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Predicting aggression in late adolescent romantic relationships: A short-term longitudinal study

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Abstract

This study sought to prospectively predict aggression in the romantic relationships of 1180 college students from the United States (807 females; 373 males) over the course of two months with a set of intrapersonal risk and [protective factors](#), including personality characteristics that rarely have been examined in this population. After accounting for prior dating aggression, perpetration of verbal aggression was predicted uniquely by aggressive attitudes, emotion regulation, and for females, narcissism. Perpetration of physical aggression was predicted by aggressive attitudes, but only at low levels of emotion regulation, and the interaction of callous-unemotional

traits, emotion regulation, and gender: males with low levels of callous-unemotional traits perpetrated less physical aggression when they reported greater emotion regulation. These findings are among the first to show that personality traits and emotion regulation prospectively predict partner aggression in late adolescence and suggest mechanisms for continuity in interpersonal aggression from early adolescence to adulthood.

Keywords:

Aggression, Dating violence, Callous-unemotional traits, Narcissism, Emotion regulation, Personality

For many late adolescents, moving out of the family home is an important signifier of the transition to adulthood. Living independently typically affords greater opportunities for romantic and sexual relationships, particularly for those residing on college campuses among hundreds or thousands of peers. Establishing healthy intimate relationships is a key developmental task during this period (e.g., [Rutter, 1996](#); [Schulenberg, Bryant, & O'Malley, 2004](#)). Romantic relationships tend to become more emotionally and sexually intimate in late adolescence, but unfortunately, the rates of verbal, physical, and sexual aggression in these relationships also are high ([Haynie et al., 2013](#); [Whitaker & Savage, 2014](#)). Physical and sexual victimization are associated with serious health risks, including injury, depression, [substance use](#), and suicidality ([Exner-Cortens, Eckenrode, & Rothman, 2013](#); [Silverman, Raj, Mucci, & Hathaway, 2001](#)); verbal aggression also is associated with mental health problems (e.g., [Foshee, Reyes, Gottfredson, Chang, & Ennett, 2013](#)), and appears to be a precursor of physical aggression ([Exner-Cortens et al., 2013](#); [Murphy & O'Leary, 1989](#)).

Given the immediate consequences of relationship violence and its potential to set adolescents on a path toward continuing or escalating violence as they enter more committed partnerships in adulthood ([Foshee & Reyes, 2009](#)), it is critical to understand the factors that best predict the perpetration of aggression toward romantic partners. The present study utilized a prospective longitudinal design to test whether a set of intrapersonal characteristics could predict the occurrence of relationship aggression over the course of two months in a large sample of college-aged adolescents. We examined several risk and [protective factors](#), including personality traits that are associated with [intimate partner violence](#) in adulthood but rarely have been studied in adolescent samples, to identify whether any could uniquely predict new instances of aggression after accounting for prior history of dating aggression.

1. Romantic relationship aggression in late adolescence

Among the range of risk factors identified for the perpetration of [dating violence](#) (for a review see [O'Keefe, 2005](#)), the most consistent are a history of interpersonal aggression and the beliefs that aggression is normative and justifiable ([Jouriles, McDonald, Mueller, & Grych, 2012](#)). Although situational and relationship factors also contribute to the occurrence of aggression (e.g., [DeWall, Anderson, & Bushman, 2011](#); [Slotter & Finkel, 2011](#)), studies of aggression in childhood and adulthood indicate that there are fairly stable individual characteristics that promote continuity in aggressive behavior over the lifespan ([Hines, 2008](#); [Nestor, 2002](#); [Ross & Babcock, 2009](#)). For example, children exhibiting higher levels of callous-unemotional (CU) traits engage in more interpersonal aggression ([Frick, Cornell, Barry, Bodin, & Dane, 2003](#)), and narcissism predicts aggression in early adolescence even after accounting for CU traits ([Kerig & Stellwagen, 2010](#)). Personality characteristics also are prominent in some conceptual models of adult [intimate partner violence](#) and have been shown to correlate with perpetration (e.g., [DeWall et al., 2011](#); [Dutton, 1994](#); [Holtzworth-Munroe & Stuart, 1994](#)). For example, [Ehrensaft, Cohen, and Johnson \(2006\)](#) reported that antisocial and narcissistic traits assessed at age 21 predicted intimate partner violence at age 31. Personality characteristics rarely have been examined as predictors of aggression toward romantic partners during adolescence ([Reuter, Sharp, Temple, & Babcock, 2015](#)), but may be important for understanding sources of continuity in interpersonal aggression and identifying individuals at high risk for perpetrating aggression.

The transition to adulthood is an important time to identify predictors of intimate partner violence given the salience of romantic relationships at that time and the potential for patterns of relating to [intimate partners](#) to become established. It is equally important to identify [protective factors](#) that *reduce* the likelihood of relationship aggression. Developmental transitions represent times of opportunity, when behavioral trajectories may be more open to change (e.g., [Masten, Obravodić, & Burt, 2006](#); [Rutter, 1996](#)). However, very little of the research on relationship violence in adolescence has examined characteristics that might inhibit aggression ([McCloskey & Lichter, 2003](#); [Schumacher & Slep, 2004](#)). In fact, in their review of longitudinal research on adolescent dating violence, [Vagi et al. \(2013\)](#) found only 2 studies that assessed potential protective factors.

