non-clinical sample. This would, again, make it very difficult to find a statistically significant interaction effect using a regression analysis.

#### *Moving from the Construct to the Individual: Trajectories of Narcissistic Traits, Low Self-Esteem and Aggressive Behaviour.*

While our results did not indicate an interaction effect between narcissism and self-esteem, we can speculate that the two constructs represent two distinct groups of aggressive individuals. One group appears to be individuals who endorse low self-esteem, and who

acknowledge increased aggressive behaviour as well as increased acceptance of aggressive behaviour in dating situations. We can infer that the second group are those individuals who endorse a high level of narcissistic traits. While both of these groups appeared to look similar on the measures that assess aggression (that is, they do not differ on the dependent variables) they may represent two different processes that lead to aggressive behaviour. According to the theory of 'threatened egotism' posited by Baumeister et al. (1996), individuals with high levels of narcissism possess an inflated sense of self which, due to its fragility, needs to be protected in order to maintain a consistent self-appraisal. For these individuals, aggressive retaliation occurs in response to the discrepancy between their view of self and the frequently less favourable one presented by an external source. Conversely, the low self-esteem hypothesis posits that individuals with low self-esteem will aggress against others as a way of establishing power and dominance; as a means of bolstering their low sense of self.

It appears that the results of our study indicate support for both theories, rather than an 'either or' stance. These two groups of youth, while seemingly different on an individual level, use aggressive behaviour as a response to modulate their feelings of self-worth in the face of threat. However, the motivations and processes that underlie the use of aggression appear intrinsically different (narcissism versus low self-esteem). The developmental trajectories to aggression for these two subtypes might also be distinct.

Kernis (2003) presents a model of self-esteem in which he puts forward four typologies of high, yet fragile self-esteem: defensive, dissociated, unstable, and contingent. He argues that high self-esteem is not always adaptive, and may represent a fragile self-view that needs to be protected by the individual. Conversely, he theorizes that low self-esteem is more reflective of negative self-concepts and poor self-worth, and is often accompanied by feelings of sadness and low self-confidence. Based on this model, Tracy and Robins (2003) propose that Kernis' (2003) four forms of high, fragile self-esteem represent different manifestations of narcissistic self-esteem regulation. With this in mind, Tracy and Robins (2003) propose a developmental model of narcissism, which incorporates early childhood experiences and temperament as factors which

influence the development of narcissism, or fragile self-esteem. Their model is based on early theories presented by Kohut (1977) who suggested that narcissism develops when parents over-idealize their children, placing unrealistic demands on them. The child, in turn, feels rejected when they are unable to achieve perfection, and may respond to this internal conflict in a variety of ways. This may include developing dissociated positive and negative representations of self, or developing a defensive self-regulatory style. In regards to the present research, the narcissistic child may resort to aggressive behaviour in order to protect their fragile and unrealistically high sense of self.

According to the above conceptualization (Kernis, 2003; Tracy & Robins, 2003), individuals with truly low self-esteem are distinct from those with narcissistic self-esteem regulation. It is important to recognize that these are only two possible theories for the development of low self-esteem as compared to narcissism, and that a multiple trajectory model would be more beneficial to developmental researchers as it would allow them to investigate a myriad of risk and protective factors, and to potentially enhance treatment options (Salekin & Frick, 2005). Nonetheless, these models offer a developmental window into understanding narcissism and self-esteem, re-framing the conceptualization of these constructs 'personality factors' in terms of developmental adjustments that become consolidated over time. A developmental perspective on the construct of narcissism or self-esteem helps us to better understand the motivations behind a youth's aggressive behaviour, and thus informs intervention strategies that are best suited for each adolescent.

### *Limitations and Future Directions*

This study is the first, to our knowledge, to examine the moderating role of narcissism and self-esteem in a high-risk adolescent sample. It is also the first to extend research beyond peer-oriented aggression to examine attitudes about aggression in dating situations. Yet there are several caveats to our findings that warrant discussion. First, this study used self-report measures for all independent and dependent variables. Self-report measures are the most common way to assess self-esteem in studies examining this construct in children and

adolescents and they provide insight into a youth's opinion of themselves, regardless of how they present to those around them. One could reason that this type of format invites honesty and candidness in a way that interviews cannot, or that, for a construct like self-esteem, only the individual him/herself can accurately rate their feelings of self-worth. On the other hand, one may question how proficient children and adolescents are at rating themselves on self-report measures; that is, do they have the capacity for self-reflection and self-awareness required to provide valid responses on a self-report questionnaire? For example, reporting high self-esteem may be the result of any number of different influences, such as a genuinely positive self-regard; a desire to present oneself as possessing high self-esteem when one does not; or bias due to social desirability (Salmivalli, 2001).

