Short Communication

Contingent on contingencies: Connections between anger rumination, self-esteem, and aggression

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ABSTRACT

Mixed findings have engendered debate regarding the relationship between self-esteem and aggression. The present study tested the hypothesis that the contingency of perceived self-worth on external factors (i.e., contingent self-esteem) predicts aggression, particularly reactive, over and above global self-esteem, and that anger rumination exacerbates this relationship. The potential moderating role of gender was also considered. Regression analyses on a sample of 729 undergraduates revealed that contingent self-esteem interacts with both anger rumination and gender to predict reactive aggression. In combination with observations for proactive aggression, results of the present study suggest that the variation in previous findings may be at least partly explained by failure to account for the influences of self-esteem contingency, gender, and functional subtypes of aggression.

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1. Introduction

The relationship between self-appraisals and aggression has been a controversial one. The conventional view that negative self-appraisal predicts aggression (e.g., Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005) has been challenged by studies finding no relationship between self-esteem and aggression (e.g., Bushman & Baumeister, 1998), and by others suggesting that high self-esteem is linked to aggression (e.g., Baumeister, Smart, & Boden, 1996).

This research has largely focused on global self-esteem (GSE), narcissism, or interactions between them. However, other aspects of self-evaluation may affect aggression, including contingency of self-esteem (CSE), or the degree to which one's self-esteem depends on external factors such as appearance, popularity, or performance in various domains (James, 1890; Paradise & Kernis, 1999). Pursuit of self-esteem can have negative ramifications for learning, autonomy, and self-regulation (Crocker & Park, 2004). Even when GSE is high, adults with high CSE experience more negative affect and anger (Zeigler-Hill, Besser, & King, 2011), which can lead to aggressive behavior (Peled & Moretti, 2010).

Gender and anger rumination also influence aggression. Men tend to report more physical aggression than do women (Bailey & Ostrov, 2008). Anger rumination (AR), the tendency to focus and dwell on angry moods, experiences, their causes and consequences (Sukhodolsky, Golub, & Cromwell, 2001), predicts aggression over and above anger itself (Peled & Moretti, 2010). Although influences of gender and anger rumination are sometimes considered in aggression research, their moderating influences typically are not, despite their potential importance. For instance, the negative effects of self-esteem contingency (Zeigler-Hill et al., 2011) may be more likely to lead to physically aggressive retaliation in men than in women, since men have higher rates of physical aggression in general. Anger rumination might further fuel hostile responses to ego threats, thereby exacerbating the influence of contingent self-esteem.

While often neglected, important distinctions and correlates also exist between functional subtypes of aggression. Reactive aggression (RA) entails hot-blooded responses to perceived provocation, whereas proactive aggression (PA) involves calculated, instrumental acts of harm (Dodge & Coie, 1987). Of these subtypes, CSE likely contributes to RA, since self-esteem threats can evoke angry, hostile responses (e.g., Crocker & Park, 2004). In contrast, AR predicts both subtypes of aggression (White & Turner, 2014).

Based on this body of work, we predicted that CSE uniquely predicts aggression, particularly RA, over and above GSE. We also hypothesized that AR exacerbates this relationship, because the tendency to angrily ruminate increases the impact of CSE on RA. Finally, we explored whether gender also moderates these relationships.

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2. Method

2.1. Participants

Participants were 729 undergraduate students (75% female, 25% male) ages 18–24 at a public southeastern U.S. university. The sample was 86% non-Hispanic White, 8.5% Asian/Asian American, 2.7% Hispanic/Latino, 2.3% Black/African American, and 6.1% from other groups.

2.2. Procedure

Participants completed self-report measures as part of a larger confidential online study approved by the Institutional Review Board and received extra credit as compensation.

2.3. Measures

2.3.1. Global self-esteem

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is a 10-item measure consisting of both positive and negative self-evaluative statements on a 4-point Likert scale. Higher scores indicate higher GSE. In the present study, $\alpha = .91$.

2.3.2. Contingent self-esteem

Contingent Self-Esteem Scale (CSES; Paradise & Kernis, 1999). The CSES is a 15-item measure on a 5-point Likert scale of the degree to which self-esteem depends on external factors (e.g., "Even in the face of rejection, my feelings of self-worth remain unaffected"). Higher scores reflect more contingent self-esteem; $\alpha = .83$.

2.3.3. Anger rumination

Anger Rumination Scale (ARS; Sukhodolsky et al., 2001). The ARS is a 19-item questionnaire using a 4-point Likert scale. The total Anger Rumination Scale was used ($\alpha = .94$).