2. The present study

The current study aimed to address the complexity of [intimate partner violence](#) by assessing risk and [protective factors](#) across multiple domains ([Bogat, Levendosky, & Eye, 2005](#)). Specifically, it investigated whether college students' beliefs about aggression, personality characteristics, and emotion regulation could predict the occurrence of relationship aggression over the course of two months. Social [learning theory](#) suggests that individuals who believe that aggressing toward a partner is justifiable or is common are more likely to act on the aggressive impulses that can arise in romantic relationships (e.g., [Jouriles et al., 2012](#)). Although an association between aggressive beliefs and perpetration has been established in both adult and adolescent relationships ([Foshee, Bauman, & Linder, 1999](#); [Grych & Kinsfogel, 2010](#)), the few longitudinal studies conducted have produced mixed results. For example, [Foshee, Linder, MacDougall, and Bangdiwala \(2001\)](#) and [Connolly, Friedlander, Pepler, Craig, and Laporte \(2010\)](#) found that accepting attitudes about [dating violence](#) predicted relationship aggression assessed 9–12 months later, but [Wolfe, Wekerle, Scott, Straatman, and Grasley \(2004\)](#) did not.

Based on theory and prior research linking personality and aggression with children and adults (e.g., [Baumeister, Bushman, & Campbell, 2000](#); [Frick & White, 2008](#)), we assessed two personality characteristics: CU traits and narcissism. CU traits involve a lack of empathy and guilt, and poverty in emotional expression ([Frick & White, 2008](#)). Individuals high on CU traits may lack the empathic and emotional connection to their romantic partners that functions to inhibit aggressive behavior and consequently may aggress against their partner if they think it will suit their needs. Research indicates that children with CU traits are a unique subgroup of antisocial youths who exhibit a more violent and chronic pattern of delinquent behavior ([Frick, Stickle, Dandreaux, Farrell, & Kimonis, 2005](#)). For example, in comparison to children with conduct problems alone, children with both CU traits and conduct problems are more likely to perpetrate aggression ([Frick et al., 2005](#)). Longitudinal research indicates that there is continuity in this trait from childhood into early adulthood. For example, interpersonal callousness in boys ages 7 through 12 predicted impulsive and [antisocial behavior](#) in young adulthood ([Burke, Loeber, & Lahey, 2007](#)), and [Blonigen, Hicks, Krueger, Patrick, and Iacono \(2006\)](#) found that CU traits remained relatively stable from adolescence to early adulthood. Although research shows that antisocial and psychopathic traits in young adults are associated with [partner violence](#) perpetration ([Czar, Dahlen, Bullock, & Nicholson, 2011](#); [Woodward, Fergusson, & Horwood, 2002](#)), CU traits have not been investigated as a predictor of intimate partner violence.

Narcissism is characterized by a sense of superiority, importance, and a preoccupation with seeking the admiration of others (e.g., [Miller, Lynam, & Campbell, 2014](#); [Ryan, Weikel, & Sprechini, 2008](#)). The grandiose egotism of narcissistic individuals is fragile, however, and they are highly sensitive to threats to their self-image, especially from people they value ([Baumeister et al., 2000](#)). Consequently, perceived threats to their sense of superiority from romantic partners may trigger [anger](#) and aggressive behavior against them ([Baumeister et al., 2000](#); [Brown, 2004](#); [Campbell, 1999](#)). Research has linked narcissism to expressions of anger, hostility, and

dominance in adolescents and young adults ([Emmons, 1984](#); [Papps & O'Carroll, 1998](#); [Raskin, Novacek, & Hogan, 1991](#)), but little is known about the relationship between narcissism and violence in adolescent romantic relationships.

In contrast to these risk factors, we hypothesized that emotion regulation would predict lower levels of aggression. Emotion regulation refers to the process of managing affective responses to environmental demands ([Aldao, Nolen-Hoeksema, & Schweizer, 2010](#)). Interactions with romantic partners have the potential to elicit powerful emotions, including anger, and strong regulatory capacities may inhibit aggressive impulses that are triggered in relationships ([Slotter & Finkel, 2011](#)). Emotion regulation is negatively associated with aggression in children and adults (e.g., [Dunsmore, Booker, & Ollendick, 2013](#); [Pond et al., 2012](#)), and has been correlated with lower levels of aggression toward dating partners ([Clarey, Hokoda, & Ulloa, 2010](#); [Kinsfogel & Grych, 2004](#)) but its potential to prospectively predict aggression has not been tested.

2.1. Assessing dating violence

Most studies of relationship aggression in adolescence are cross-sectional and consequently do not show that the risk factors actually predict the occurrence of later aggressive behavior. This is particularly problematic because it is possible that some of these factors simply are correlates of aggression that are related through a third variable or are consequences of engaging in violence. For example, violent adolescents may report that aggression is normative as a way of justifying their own behavior. Longitudinal research thus is necessary to demonstrate whether particular factors predict the later occurrence of relationship aggression. A recent review of longitudinal studies of dating violence in adolescence showed that most hypothesized risk factors have been examined in only one or two studies ([Vagi et al., 2013](#)), and some of the correlates of violence identified in cross-sectional research do not predict aggression prospectively ([Connolly et al., 2010](#); [Foshee et al., 2001](#); [Jouriles, Grych, Rosenfield, McDonald, & Dodson, 2011](#)). However, the conclusions that can be drawn from existing longitudinal research rely on participants accurately recalling and reporting on events that may have taken place many months earlier, which can be particularly problematic for assessing verbally aggressive behavior because it often is less salient than physical aggression.

In an effort to devise a more accurate method for assessing dating violence, Jouriles and his colleagues ([Jouriles, McDonald, Garrido, Rosenfield, & Brown, 2005](#)) developed a cumulative assessment strategy in which participants are contacted biweekly by phone and asked to report any dating aggression that occurred over the prior two weeks. After 8 weeks, those reports are aggregated into a score reflecting the total amount of aggression that occurred over the prior two months. Assessing aggression frequently minimizes the impact of forgetting and recall biases on self-reports of aggression, and combining the biweekly reports into a cumulative score provides a longer sampling period. Although many adolescents report experiencing relationship aggression over the course of a year, the probability of it occurring in any given 2-week period is low.

