



## Emotion dysregulation, negative affect, and aggression: A moderated, multiple mediator analysis



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### ABSTRACT

Research on violence has highlighted the role of trait negative affect in reactive aggressive behavior. Emotion dysregulation is a multidimensional construct reflecting maladaptive ways in which a person experiences and responds to emotional states, and has also been empirically linked to aggression. This study sought to test the hypothesis that multiple facets of emotion dysregulation would mediate the relationship between negative affect and physical aggression in a nonclinical sample. An additional aim was to examine the moderating effect of sex in the relationship between negative affect and aggression, and whether mediators differ as a function of sex. Three-hundred and eighteen participants completed measures of physical aggression, difficulties in emotion regulation, and negative affect. Results showed that sex moderated the relationship between negative affect and physical aggression, and emotion dysregulation fully mediated the relationship between these variables in both males and females. While difficulty inhibiting impulsive behavior when distressed was a significant mediator across sexes, difficulties with emotional awareness demonstrated a mediation effect only in males. Findings provide preliminary support for the facets of emotion dysregulation that are important in understanding the negative affect – physical aggression association in males and females.

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### 1. Introduction

Aggressive behavior falls under the *externalizing* factor of the personality spectrum, a latent dimension encompassing substance abuse and antisocial behaviors (Kendler, Davis, & Kessler, 1997). Extant research has highlighted the role of negative affect (or Neuroticism) in the pathogenesis of reactive aggression (Miller & Lynam, 2006; Rothbart, Ahadi, & Hershey, 1994). Negative affect reflects the disposition to experience aversive affective states, encompassing emotions such as anger, fear, anxiety, shame and disgust (Watson, Clark, & Tellegen, 1988). Indeed, the propensity to experience negative affect has been a focal point of developmental theories of externalizing problems (Waldman, Singh, & Lahey, 2006).

The association between trait negative affect and aggressive behavior is well documented in the literature. In children, prospec-

tive associations between negative affect and aggression have been identified (Rothbart et al., 1994). Negative emotionality in adolescence predicts later antisocial personality disorder, over and above adolescent conduct disorder (Krueger, 1999). Among adults, negative affect variables are associated with aggression (Miller, Zeichner, & Wilson, 2012), with Neuroticism emerging as the primary broadband personality trait distinguishing reactive and proactive aggression (Miller & Lynam, 2006). Further evidence suggests the association between Neuroticism and aggression is related in part to an increase in aggressive emotions (Barlett & Anderson, 2012).

#### 1.1. Emotion dysregulation and aggression

To better elucidate the negative affect-aggression association, additional investigations into mechanisms underlying this relationship are needed. Emotion regulation (ER) reflects the set of processes that influence which emotions one has, when one has them, and how one experiences and expresses these emotions (Gross, 2013). Emotion dysregulation reflects maladaptive ways in which a person experiences and responds to emotional states

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(Werner & Gross, 2010). Emotion dysregulation has emerged as a possible mechanism by which negative affect influences psychopathology in general. Calkins' (1994) developmental theory of ER suggests the effects of behavioral traits (e.g., emotional reactivity) on social outcomes are mediated by individual differences in ER. Supporting this, in a study of maltreated and nonmaltreated children, Kim-Spoon, Cicchetti, and Rogosch (2013) found ER longitudinally mediated the relationship between emotional lability–negativity and internalizing symptoms. In the externalizing domain, ER difficulties have been shown to mediate the relationship between negative affect intensity and drinking to cope (Veilleux, Skinner, Reese, & Shaver, 2014). The role of ER in explaining the link between negative affect and aggression has been less examined however, and warrants further inquiry.

Several lines of research support the notion that negative affect may lead to aggression through ER difficulties (see Robertson, Daffern, & Bucks, 2012). In conceptualizing clinical anger, Gardner and Moore (2008) posit aggression functions as avoidance, thereby serving to regulate anger in the short-term. Among adolescents, emotion dysregulation prospectively predicts aggressive behavior, although psychopathology in general does not predict later ER deficits, providing evidence for emotion dysregulation as a risk marker (McLaughlin, Hatzenbuehler, Mennin, & Nolen-Hoeksema, 2011). In a student sample, deficits in self-regulation partially mediate the relationship between anger rumination and reactive aggression (White & Turner, 2014).