2.3.4. Aggression

Reactive and Proactive Aggression Questionnaire (RPQ; Raine et al., 2006). This 23-item measure consists of 12 PA items and 11 RA items each rated for frequency on a 3-point scale. In the current study, $\alpha = .85$ for both scales.

2.4. Data analysis

After screening for outliers and careless responders (Meade & Craig, 2012), hierarchical linear regressions were conducted separately for RA and PA as dependent variables. In the first step, GSE, CSE, gender, and AR were entered. Due to its association with other variables, race (dichotomized as non-Hispanic White or other racial group) was covaried. The non-focal aggression subtype (PA or RA) was also covaried to test for unique associations. Two-way interaction terms were entered in the second step for all combinations of AR, gender, GSE and CSE. Three-way interactions were entered in the third step. Significant interactions ($p < .05$) were probed using PROCESS (Hayes, 2013).

3. Results

Preliminary analyses were completed first. The sample descriptive statistics were as follows: RA (M = 6.39, SD = 3.47), PA (M = 1.02, SD = 1.34), AR (M = 32.63, SD = 9.31), CSE (M = 51.84, SD = 8.25), and GSE (M = 18.16, SD = 5.20). A number of significant bivariate correlations emerged (all ps < .001 unless otherwise noted). In the study sample, in comparison to those from other racial groups, non-Hispanic White participants reported higher GSE ($r = .14$) and lower AR ($r = -.11$, $p < .01$), RA ($r = -.09$, $p < .05$), and PA ($r = -.14$). Global and contingent self-esteem were moderately inversely correlated ($r = -.44$). RA was positively related to PA ($r = .56$), CSE ($r = .24$), and AR ($r = .47$), and inversely related to GSE ($r = -.09$, $p < .05$). PA was positively associated with AR ($r = .37$) and inversely with GSE ($r = -.16$). Finally, AR was inversely related to GSE ($r = -.43$) and positively to CSE ($r = .37$).

Table 1 provides regression results for RA. After controlling other variables, CSE and AR were positively related to RA ($\beta = .05$, $p = .001$; $\beta = .10$, $p < .001$), though the latter was qualified by a two-way GSE × AR interaction ($\beta = .08$, $p = .024$) and a three-way CSE × AR × gender interaction ($\beta = .01$, $p = .022$). These significant interactions were probed and plotted (Fig. 1a). Males high on AR and CSE reported the highest levels of RA, while females high on AR reported relatively high levels of RA, regardless of the contingency of their self-esteem. For individuals reporting low AR, the opposite gender relationship was found: females low on AR and low on self-esteem contingency reported the lowest levels of RA, and though males who reported low AR reported similar levels of RA, the contingency of their self-esteem had no effect on those RA levels.

Table 1
Regression of reactive and proactive aggression on study variables.

Variable	B	β	t	p	Variable	B	β	t	p
DV = Reactive aggression					*DV = Proactive aggression*				
Step 1: Gender	.05	.01	.20	.842	Step 1: Gender	.48	.16	5.12	<.001
Race	.11	.01	.37	.711	Race	−.30	−.08	−2.64	.009
PA	1.23	.48	15.19	<.001	RA	.20	.51	15.19	<.001
CSE	.05	.01	3.23	.001	CSE	−.01	−.06	−1.77	.077
GSE	.01	.01	.23	.817	GSE	−.01	−.02	−.64	.524
AR	.10	.28	6.42	<.001	AR	.02	.12	3.24	.001
Step 2: GSE × AR	.01	.08	2.27	.024	Step 2: GSE × AR	−.00	−.09	−2.43	.016
CSE × AR	−.00	−.01	−.35	.725	CSE × AR	.00	−.02	−.42	.676
GSE × CSE	−.00	−.04	−1.13	.260	GSE × CSE	.00	.09	2.30	.022
GSE × gender	.03	.02	.62	.536	GSE × gender	−.01	−.02	−.56	.576
CSE × gender	.04	.05	1.31	.189	CSE × gender	.01	.02	.49	.625
AR × gender	.01	.01	.19	.851	AR × gender	.01	.03	.68	.500
Step 3: GSE × CSE × AR	.00	−.03	−.73	.465	Step 3: GSE × CSE × AR	.00	.04	1.04	.297
GSE × CSE × gender	.01	.05	1.05	.293	GSE × CSE × gender	.00	.01	.16	.872
GSE × AR × gender	.01	.08	1.80	.072	GSE × AR × gender	−.01	−.12	−2.78	.006
CSE × AR × gender	.01	.11	2.30	.022	CSE × AR × gender	−.00	−.06	−1.09	.278

Note: Gender coded 0 = Female, 1 = Male. Race coded 0 = Other racial groups, 1 = Non-Hispanic White.