[Jouriles et al. \(2005\)](#) found that aggregating the biweekly assessments into a cumulative total covering the 8-week period resulted in more reports of aggression than a single retrospective assessment covering the same 8-week period, supporting the idea that forgetting leads to underestimates of perpetration even in the span of two months. This finding implies that this assessment strategy allows for the detection of important findings that may not be recognized with the use of a one-time retrospective report. Further, this study showed that their short-term cumulative strategy produced more sensitive and valid reports of aggression than did the single retrospective follow-up ([Jouriles et al., 2005](#)). We adapted the method used by [Jouriles et al. \(2005\)](#) by conducting the biweekly assessments online rather than attempting to reach participants by phone.

The study investigated three research questions:

- 1) Do aggressive attitudes, CU traits, and narcissism uniquely predict greater perpetration of dating aggression over the course of two months after accounting for participants' prior aggression toward romantic partners?
- 2) Does emotion regulation predict fewer occurrences of dating aggression? [Finkel \(2008\)](#) proposed that inhibitory factors such as emotion regulation buffer or moderate the effect of risk factors on aggressive behavior, and so we examined interactive as well as direct effects of emotion regulation on perpetration.
- 3) Are there gender differences in the associations between these risk factors, protective factor, and perpetration? Although some studies have reported gender differences in the strength of the relation between particular risk factors and dating aggression, a consistent pattern has not emerged.

3. Method

3.1. Participants

Participants were 1180 undergraduate students between the ages of 18 and 25 ($M = 18.85$, $SD = 1.15$) from a medium-sized university in the Midwest; 89% of the sample was between the ages of 18 and 20. The sample was predominantly female (68.2%), and White: 77% identified as White, 8.9% as Asian, 8.1% as Latino or Hispanic, 5.2% as Black, and 0.8% as either Hawaiian or Native American. Participants were recruited from Psychology courses through the department's participant pool and received course credit.

3.2. Procedure

The study procedures were approved by the university IRB. At an initial visit, informed consent was obtained and participants completed a battery of online questionnaires in a computer lab. They provided demographic information and completed measures assessing attitudes about aggression, past-year aggression in their romantic relationships, personality, emotion regulation, and romantic relationship involvement. Due to the sensitivity of the questions asked, all participants received a list of on- and off-campus psychological services at the end of the session.

Participants then were sent an email message every two weeks for up to 8 weeks with a link to an online survey. On these follow-up e-mails, they first were asked if they had any interactions with a romantic partner in the prior two weeks. Because romantic relationships in this age group can take diverse forms (e.g., [Bogle, 2007](#); [Heldman & Wade, 2010](#)), "romantic" was defined broadly (e.g., committed relationship, casual dating, "hook-up", "friends-with-benefits"). If participants answered affirmatively, they completed an abbreviated version of the Conflict in Adolescent Dating Relationships Inventory (CADRI; [Wolfe et al., 2001](#)) to indicate whether any of a series of verbally, physically, or sexually aggressive behaviors had occurred. Following [Jouriles et al. \(2005\)](#), the reports on the CADRI were aggregated across the number of follow-up surveys completed (up to 4). In order to recruit as many participants as possible, students were eligible to participate throughout the semester; however, the number of follow-up surveys that participants were eligible to complete was restricted by the number of weeks left in the semester. Most students participated early enough in the semester to receive four follow-up surveys and almost all students who received follow-up surveys completed them; only 6.6% of those who were sent follow-up surveys did not respond. The majority of the sample (56.5%; $n = 667$) completed four follow-up surveys, 6.2% ($n = 74$) completed three, 11.9% completed two ($n = 141$), and 11.9% completed one ($n = 141$); 6.9% of those completing measures at Time 1 began the study too late in the semester to receive any follow-ups. A MANOVA showed that participants who completed follow-up surveys did not differ on the baseline measures from those who received them but did not complete them ($F(5, 1095) = 1.68$, $p = 0.14$). Because participants differed in the number of follow-ups completed, we computed a mean rather than a sum to create a summary perpetration score.

3.3. Measures

3.3.1. Romantic relationship aggression

Conflict in Adolescent Dating Relationships Inventory (CADRI; [Wolfe et al., 2001](#)). Participants indicated how often they engaged in each of 35 behaviors with a romantic partner using a 5-point scale ranging from “never,” to “often.” Three subscales were computed for the present study: Psychological Abuse ($\alpha = 0.86$; sample item: “I insulted him/her with put-downs”); Physical Abuse ($\alpha = 0.85$; sample item: “I kicked, hit or punched him/her”); [Sexual Abuse](#) ($\alpha = 0.62$; sample item: “I touched him/her sexually when he/she didn't want me to”). In the initial session, the questions referenced interactions occurring with a romantic partner in the past year, whereas the follow-up surveys referenced interactions occurring with a romantic partner over the prior two weeks.

3.3.2. Beliefs about aggression

Explicit Beliefs About Aggression (C-EBAA; [Foshee et al., 2001](#)). Participants' beliefs about the justifiability of aggressing against a dating partner were assessed with two subscales of the C-EBAA. The “Perceived Prevalence” scale includes items such as “Most guys hit their girlfriends”, and the “Prescribed Norms” scale includes items such as “It is OK for a boy to hit his girlfriend if she did something to make him mad.” Response ranged from 0 = *strongly disagree* to 3 = *strongly agree*. Coefficient alpha for a composite of the two subscales was 0.70, and thusly the two scales were combined to create a single measure reflecting participants' beliefs about the acceptability of aggression in romantic relationships.

3.3.3. Callous/unemotional traits

The *Inventory of Callous Unemotional Traits* (ICU; [Frick, 2004](#)). The ICU is a well-established 24-item measure that includes items such as “I do not care who I hurt to get what I want,” and “I do not show my emotions to others.” Responses range from 0 = *not at all true*, to 2 = *definitely true*. The ICU displayed good internal consistency in this sample ($\alpha = 0.78$).

