



School burnout and intimate partner violence: The role of self-control



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ABSTRACT

The deleterious effects of school burnout (academic-related stress) on academic, physiological, and cognitive outcomes have been previously established. However, school burnout's relationship to emotional and relationship outcomes as well as underlying factors contributing to their potential relationship are less understood. Therefore, three studies were conducted to fill this gap by examining the relationship between school burnout, self-control, emotional dysregulation, and intimate partner violence. In emerging adult samples, results demonstrate that school burnout is positively associated with emotional dysregulation, independent of anxiety and depression (Study 1), and that self-control moderates this relationship (Study 2) as well as the relationship between school burnout and intimate partner violence perpetration and victimization (Study 3). Specifically, the relationship between school burnout and emotional dysregulation (Study 2), as well as with both victimization and perpetration (Study 3), are stronger under lower levels of dispositional self-control. Findings from these studies identify school burnout as an important phenomenon of inquiry in relation to psychosocial outcomes among emerging adults. More importantly, findings suggest that self-control may serve as a potential point of intervention for ameliorating school burnout's damaging effects. Limitations and directions for future research are discussed.

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1. Introduction

Burnout within the occupational setting has been of interest to researchers since the 1970's (see *Schaufeli, Leiter, & Maslach, 2009*). However, in light of growing academic demands and rising levels of psychological distress among college students (*Wang, 2016*), researchers have begun to investigate burnout in tertiary education. School burnout, characterized by high levels of school related cynicism, emotional exhaustion and feelings of inadequacy, occurs as a result of the depletion or 'wearing out' of mental and emotional resources needed to provide meaningful engagement in one's work (*Salmela-Aro & Upadyaya, 2014*). Although school burnout has been shown to be related to academic (*May, Bauer, & Fincham, 2015*) and health outcomes (*May, Sanchez-Gonzalez, Brown, Koutnik, & Fincham, 2014; May, Sanchez-Gonzalez, & Fincham, 2014; May, Sanchez-Gonzalez, Seibert, & Fincham, 2016*), little is known about how school burnout is associated with individual emotional functioning and relationship outcomes, such as intimate partner violence (IPV).

The conceptual link between school burnout, emotional functioning, and ultimately intimate partner violence may reside with self-control. Self-control, defined as the capacity to inhibit immediate impulsive behavioral and emotional responses resulting from stress, is said to be contingent upon a depletable resource (*Baumeister & Heatherton,*

1996). Individuals with low dispositional self-control, relative those with high self-control, will have fewer resources to inhibit impulsive emotionally driven behaviors. Thus, the relationship between school burnout and emotional dysregulation as well as intimate partner violence is likely to be stronger under low dispositional self-control. The current research attempts to address this possibility by first investigating associations between school burnout and emotional dysregulation while controlling for similar affective symptomology (i.e., anxiety and depression) in Study 1. In the context of the self-regulatory strength model of self-control (*Baumeister & Heatherton, 1996*), emotional dysregulation can be understood as the outcome of poor self-regulatory strength. Previous findings indicate that both dispositional and state self-control moderate the relationship between school burnout and student outcomes (i.e. grade point average and absenteeism; *Seibert, May, Fitzgerald, & Fincham, 2016*), thus the current research goes on to explore (in Study 2) dispositional self-control as a potential moderator of the relationship between school burnout and emotional dysregulation.

School burnout is a growing concern on college campuses and may soon rival that shown for rates of intimate partner violence among college students (*Fass, Benson, & Leggett, 2008*). Some researchers have found that self-control is a critical component for understanding how individuals are able to inhibit the desire to act on thoughts of aggression towards their partner (*Finkel, DeWall, Slotter, Oaten, & Foshee, 2009*) while others have identified self-control as a predictor of victimization (*Pratt, Turanovic, Fox, & Wright, 2014*). Under the tenets of the strength model of self-control, school burnout would tax the strength of

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subsequent self-control efforts. Accordingly, we expect increased emotional dysregulation and occurrences of intimate partner violence for individuals who have low dispositional capacity for self-control and who are experiencing higher levels of school burnout. Thus, Study 3 investigates whether dispositional self-control moderates the relationship between two dominant issues faced by college students today: school burnout and intimate partner violence.