As discussed earlier, our current results, which found self-esteem to significantly predict aggression, was not reflective of previous results found in a normative sample (Da Silva & Moretti, 2003). It is possible that the Rosenberg Self-Esteem scale, an explicit measure of global self-esteem, may not be the most sensitive instrument to tap self-esteem across both clinical and non-clinical samples. Future replication and extension of these findings would likely benefit from the inclusion of explicit as well as implicit measures of self-esteem. Unlike explicit self-esteem, which is believed to be reflective of conscious self-appraisals, implicit self-esteem is defined as "unconscious, automatic, and overlearned self-evaluations" (p.120; Zeigler-Hill, 2006). Measuring implicit self-esteem is based on the dual-process model, which proposes that individuals process information on two levels: the cognitive level (rational, conscious) and experiential level (unconscious, affective) (Smith & DeCoster, 2001). An example of an implicit self-esteem measure is one which requires the participant to rate how much they like each letter of the alphabet on a 7-point likert scale (Initials Preference; Nuttin, 1985). Self-esteem is calculated based on the degree to which the participant demonstrates preference for the letters that comprise their own initials. Recently, Ziegler-Hill (2006) found that individuals with discrepant self-esteem (high explicit self-esteem and low implicit self-esteem) demonstrated the

highest levels of narcissism, suggesting that inclusion of both types of self-esteem measures is beneficial in further delineating the relationship between narcissism and self-esteem.

A broader limitation of the current research is the lack of a well-conceptualized developmental framework for understanding narcissism and its emergence as a personality dimension in children and adolescence. At this point we do not know of any research that investigates developmental changes in narcissistic beliefs and behaviour that would provide a meaningful baseline for evaluating departure from a normative course of development. While research has demonstrated that adolescence is marked by an increase in self-focus (Steinberg, 1999), research examining developmental trends in self-esteem often presents contradictory results (Robins et al, 2002). As a result, there is no benchmark in the developmental literature which can inform our expectations about the development of narcissistic behaviour or fragile self-esteem during the period of adolescence. The need for a developmental psychopathology perspective on the trajectories of narcissism in childhood and adolescence will allow us to differentiate between youth whose 'narcissistic tendencies' reflect a normative developmental shift from those who could be identified as at risk of a maladaptive trajectory (Salekin & Frick, 2005).

Last, the results of this study point to the equifinality of narcissism and self-esteem and their relationship with aggressive behaviour. Our findings infer different developmental trajectories leading to the same outcome (e.g., aggressive behaviour), suggesting there may be utility in analyzing the roles of narcissism and self-esteem on an individual, or 'person' level rather than examining these constructs solely on a continuum. Future research could focus on the individual profiles which exist when examining narcissism and self-esteem in conjunction with one another (e.g., high narcissism, high self-esteem vs. low narcissism, low self-esteem) to better understand aggressive behaviour from these various trajectories. This would also allow for a closer examination of the contexts, vulnerabilities, and motivational factors that influence aggressive coping in adolescents who may appear similar based on outcome measures, but who are distinct from one another in terms of self-regulatory processes and personality mechanisms.

### *Clinical Implications*

As mentioned earlier, the findings of this study point to different developmental trajectories leading to aggressive behaviour, both in the context of peer relationships and romantic relationships. Youth who scored high on narcissism were more likely to engage in and endorse aggressive behaviour than those with low narcissism scores, suggesting that narcissistic beliefs and attitudes should be interpreted as a red flag for maladaptive or aggressive coping strategies. Similarly, youth who endorsed having a low self-esteem were also found to be significantly more aggressive than those adolescents who scored high on self-esteem. Again, this implies that a low sense of self-esteem should also be recognized as a potential risk factor for aggressive acting out. While the results of this study indicate that these two groups of youth look similar in terms of their behaviour, being able to differentiate between these two groups will be important when informing intervention strategies, as these youth likely have different motivations and triggers which influence their actions. Programs or therapy that focus on a healthy, realistic self-view - where the adolescent is taught to build on their strengths while accepting areas of weakness - may be best suited for youth with a low sense of self-worth. For those youth with a defensive self-esteem, or narcissistic sense of self, the focus of intervention may be on how to cope with - and accept - criticism, and develop a better integrated sense of self.

Another important implication of this study is the protective value of a high, but healthy sense of self-esteem. Adolescents with a genuinely positive view of themselves are less likely to engage in aggressive behaviour, and to endorse aggressive acting out within the context of a romantic relationship. Because adolescence is a time during which major shifts in self-concept formation occur (Blyth & Traeger, 2001; Moretti & Higgins, 1999; Steinberg, 1999), the importance of helping youth to develop a healthy self-view is even more pronounced. In groups of high-risk youth, such as those sampled in this study, the possible repercussions of a fragile or narcissistic self-concept are even more detrimental.

In regards to attitudes towards dating aggression, both males and females found female-to-male aggression in a dating context to be more acceptable. This may be due to the fact that both socially and culturally, male violence against women is severely sanctioned, whereas female violence against men is at times glamorized in the media or not taken seriously (Sears, Byers, & Price, 2006). Sears and colleagues (2006) found that girls were more likely than boys to report using both psychological and physical forms of abuse within a relationship context. While our study did not examine the actual perpetration of dating aggression, research has demonstrated a robust correlation between attitudes about the acceptability of dating violence and its actual occurrence (Slep et al., 2001). Our results indicate a need to educate high-risk youth on the cyclical nature of relationship violence, and to teach these youth about adaptive problem-solving and communication in a relationship. Because adolescence is a time of individual growth and change, it is an ideal time to intervene and potentially change negative relationship trajectories for the better.

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