3.3.4. Narcissism

[Narcissistic Personality](#) Inventory (NPI-16; [Ames, Rose, & Anderson, 2006](#)). The widely used NPI includes 16 item pairs, one of which is consistent with narcissistic traits and one which is not. Participants were asked to mark one statement in each pair that best describes themselves and responses consistent with narcissism are summed to create a total score. Responses included “I find it easy to manipulate people,” and “I can make anybody believe anything I want them to.” Coefficient alpha for this measure was 0.69.

3.3.5. Emotion regulation

The *Difficulties with Emotion Regulation Scale* (DERS; [Gratz & Roemer, 2004](#)). The DERS is a 36-item measure assessing characteristic patterns of emotion regulation and includes items such as, “I experience my emotions as overwhelming and out of control,” and “I have difficulty making sense out of my feelings.” Responses range from 1 = *almost never*, to 5 = *almost always*, and were summed to create a total score. With the current sample, the DERS demonstrated strong internal reliability with an alpha of 0.91.

4. Results

We first computed correlations among the variables assessed at Time 1 in order to replicate cross-sectional findings regarding risk factors for relationship aggression. We then conducted two hierarchical regression analyses to determine the capacity of the personality characteristics, emotion regulation, and aggressive attitudes to prospectively predict the occurrence of perpetration up to two months later (after accounting for past-year perpetration).

4.1. Cross-sectional associations

Most of the 1180 participants (82.2%) reported that they had begun dating and thus completed the measure on relationship aggression. Correlations between the Time 1 measure of dating aggression and the proposed risk and [protective factors](#) are presented in [Table 1](#). For males and females, aggression over the course of the past year was significantly correlated with all of the predictors. These findings replicate prior research documenting associations between dating aggression and cognitive and emotional constructs and show that personality characteristics also are related to relationship aggression in college-aged youth.

Table 1. Cross-sectional associations at time 1.

Variables	1	2	3	4	5
1. Past-Year Dating Violence Perpetration –		0.27**	0.16**	0.18**	–0.25**
2. Aggressive Attitudes	0.37**	–	0.19**	0.04	–0.16**
3. CU traits	0.22**	0.19**	–	0.04	–0.33**
4. Narcissism	0.27**	0.09**	0.14**	–	0.05
5. Emotion Regulation	–0.23**	–0.23**	–0.30**	0.02	–
N	970	1159	1158	1160	1159
M	9.85	15.15	36.42	4.20	124.35
SD	7.41	3.40	7.07	2.83	22.11

Note. Correlations for females appear above the diagonal; males' correlations appear below the diagonal.

Sample size, mean and standard deviation are reported for the whole sample.

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

4.2. Prospective prediction of perpetration

We then tested which predictors significantly forecast the occurrence of relationship aggression over the next two months. To examine whether verbal and physical aggression have different predictors (e.g., [Coker, Smith, McKeown, & King, 2000](#)) we analyzed them separately. Of the 1023 participants who participated in at least one follow-up survey, 319 (31.2%) reported that they did not have any romantic involvement during the follow-up period and therefore did not provide data on relationship aggression. A MANOVA revealed that participants who reported romantic involvement ($n = 704$) did not differ from those who did not on measures of aggressive attitudes, CU traits, and narcissism ($F(4, 1018) = 0.95, p = 0.44$). As [Table 2](#) shows, about half (51.6%; $n = 363$) of the participants who reported romantic involvement on the follow-ups described perpetrating one or more incidents of aggression toward their partner (54% of females, 44% of males). Consistent with prior research on aggression in romantic relationships, females reported higher rates of perpetration than males (for a review, see [Archer, 2000](#)), but the association between gender and perpetration was quite weak: Gender was not significantly correlated with perpetration of physical aggression ($r = 0.04, p = 0.38$) and had a significant but very small association with verbal aggression ($r = 0.09, p = 0.02$). Most of the aggressive incidents reported involved verbal aggression; only 7.4% of participants reported being physically aggressive and 0.9% reported sexual perpetration. Due to the low rate of occurrence, sexual aggression was not included in further analyses. Verbal and physical perpetration were significantly correlated ($r = 0.41, p < 0.001$).

Table 2. Aggressive behavior in the follow-up assessments: Frequencies ($N = 704$).

Variables	Frequency (Percent)	
	Males ($N = 218$)	Females ($N = 486$)
Verbal-Emotional Perpetration	82 (37.6%)	264 (54.3%)

Variables	Frequency (Percent)	
	Males (N = 218)	Females (N = 486)
Physical Perpetration	13 (5.9%)	62 (12.7%)
Sexual Perpetration	9 (4.1%)	4 (0.8%)

Note: 704 participants reported romantic involvement out of the total 1023 participants that received follow up measures. Those who did not report romantic involvement did not complete a measure of [dating violence](#).

Next, hierarchical regression analyses were conducted to test whether the proposed risk and protective factors predicted verbal and physical perpetration during the weeks following the initial session. Past-year dating perpetration reported at Time 1 was entered into the first step of the equation to determine if aggressive beliefs, CU traits, narcissism, and emotion regulation accounted for unique variance in dating aggression perpetration after accounting for prior history of dating aggression. Gender also was included given that female participants reported higher rates of aggression. In the second step, we tested whether emotion regulation moderated the associations between the other predictors and perpetration by adding the interaction of emotion regulation with aggressive attitudes, CU traits, and narcissism (all means centered; [Aiken & West, 1991](#)). Interactions between gender and each predictor were also included in this step to determine if their association with aggression differed for males and females. In a final step, the three-way interactions of gender, emotional regulation, and each risk factor were added to the equation for both analyses to examine whether males and females differed in any buffering effects of emotion regulation on dating aggression perpetration.