1.1. Emotional dysregulation and self-control

In the past few decades, researchers have sought to understand how individuals manage emotions and their subsequent behavioral responses (Gross, 1998a). Emotion regulation is understood as an internal process that occurs as one responds to stress. According to the process model of emotion regulation proposed by Gross (1998a), emotions unfold over time and individuals employ various emotion regulatory strategies throughout the emotion-generative process to diminish or increase the emotional impact of an event, either before the event occurs (antecedent-focused) or after it occurs (response-focused). The ability to effectively regulate emotions has been associated with improved psychological well-being (Bradley, DeFife, et al., 2011; Bradley, Westen, et al., 2011), physical health (see Gross, 1998b) and less aggression (McNulty & Hellmuth, 2008). Individuals low in effective emotion management are more likely to experience emotional dysregulation (Gross, 1998a, 2015). Emotional dysregulation is thus defined as the failure to effectively regulate one's emotions (Gross, 1998a, 2015), and can be conceptualized as a product of low self-regulatory resources. For example, individuals with a higher level of self-control are more resistant to the effects of stress, presumably reducing the likelihood that stress will result in emotional dysregulation. Therefore, individual capacity for self-control offers an explanation for why some individuals fail to effectively regulate their emotions.

Self-control is characterized by both dispositional and state features (Baumeister, 2014; Gailliot & Baumeister, 2007); the dispositional aspect of self-control tends to be more consistent over time whereas the state aspect is more susceptible to day-to-day fluctuations (Baumeister, 2014; Tangney, Baumeister, & Boone, 2004). In the self-regulatory strength model of self-control the capacity to exert self-control is a limited resource, susceptible to depletion resulting from the exertion of self-control which further diminishes the strength of subsequent self-control efforts (see Hagger, Wood, Stiff, & Chatzisarantis, 2010). The exhaustion of such resources is associated with poorer self-esteem, binge eating, substance use, mental health challenges (Tangney et al., 2004), and increased aggression (DeWall, Baumeister, Stillman, & Gailliot, 2007). Thus, the importance of self-control in managing negative emotions that precede such deleterious outcomes has long been recognized (Baumeister, Heatherton, & Tice, 1994; Tangney et al., 2004). It is therefore quite possible that susceptibility to emotional dysregulation in the face of school burnout varies at different levels of dispositional self-control.

1.1.1. Self-control and school burnout

Researchers have identified numerous stressors that are associated with self-control. For example, high maintenance social interactions (Finkel et al., 2006), financial strain, problem solving, making decisions and even the act of engaging in self-control (see Baumeister & Vohs, 2014) have all been found to deplete self-regulatory resources. For the average college student, the rising costs and academic demands of obtaining a degree (Wang, 2016) are sources of stress that potentially deplete the resources needed to effectively employ self-control to stave off the effects of school burnout. Only one study (Seibert et al., 2016) to date has demonstrated a link between school burnout, self-control, and individual outcomes such as academic performance.

As noted, interest in school burnout derives from the construct of occupational burnout which emerged as a global phenomenon as countries transitioned from industrial to service based economies

(Schaufeli et al., 2009). Within the academic context, school burnout is characterized by feelings of academic strain and fatigue due to an abundance of school work (i.e. exhaustion), a loss of interest in schoolwork which is seen as less meaningful (i.e. cynicism), and a reduced sense of competence including a lack of academic accomplishment and feelings of inadequacy (i.e. efficacy; Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009; Salmela-Aro, Kiuru, Pietikäinen, & Jokela, 2008). Higher school burnout has been linked to lower grade point average, cognitive functioning (i.e. poor attentional capacity and problem solving success; May et al., 2015), and less efficient cardiovascular functioning (May, Sanchez-Gonzalez, Brown, et al., 2014). Notably absent from this research, however, is the examination of interpersonal behavior which is also likely to be influenced by school burnout. Although the risks posed by school burnout are becoming clearer, understanding how school burnout leads to negative outcomes remains important. Recently, researchers have begun to address this need by identifying self-control as an individual resource that can help explain why school burnout may have more deleterious outcomes for some individuals than others. Seibert and colleagues found that when self-control resources were depleted, those experiencing high school burnout demonstrated poorer performance on laboratory tasks (i.e. arithmetic performance; Seibert et al., 2016). Such findings provide a precedent for how self-control might potentially impact the relationship between school burnout and interpersonal behaviors such as IPV.