#### 1.1.1. Specific ER skills and aggression

Although significant advances have been made in the study of ER, research has been hindered by problems with definitional clarity (Zinbarg & Mineka, 2007). We take an acceptance-based perspective, in which emotion dysregulation is conceptualized as a multidimensional construct involving difficulties with the awareness, understanding, and acceptance of emotions; difficulties engaging in goal-directed behavior and inhibiting impulsive behaviors; and, limited access context-appropriate regulatory strategies when distressed (Gratz & Roemer, 2004).

Prior research suggests problems in each of these domains are associated with aggression. In a sample of undergraduates, self-reported difficulties inhibiting impulsive behaviors when distressed, difficulties engaging in goal-directed behavior when distressed, and limited perceived access to ER strategies each exhibited significant correlations with frequency of intimate partner abuse (Gratz & Roemer, 2004). In another study, emotional nonacceptance mediated the association between restrictive emotionality and aggressive behavior in males (Cohn, Jakupcak, Seibert, Hildebrandt, & Zeichner, 2010). Recently, using experience sampling methodology, the ability to understand and differentiate between emotions was shown to moderate the relationship between anger and aggression (Pond et al., 2012). Together, these studies suggest negative affect may increase the likelihood of aggression via one's difficulty adaptively regulating these experiences.

#### 1.2. Sex differences in emotional arousal and aggression

Research on aggression suggests that males are more aggressive than females (see Bettencourt & Miller, 1996). In a meta-analysis by Knight, Guthrie, Page, and Fabes (2002), the magnitude of sex differences in aggression covaried as a function of emotional arousal, suggesting that divergence in aggression between males and females partially stems from differences in emotional arousal or regulation. Consistent with this, emotion dysregulation was recently found to mediate the link between childhood maltreatment and intimate partner violence in males only (Gratz, Paulson, Jakupcak, & Tull, 2009). Given these findings, investigations into relationships between emotional arousal, regulation,

and aggression should also examine potential sex differences, as these associations may vary as a function of sex.

#### 1.3. The present study

This study will elaborate on the relationship between trait negative affect and aggression, and examine the role of multiple aspects of ER in explaining this relationship. We hypothesized that trait negative affect would significantly relate to trait physical aggression, and this association would be stronger in men as compared to women. Next, we hypothesized that six facets of emotion dysregulation (emotional nonacceptance; difficulties engaging in goal-directed behaviors when distressed; difficulties controlling impulsive behaviors when distressed; lack of emotional awareness; limited perceived access to emotion regulation strategies; and, lack of emotional clarity) would be associated with trait physical aggression at the bivariate level, and ER difficulties would mediate the relationship between negative affect and aggression. To evaluate this question, we examined the simultaneous and shared influence of individual ER domains in mediating the relationship between negative affect and physical aggression and the moderating role of sex among these associations.

## 2. Method

### 2.1. Participants

Three-hundred and eighteen undergraduate students were recruited from a university in the northeastern United States. Participants were required to be at least 18 years old and able to read and understand English. Ages ranged from 18 to 67 years ( $M = 21.35$ ,  $SD = 5.83$ ), and 71% of the sample was female. The sample was 62.6% Caucasian, 16% African–American, 11% Hispanic, 5% Asian, and 5.4% 'Other.' Median household income ranged from 46,000 to 50,000. This study received full approval from the University Institutional Review Board.

### 2.2. Materials

#### 2.2.1. Difficulties in emotion regulation scale (DERS)

The DERS (Gratz & Roemer, 2004) is a 36-item self-report questionnaire designed to assess emotion dysregulation both generally and in specific domains. In the current study, internal consistency was adequate for the total score ( $\alpha = .93$ ) and the six factor-analytically derived subscales ( $\alpha$  ranging from .79 to .89). The six subscales measure nonacceptance of emotional responses (Nonacceptance); difficulties engaging in goal-directed behaviors when distressed (Goals); difficulties controlling impulsive behaviors when distressed (Impulse); lack of emotional awareness (Awareness); limited access to emotion regulation strategies perceived as effective (Strategies); and, lack of emotional clarity (Clarity).

#### 2.2.2. Positive and negative affect schedule (PANAS)

The PANAS (Watson et al., 1988) is a 20-item self-report measure designed to assess two dimensions of emotional experience: negative affect (NA), the disposition to experience negative mood states; and, positive affect (PA), the disposition to experience positive mood states. The PANAS has previously demonstrated excellent psychometric properties. The NA scale ( $\alpha = .85$ ) was utilized for this study, and participants rated mood descriptors based on how they feel generally.

#### 2.2.3. Aggression questionnaire (AQ)

The AQ (Buss & Perry, 1992) is a 29-item self-report questionnaire which assesses the dispositional traits of aggression in cogni-

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