4.2.1. Predicting the perpetration of verbal aggression

As [Table 3](#) shows, after accounting for T1 aggression, aggressive beliefs ($\beta = 0.10, p = 0.02$) and narcissism ($\beta = 0.08, p = 0.03$) uniquely predicted higher levels of verbal aggression, whereas emotion regulation ($\beta = -0.10, p = 0.01$) predicted lower levels of verbal aggression (see [Table 3](#)). Step two of the analysis revealed that narcissism significantly interacted with gender ($\beta = 0.25, p = 0.047$). As seen in [Fig. 1](#), this interaction was explored using tests of simple slopes, which indicated that narcissism significantly predicted verbal perpetration for females ($\beta = 0.18, p < 0.001$) but not for males ($\beta = 0.08, p = 0.23$). Step 3 of the regression analysis did not reveal any significant three-way interactions. Overall, the simple or direct effects of the intrapersonal characteristics accounted for substantially more variance than did the interactions with gender or emotion regulation.

Table 3. Hierarchical regression analysis predicting the perpetration of verbal Aggression (N = 704).

Variable	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE</i>	<i>B</i> β	<i>B</i>	<i>SE</i>	<i>B</i> β	<i>B</i>	<i>SE</i>	<i>B</i> β
Past Dating Violence	0.17	0.02	0.35***	0.17	0.02	0.35***	0.17	0.02	0.35***
Aggressive Attitudes	0.10	0.04	0.10*	0.09	0.14	0.08	0.11	0.15	0.10
Gender	0.45	0.28	0.06	0.36	0.28	0.05	0.42	0.30	0.06
CU traits	0.01	0.02	0.02	0.00	0.07	-0.00	-0.01	0.07	-0.02
Narcissism	0.10	0.05	0.08*	-0.19	0.15	-0.16	-0.20	-0.15	-0.17
Emotion Regulation	-0.02	0.01	-0.10*	-0.02	0.02	-0.12	-0.02	0.02	-0.15
Agg. Att. X Gender				0.00	0.08	0.00	-0.01	0.09	-0.02
Agg. Att. X Emo. Reg.				-0.00	0.00	-0.05	-0.00	0.01	-0.04
CU traits X Gender				0.01	0.04	0.02	0.01	0.04	0.04
CU traits X Emo. Reg.				-0.00	0.00	-0.02	-0.00	0.00	-0.14
Narcissism X Gender				0.18	0.09	0.25*	0.19	0.09	0.26

Variable	Model 1		Model 2		Model 3	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Narcissism X Emo. Reg.			-0.00	0.00	0.01	0.01
Emo. Reg. X Gender			0.00	0.01	0.01	0.01
Agg. Att. X Emo. Reg. X Gender					-0.00	0.00
CU Traits X Emo. Reg. X Gender					0.00	0.00
Narcissism X Emo. Reg. X Gender					-0.01	0.00
<i>R</i> ²	0.207		0.219		0.222	
<i>F</i> for change in <i>R</i> ²	27.80***		13.66***		11.23***	

Note: Past [dating violence](#), Aggressive Attitudes (i.e., Agg. Att.), CU traits, Narcissism, and Emo. Reg. were centered at their means.

Gender: 1 = *Male*, 2 = *Female*.

p* < 0.05. *p* < 0.01, ****p* < 0.001.

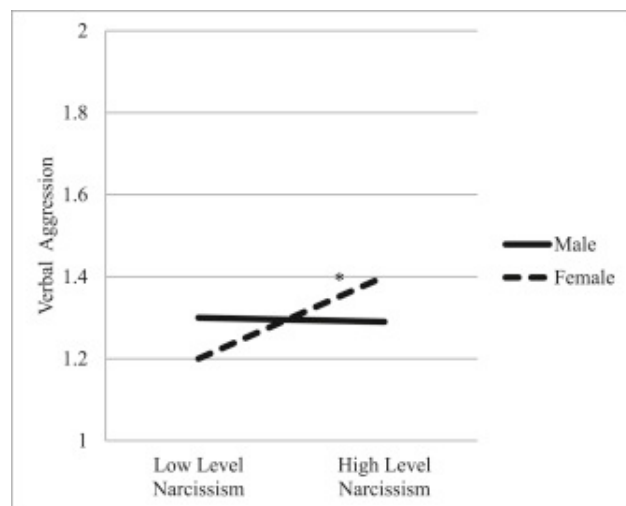


Fig. 1. Interaction of Narcissism and Gender.

Note: * $\beta = 0.18$, $p < 0.001$.

4.2.2. Predicting the perpetration of physical aggression

As [Table 4](#) shows, after accounting for T1 aggression, aggressive beliefs ($\beta = 0.14$, $p = 0.001$) and CU traits ($\beta = 0.15$, $p < 0.001$) predicted higher levels of physical perpetration. Step two revealed two significant interactions. First, the interaction between aggressive attitudes and emotion regulation was significant ($\beta = -0.09$, $p = 0.02$). As seen in [Fig. 2](#), tests of simple slopes revealed that aggressive attitudes predicted physical perpetration at low levels (<0.5 sd) of emotion regulation ($\beta = 0.22$, $p = 0.001$), but not at high levels (>0.5 sd) of emotion regulation ($\beta = 0.05$, $p = 0.51$). The interaction between gender and CU traits also was significant ($\beta = -0.34$, $p = 0.02$). In order to explore the nature of this interaction, simple slopes were calculated separately for males and females (see [Fig. 3](#)). These analyses showed that the relationship between CU traits and physical perpetration was positive and significant for both genders but stronger for males ($\beta = 0.28$, $p < 0.001$) than for females ($\beta = 0.14$, $p = 0.004$).