Similar to school burnout, self-control has been linked to various outcomes such as academic performance, adjustment, eating and drinking behaviors (i.e. bingeing), and relationship well-being (Tangney et al., 2004). Self-control is not only important for one's responses, such as guiding behavior and making choices, but is also important for interpersonal processes (i.e. impression management or dealing with demanding partners; Baumeister, Vohs, & Tice, 2007). One study even attempted to establish a link between academic stress and dating violence in college students (Mason & Smithey, 2012). Academic stress in the context of experiencing school burnout may more readily deplete self-control resources leading to poor impulse control and the occurrence of destructive interpersonal behaviors such as aggression. Therefore, investigating the role of self-control can offer a clearer understanding of how school burnout, in tandem with self-control, is associated with occurrences of IPV.

1.1.2. Intimate partner violence and self-control

The prevalence of IPV among college students is high; one study found that over 35% of college students reported being a victim of IPV at some point while in college (Fass et al., 2008). Although estimates of IPV on college campuses vary, the most consistent prevalence rates range from about 20% to 33% (Smith, Thompson, Tomaka, & Buchanan, 2005). Not surprisingly, a considerable amount of research investigates the risk factors for and outcomes of IPV, including self-control (see Finkel et al., 2009). Specifically, researchers have begun to tease out the association between self-control and aggression towards romantic partners (Payne, Triplett, & Higgins, 2011) and have repeatedly shown self-regulatory failure to be associated with IPV (see Finkel, 2008).

Although a large body of research has identified risk factors for IPV (e.g., previous experiences of violence, or childhood trauma, and current triggers; Kaukinen, 2014), it is important to understand not only the propensity towards violence but also the strength of inhibitory behaviors, such as emotional regulation and self-control as potential prophylactic measures. In fact, McNulty and Hellmuth (2008) found that being able to regulate one's emotions reduces the tendency towards IPV, particularly in the face of IPV by one's partner. Additionally, individuals high in self-control are shown to be less likely to act on violent impulses; however, when depleted they are more likely to engage in violent tendencies towards their partners (Finkel et al., 2009). Individuals with low state self-control and high dispositional aggression were found to be more likely to engage in IPV (Finkel et al., 2012). In fact,

lower levels of self-control have even been linked with increased aggression towards strangers (DeWall et al., 2007).

Further, self-control has been found to be related to not only perpetration of IPV but also with victimization. In a recent meta-analysis (Pratt et al., 2014), self-control consistently predicted victimization. Specifically, those with low self-control are more susceptible to engaging in risky behaviors that potentially increase vulnerability to victimization (Pratt et al., 2014). Therefore, it is expected that self-control acts as a resource that can be utilized to inhibit one's engagement in or victimization of IPV. In relation to school burnout and IPV, the link has yet to be determined with only one study having attempted to link academic stress to IPV (Mason & Smithey, 2012). Given the weak relationship found between academic stress and psychological aggression by Mason and Smithey (2012), the current research aims to further clarify this link and explore how self-control might contribute to the potential relationship between school burnout and IPV perpetration and victimization.