Table 4. Hierarchical regression analysis predicting the perpetration of physical Aggression (N = 704).

Variable	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE</i>	<i>B</i> β	<i>B</i>	<i>SE</i>	<i>B</i> β	<i>B</i>	<i>SE</i>	<i>B</i> β
Past Dating Violence	0.01	0.00	0.14**	0.01	0.00	0.14**	0.01	0.00	0.14**
Aggressive Attitudes	0.03	0.01	0.14**	0.15	0.03	0.27	0.05	0.03	0.28
Gender	0.03	0.05	0.02	0.13	0.05	0.02	0.08	0.05	0.07
CU traits	0.12	0.00	0.15***	0.04	0.01	0.47**	0.03	0.01	0.40*
Narcissism	-0.01	0.01	-0.03	-0.04	0.03	-0.22	-0.05	0.03	-0.23
Emotion Regulation	0.00	0.00	-0.00	-0.00	0.00	-0.09	-0.00	0.00	-0.16
Agg. Att. X Gender				-0.02	0.02	-0.15	-0.02	0.02	-0.15
Agg. Att. X Emo. Reg.				-0.00	0.00	-0.09*	-0.00	0.00	-0.34*
CU traits X Gender				-0.02	0.01	-0.34*	-0.01	0.01	-0.26
CU traits X Emo. Reg.				0.00	0.00	-0.06	-0.00	0.00	-0.56**
Narcissism X Gender				0.02	0.02	0.20	0.03	0.02	0.21
Narcissism X Emo. Reg.				0.00	0.00	-0.01	0.00	0.00	0.15
Emo. Reg. X Gender				0.00	0.00	0.06	0.00	0.00	0.14
Agg. Att. X Emo. Reg. X Gender							0.00	0.00	0.25
CU Traits X Emo. Reg. X Gender							0.00	0.00	0.51**
Narcissism X Emo. Reg. X Gender							-0.00	0.00	-0.10
R^2	0.085			0.114			0.136		
F for change in R^2	9.49***			6.02**			5.93**		

Note: Past [dating violence](#), Aggressive Attitudes (i.e., Agg. Att.), CU traits, Narcissism, and Emo. Reg. were centered at their means.

Gender: 1 = Male, 2 = Female.

* $p < 0.05$. ** $p < 0.01$, *** $p < 0.001$.

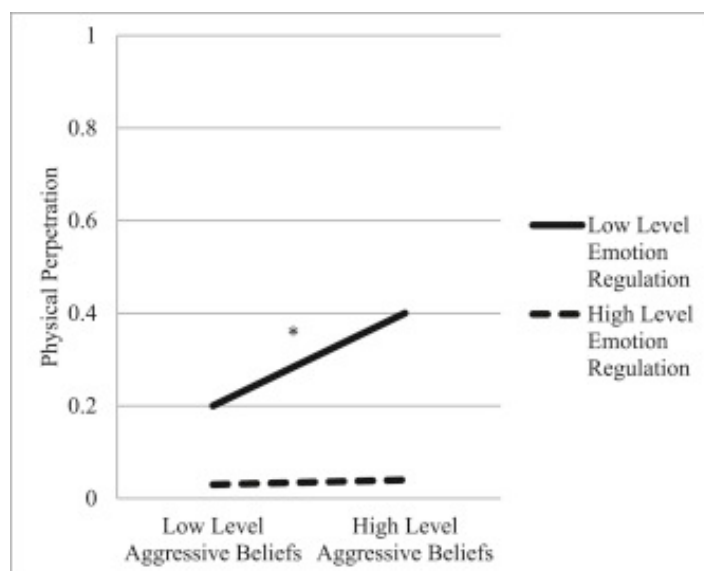


Fig. 2. Interaction of Aggressive Beliefs and Emotion Regulation.

Note: * $\beta = 0.22$, $p = 0.001$.

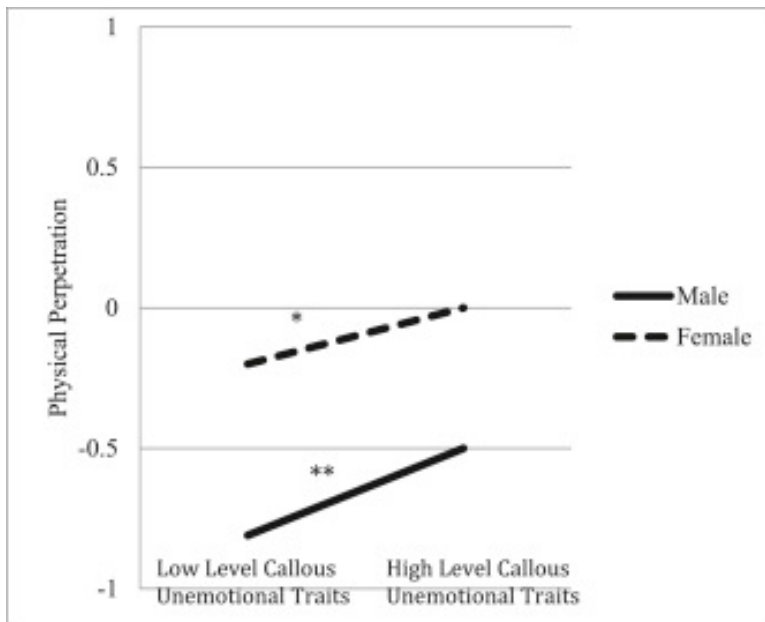


Fig. 3. Interaction of Callous Unemotional Traits and Gender.

Note: * $\beta = 0.14$, $p = 0.004$. ** $\beta = 0.28$, $p < 0.001$.

Step three of the regression analysis predicting physical perpetration revealed that the interaction between CU traits, emotion regulation, and gender was significant ($\beta = 0.51$, $p = 0.002$). To describe the nature of this interaction, we first conducted regression analyses testing the interaction of CU traits and emotion regulation in males and females separately. These analyses did not reveal a significant interaction for either gender. We then tested the interaction of emotion regulation and gender at high and low levels of CU traits, and found that this interaction approached significance at low levels of CU traits ($\beta = 0.79$, $p = 0.05$), but not at high levels of CU traits ($\beta = 0.36$, $p = 0.83$). The nature of this interaction was then explored by calculating simple slopes separately for males and females at low levels of CU traits. As Fig. 4 shows, this analysis showed that at low levels of CU traits, emotion regulation predicted less perpetration for males ($\beta = -0.45$, $p = 0.03$), but not for females ($\beta = -0.00$, $p = 0.68$).

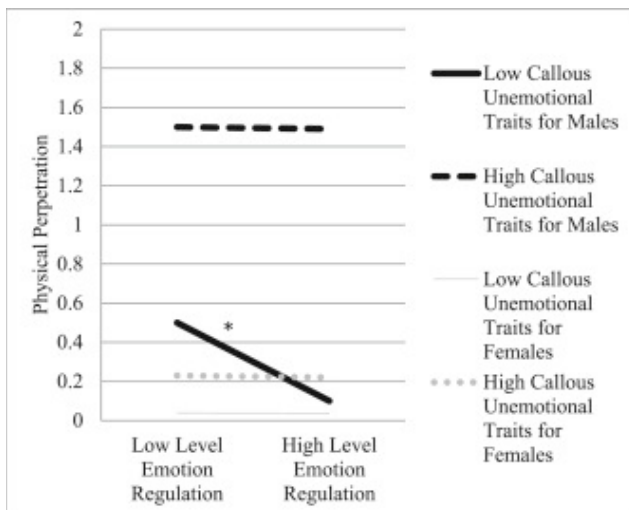


Fig. 4. Interaction of Callous/Unemotional Traits, Emotion Regulation, and Gender.

Note: * $\beta = -0.45$, $p = 0.03$.

5. Discussion

Late adolescence represents an important transitional period for the development of romantic relationships, which tend to become more sexually and emotionally intimate at this time but also present substantial risk for verbal, physical, and sexual aggression. By focusing on college-aged adolescents, this study bridges research on individual characteristics linked to interpersonal aggression in childhood with research documenting associations between [personality disorders](#) and [intimate partner violence](#) in adulthood. After accounting for participants' history of aggression in the prior year, we found that several intrapersonal characteristics uniquely and prospectively predicted the perpetration of romantic relationship aggression: greater verbal aggression was perpetrated by males and females who held beliefs that aggression was justifiable and normative, exhibited lower levels of emotion regulation, and by females who reported greater narcissism; greater physical aggression was perpetrated by males and females expressing higher levels of aggressive beliefs and greater CU traits. Emotion regulation also buffered the effect of aggressive beliefs on physical aggression, and males with low levels of CU traits were less likely to perpetrate physical aggression when they reported greater emotion regulation. This study thus offers new insights into personal characteristics that may contribute to continuities in relationship aggression over time as well as identifying a [protective factor](#) that may inhibit aggression toward romantic partners.

Beliefs about the justifiability of aggression are a well-established correlate of [dating violence](#), and the present results are consistent with longitudinal studies of high school students reporting that beliefs and attitudes predicted perpetration over periods of 2–12 months ([Connolly et al., 2010](#); [Jouriles et al., 2011](#)). Social learning models have emphasized the role of cognitive processes in guiding aggressive behavior (e.g., [Jouriles et al., 2012](#)) and these data provide further evidence that both males and females who believe that aggression toward romantic partners is justifiable or normative are more likely to act on aggressive impulses.

Personality characteristics have been associated with interpersonal aggression in children and [partner violence](#) in adulthood, but rarely have been examined in studies of adolescent dating violence. These results showed that even after accounting for a history of dating violence, there are intrapersonal traits that predict the future occurrence of relationship aggression. CU traits and narcissism may lead to violent behavior by influencing how individuals with these traits perceive and respond to their partner. People with high levels of CU traits lack empathy and guilt and consequently may pay little attention to their partners' needs and may have little remorse about hurting them if they feel angry or believe that will help them attain some goal (e.g., control in the relationship). The association of CU traits with greater physical but not verbal aggression is consistent with data linking CU traits with severe violence in childhood.

Individuals high in narcissism are particularly sensitive to experiencing threats to their inflated sense of self, and narcissistic individuals may be more likely to respond to perceived signs of rejection or devaluing by lashing out at, putting down, or even hurting their partner (e.g., [Baumeister et al., 2000](#)). It is not clear why narcissism predicted only verbal aggression and only for females, and it will be important to replicate these findings before any firm conclusions can be drawn. However, it is possible that females at this age experience greater romantic and sexual pressures and consequently are more sensitive and vulnerable to rejection. Narcissistic females may perceive that insulting or verbally demeaning their partners is a more effective way to restore a sense of superiority than pushing or hitting them; this may be particularly true in the present sample of well-educated, largely middle-class college students. A recent study of newlyweds found that wives' but not husbands' narcissism predicted declines in marital satisfaction and increases in marital problems over time ([Lavner, Lamkin, Miller, Campbell, & Karney, 2015](#)), suggesting that narcissism may have different implications for men and women. Further research is needed to clarify how it may differentially impact men and women's behavior in relationships.