2. Study 1

2.1. Introduction

Recent research has begun to document the physiological and cognitive outcomes associated with school burnout (May, Sanchez-Gonzalez, Brown, et al., 2014; May, Sanchez-Gonzalez, & Fincham, 2014; May et al., 2015; May et al., 2016; Seibert et al., 2016; Tangney et al., 2004), however, less is known about the potential emotional consequences of school burnout. Study 1 therefore investigates the direct relationship between school burnout and emotional dysregulation. We hypothesized that individuals with higher reported burnout scores would also report higher emotional dysregulation scores. In accordance with previous research on school burnout, the current study controlled for similar affective symptomatology (anxiety and depression; Schaufeli & Buunk, 2003).

2.2. Method

2.2.1. Procedure and participants

Two independent samples of undergraduate students from a major southeastern university participated in the current study (Sample 1: $N = 265$, 87.2% females, $M_{\text{age}} = 19.24$ years, $SD = 1.98$; Sample 2: $N = 253$, 86.1% females, $M_{\text{age}} = 19.67$ years, $SD = 2.01$). Sample 1 consisted of 60.2% 'Caucasian', 21.7% 'Black', 12% 'Hispanic', 1.2% 'Asian or Pacific Islander', 4.8% 'Other'. For Sample 2, 67.3% of the students reported being 'Caucasian', 17.5% 'Black', 12.1% 'Hispanic', 1.4% 'American Indian or Alaskan', and 1.7% reported 'Other'. Following institutional review board approval, participants were recruited from college classes in which research participation constituted one means of earning extra credit. After consenting to participate, students were instructed to complete all surveys online.

2.2.2. Measures

2.2.2.1. School burnout. School burnout was assessed using the School Burnout Inventory (SBI; Salmela-Aro, Kiuru, et al., 2009; Salmela-Aro, Savolainen and Holopainen, 2009; Sample 1 $\alpha = 0.90$ and Sample 2 $\alpha = 0.88$). The SBI consists of nine items measuring three first-order factors of school burnout: (a) exhaustion at school (four items), (b) cynicism towards the meaning of school (three items) and (c) sense of inadequacy at school (two items). Summed scores from the first-order factors comprise a second-order overall school burnout score. All the items were rated on a 6-point Likert-type scale ranging from 1 (completely disagree) to 6 (strongly agree) with higher scores indicating higher burnout. Example questions include "I feel overwhelmed by my school work" and "I often have feelings of inadequacy in my schoolwork." For the purpose of this research, overall second order school burnout scores were used for analyses.

2.2.2.2. Stress. Stress was assessed using the stress subscale from the Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995, Sample 1 $\alpha = 0.88$). Seven items are scored on a 4-point Likert scale ranging from 0 (never) to 3 (almost always). Example questions include "I found it hard to wind down", "I found it difficult to relax", and "I felt that I was rather touchy." Scores were summed with higher scores indicating greater stress.

2.2.2.3. Depression. Depression was assessed using two different measures. For Sample 1 the depression subscale from the DASS-21 (Lovibond & Lovibond, 1995, $\alpha = 0.86$) was used. The scale comprises 7 items including "I couldn't seem to experience any positive feelings at all", "I was unable to become enthusiastic about anything", and "I felt that I had nothing to look forward to" which were scored on a 4-point Likert scale ranging from 0 (never) to 3 (almost always). The measure of depression used in Sample 2 was the 10-item Center for Epidemiologic Studies Depression Scale (CES-D; Santor & Coyne, 1977; $\alpha = 0.81$) which assesses depressive symptoms over the past week. Items were scored on a 4-point frequency rating scale ranging from 0 (rarely or none of the time) to 3 (most or almost all the time). For both the CES-D and the DASS depression subscale, scores were summed with higher scores indicating greater depressive symptomatology.

2.2.2.4. Anxiety. Two separate measures were used to assess anxiety. The anxiety subscale from the DASS (Lovibond & Lovibond, 1995, $\alpha = 0.85$) was used in Sample 1. Seven items were scored on a 4-point Likert scale ranging from 0 (never) to 3 (almost always). Example items include "I was aware of dryness of my mouth", "I felt I was close to panic", and "I felt scared without any good reason." The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970; $\alpha = 0.85$) was used in Sample 2. The STAI consists of 20 items scored on a four-point scale, ranging from 0 (Almost Never) to 3 (Almost Always). For both the STAI and DASS anxiety subscale, corresponding items were summed with higher scores indicating greater anxiety symptomatology.

2.2.2.5. Emotional dysregulation. The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004; Sample 1 $\alpha = 0.93$ and Sample 2 $\alpha = 0.94$) was used to assess emotional dysregulation. The DERS has 36 items with six subscales: nonacceptance of emotional responses (nonacceptance), difficulties engaging in goal directed behavior (goals), impulse control difficulties (impulse), lack of emotional awareness (awareness), limited access to emotion regulation strategies (strategies), and lack of emotional clarity (clarity). Each question is scored on a Likert scale ranging from 1 (almost never; 0–10% of the time) to 5 (almost always; 90–100% of the time). The scale contains individual composites for each subscale as well as a global composite score. For the purposes of the current study, the global composite score was utilized with greater scores indicating more emotional dysregulation.

2.3. Statistical analysis

Hierarchical multiple regression (HMR) was used to determine whether school burnout scores accounted for variance in emotional dysregulation over and above that of negative affective symptomatology (stress, anxiety, depression). Two separate HMR analyses were conducted, one for each sample. The first model (Model 1) of the first HMR contained the anxiety, depression, and stress composites as measured by the DASS. Model 2 introduced school burnout as an additional predictor. In the second sample, Model 1 of the HMR analysis contained the depression and anxiety composites as measured by the CES-D and STAI, respectively. Model 2 incorporated school burnout as an additional predictor of emotional dysregulation.

2.4. Results and discussion

HMR analysis revealed that school burnout is significantly positively associated with emotional dysregulation (Sample 1: $\beta = 0.15, p < 0.05$; Sample 2: $\beta = 0.14, p < 0.05$) independent of negative affect in two unique samples (see Table 1). Findings of the study are consistent with the proposed hypothesis; school burnout was positively associated with emotional dysregulation independent of affective symptomatology as measured by two different assessments of anxiety and depression. Study 1 advances research on the adverse consequences associated with school burnout to include emotional dysregulation, which has been associated with self-harming behavior (Karagöz, Dağ, Tezel, Kışlak, & Boysan, 2015), risky behaviors (Weiss et al., 2015), and interpersonal aggression (specific for men; Cohn, Jakupcak, Seibert, Hildebrandt, & Zeichner, 2010), all notable outcomes in the emerging adulthood population. Thus, findings of this study suggest that an intervention for the harmful consequences of school burnout may be appropriate.

3. Study 2

3.1. Introduction

Study 2 was designed to further understand the association between school burnout and emotional dysregulation found in Study 1 by investigating whether dispositional levels of self-control moderate this relationship. Based on Seibert et al.'s (2016) findings, we expected the relationship between school burnout and emotional dysregulation to be stronger when individuals have lower dispositional self-control as compared to higher dispositional self-control.

3.2. Method

3.2.1. Procedure and participants

Five hundred and twenty-five undergraduates (89.3% females; $M_{\text{age}} = 19.89$ years, $SD = 2.11$) at a southeastern university participated in the current study approved by the institutional review board. The sample comprised 70.5% 'Caucasian', 13.8% 'Hispanic', 11% 'African American or Black', 3.1% 'Asian or Pacific Islander', 0.4% 'Middle Eastern', and 0.4% 'Prefer not to say'. Participants were recruited from college classes in which participation in research served as one opportunity for extra credit. After consenting to participate in the current study, students were instructed to complete all surveys online.

3.2.2. Measures

As in Study 1, Study 2 utilized the SBI (Salmela-Aro, Kiuru, et al., 2009; Salmela-Aro, Savolainen, et al., 2009, $\alpha = 0.88$) to assess school

burnout, and the DERS (Gratz & Roemer, 2004; $\alpha = 0.93$) to assess emotional dysregulation.