These data also highlight the role of emotional regulation for understanding dating aggression, extending cross-sectional studies that have linked emotional reactivity or poor [anger](#) regulation to relationship violence (e.g., [Cohn, Jakupcak, Seibert, Hildebrandt, & Zeichner, 2010](#)). It is not uncommon for aggressive impulses to be triggered in emotionally intimate relationships ([Finkel, DeWall, Slotter, Oaten, & Foshee, 2009](#)), and [Finkel \(2008\)](#) argues that whether these impulses lead to aggressive behavior is a function of the balance of *impelling* and *inhibiting* forces (dispositional or situational factors that promote or discourage aggression, respectively) that are present. Research on dating violence has paid much more attention to identifying impelling or risk factors for aggression than inhibiting or protective factors (see [Vagi et al., 2013](#)), but understanding how individuals inhibit aggressive impulses is equally important. This study indicates that the capacity to effectively manage emotional arousal, and perhaps anger in particular, is important for inhibiting the aggressive impulses that sometimes arise in romantic relationships. Specifically, emotion regulation predicted fewer instances of verbal aggression and buffered the effects of aggressive attitudes on physical aggression for both males and females. Thus, even individuals who viewed aggression as more justifiable or normative were less likely to physically aggress against a partner if they had strong regulatory skills. In contrast, the finding that better emotion regulation predicted less aggression only for men low in CU traits raises the possibility that partner aggression in adolescents high in CU traits may be intentional and instrumental rather than a result of the inability to inhibit aggressive impulses.

6. Limitations

Although this study contributes to expanding our understanding of the predictors of relationship violence in late adolescent romantic relationships, it has a number of limitations as well. First, the sample is composed predominantly of middle-class, White undergraduate students, and the results may not be generalizable to other demographic groups. There also were many more female than male students in the sample (reflecting gender differences in students who enroll in Psychology courses), but the number of males ($n = 373$) is sufficiently large to provide adequate power for the analyses. Second, despite the prospective longitudinal design, causal inferences cannot be drawn because it is possible that third variables may account for the observed associations. Third, the participants reported low levels of sexual perpetration in the follow-up surveys, and as a result, we were not able to examine predictors of sexual aggression. Fourth, our understanding of [dating violence](#) is limited by the use of self-reports from a single reporter. Finally, a comprehensive understanding of dating aggression would be facilitated by examining situational and relationship characteristics that may predict aggression in addition to intrapersonal characteristics.

7. Implications for research and prevention

In this study we treated beliefs, personality characteristics, and emotional regulation as independent predictors, but as correlations among these variables indicate, they are interrelated. Both CU traits and narcissism are multifaceted constructs that have cognitive and emotional elements. For example, given their limited capacity to empathize, individuals with CU traits are more likely to view violence toward partners as acceptable (i.e., they are callous), and they tend to rely on suppression or avoidance as emotion regulation strategies (i.e., they are unemotional). Those high in narcissism may be more likely to believe that aggressing against a partner can be justifiable, at least under certain conditions (when they perceive rejection or insufficient admiration), and to be emotionally reactive when they experience a threat to their sense of self. Finding that these personality characteristics accounted for unique variance in perpetration shows that their predictive power is not due solely to aggressive cognitions or poor emotion regulation, and further exploration of how these qualities interrelate and contribute to aggressive behavior will provide a more thorough understanding of how individual characteristics give rise to relationship aggression.

Although we focused on individual [predictive factors](#) because of their potential for understanding continuities in partner aggression over time, contextual factors (i.e., relationship conflict) also reliably predict perpetration (e.g., [DeWall et al., 2011](#)). Exploring how individual and situational factors interact may further illuminate when and why fairly stable personal characteristics give rise to aggressive behavior. For example, people with particular personality characteristics (i.e., narcissism) may be sensitive to certain kinds of triggers (rejection), and to have more conflictual interactions that elicit [anger](#).

Prevention efforts designed to reduce relationship violence have focused primarily on reducing risk factors (e.g., attitudes about aggression), but the present data suggest that programs may benefit from enhancing [protective factors](#) (also see [Grych, Hamby, & Banyard, 2015](#); [Hamby & Grych, 2013](#)). Specifically, results from the current study demonstrate that helping individuals to better regulate their emotions may help reduce relationship aggression directly, and indirectly, by buffering the effects of otherwise stable personality traits. For example, third wave therapies such as [dialectical behavior therapy](#) (DBT; [Linehan, 1993](#)) focus heavily on teaching emotion regulation skills, and have proven to be effective for ameliorating difficult-to-treat mental disorders including [personality disorders](#) (e.g., [Linehan et al., 2015](#)). [Mindfulness](#) and [meditation](#) interventions also have been shown to aid in regulatory functions (e.g., [Lutz, Slagter, Dunne, & Davidson, 2008](#)). Although personality characteristics identified in childhood tend to be fairly stable (e.g., [Burke et al., 2007](#)), they are not unchangeable ([Frick, Kimonis, Dandreaux, & Farell, 2003](#); [Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007](#)). For example, [McDonald, Dodson, Rosenfield, and Jouriles \(2011\)](#) found that children ages 4–9 whose parents participated in a parenting intervention designed to reduce child conduct problems exhibited significant reductions in features of psychopathy. Therefore, documenting that certain personality characteristics increase the risk for relationship violence in adolescence could inform the focus of early interventions and consequently help to deflect a maladaptive developmental trajectory.

8. Conclusion

The current study builds on previous research by identifying intrapersonal characteristics that prospectively predicted the occurrence of aggression in romantic relationships in college students. By assessing perpetration every two weeks, we reduced the retrospective biases and forgetfulness that affect the accuracy of longer-term follow-ups, and the results argue for increasing attention to personality traits and emotion regulation in developing conceptual models of relationship violence and designing effective prevention efforts. Given that they are relatively stable, these qualities may help account for continuity in relationship aggression over time, but better understanding of the complex relationships between these risk and [protective factors](#) will help make prevention and intervention efforts for violence in adolescent dating relationships more focused and effective.

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