3.2.2.1. Self-control. The Brief Self-Control Scale (BSCS; Tangney et al., 2004) was used to measure dispositional self-control. The BSCS consists of 13 items measured on a 5 point Likert scale, ranging from 1 (not at all like me) to 5 (very much like me). Example items include "I get distracted easily", "People would say that I have very strong self-discipline", and "I do things that feel good in the moment but regret later on". Scores on each item were summed so that higher scores indicated greater self-control.

3.3. Statistical analysis

The data were analyzed using multiple regression analyses. Predictor variables were mean centered to reduce non-essential multicollinearity and increase the interpretability of results (see Cohen, Cohen, West, & Aiken, 2003 for a full explanation). Model 1 consisted of centered school burnout and self-control scores as predictors of emotional dysregulation and Model 2 introduced the interaction term (centered self-control \times centered school burnout scores) controlling for the main effects. Simple slope analysis was conducted to examine the relationship between school burnout and emotional dysregulation at varying levels of self-control. Finally, we performed the Johnson-Neyman procedure (Hayes & Matthes, 2009) to determine the range of self-control scores over which school burnout and DERS scores are related.

3.4. Results and discussion

Regression analyses revealed that SBI scores ($M = 29.69$; $SD = 8.59$) and BSCS scores ($M = 44.50$; $SD = 8.27$) significantly interact ($b = -0.05$, $SE_b = 0.012$, $\beta = -0.157$, $p < 0.001$) in predicting DERS scores after controlling for their main effects $F(3, 521) = p < 0.001$, $R^2 = 0.27$. Follow up simple slope analysis examining the association between school burnout and DERS was tested at low (-1 SD: $Y = 77.21 + 1.12X$, $p < 0.001$), moderate ($Y = 85.48 + .706X$, $p < 0.001$), and high ($+1$ SD: $Y = 93.75 + .292X$, $p = 0.19$) levels of self-control. For low self-control, a one-score increase in school burnout increases DERS by 1.12 points. For average self-control, a one-score increase in school burnout increases DERS by 0.706 points. For high self-control, a one-score increase in school burnout increases DERS by 0.292 points. According to the Johnson-Neyman technique (Hayes & Matthes, 2009), when individuals have a self-control score ranging from 8.5 points above the mean, $t(521) = 1.22$, $p = 0.221$, $b = 0.28$, to 19.5 points above the mean, $t(521) = -0.64$, $p = 0.523$, $b = -0.27$, the relationship between self-control and school burnout on DERS is not significant. However, as self-control scores become lower, the

Table 1

Hierarchical multiple regression of negative affect and school burnout accounting for variance in emotional dysregulation scores in two cross-sectional samples.

Criterion (<i>M, SD</i>)	Model	Predictors (<i>M, SD</i>)	B	<i>p</i>	<i>R</i> ²	Model F	
Sample 1 DERS (77.43, 20.40)	Model 1	DASS-D (9.89, 3.60)	0.45	<0.001	0.40	$F(3, 261) = 59.63, p < 0.001$	
		DASS-A (9.98, 3.26)	0.19	0.004			
		DASS-S (12.68, 4.12)	0.08	0.259			
	Model 2	DASS-D	0.39	<0.001	0.42		$\Delta F(1, 260) = 6.75, p < 0.010$
		DASS-A	0.21	<0.001			
		DASS-S	0.04	0.581			
N = 265		SBI (19.47, 8.47)	0.15	0.010			
Sample 2 DERS (78.43, 21.60)	Model 1	STAI (15.82, 11.17)	0.23	<0.001	0.52	$F(2, 250) = 134.76, p < 0.001$	
		CES-D (8.55, 5.19)	0.56	<0.001			
		STAI	0.21	<0.001			
	Model 2	CES-D	0.48	<0.001	0.53		$\Delta F(1, 249) = 6.74, p = 0.010$
		SBI (20.94, 8.80)	0.14	0.01			
N = 253							

Note. DERS = Difficulties in Emotion Regulation Scale; DASS-D = Depression, Anxiety and Stress Scale-Depression; DASS-A = Depression, Anxiety and Stress Scale-Anxiety; DASS-S = Depression, Anxiety and Stress Scale-Stress; CES-D = Center for Epidemiologic Studies Depression Scale; STAI = State-Trait Anxiety Inventory; SBI = School Burnout Inventory.

relationship between SBI and DERS becomes stronger, with the interaction appearing strongest at -24.50 points below the self-control mean, $t(521) = 4.40, p < 0.001, b = 1.93$. Therefore, consistent with our hypothesis, results of the moderation analysis in Study 2 reveal that the relationship between school burnout and emotional dysregulation is stronger under lower levels of dispositional self-control (see Fig. 1).

This finding adds to our understanding of the conditions under which school burnout is associated with emotional dysregulation. The current study demonstrates that dispositional self-control, or the general capacity for inhibitory behaviors, acts as a moderator between school burnout and emotional dysregulation. This suggests that those who have low self-control are less effective at managing the effects of school-related stress on emotional dysregulation.

4. Study 3

4.1. Introduction

Study 3 seeks to advance our understanding of the interaction between school burnout and self-control in influencing psychosocial factors, such as intimate partner violence. The relationship between this interaction and individual emotional outcomes such as emotional dysregulation was established in Study 2. Therefore it is important to understand how this interaction manifests at the interpersonal level, potentially resulting in aggressive behavior. Strain faced by college students has been identified as a risk factor for aggression in romantic relationships (Mason & Smithey, 2012) yet school burnout has not been studied in relation to interpersonal behaviors, such as violence. Considering the association between school burnout and emotional dysregulation (Study 1) as well as the moderating role of self-control (Study 2), two interrelated concepts which have been linked with IPV, we hypothesize that school burnout will demonstrate a significant positive relationship with IPV. Further we hypothesize that self-control will moderate this relationship. Additionally, as self-control is related to both perpetration (Finkel et al., 2009) and victimization of IPV (Pratt et al., 2014), we examined both in our analyses. Similar to findings in Study 2, we expect that the relationship between school burnout and IPV (both perpetration and victimization) will be stronger under lower levels of dispositional self-control.

4.2. Method

4.2.1. Procedure and participants

Four hundred and ninety-one undergraduate students from a major southeastern university participated in the current study approved by the institutional review board (89% females; $M_{\text{age}} = 19.63, SD =$

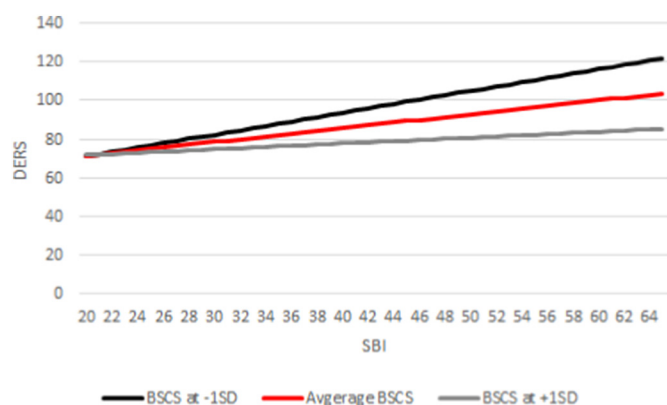


Fig. 1. Simple slope analysis testing the interaction between school burnout and self-control on emotional dysregulation. Note. DERS = Difficulties in Emotion Regulation Scale; SBI = School Burnout Inventory; BSCS = Brief Self-Control Scale; SD = Standard Deviation.

1.83). The sample comprised 62.8% 'Caucasian', 16.8% 'Hispanic', 13.2% 'Black', 3.3% 'Asian or Pacific Islander', 0.5% 'American Indian or Alaskan Native', and 3.3% 'Other'. All participants provided written consent to participate in the present study in which they were instructed to complete all surveys online. Participation in the present study was offered as one form of extra credit.

4.2.2. Measures

Study 3 utilized the SBI (SBI: Salmela-Aro, Kiuru, et al., 2009; Salmela-Aro, Savolainen, et al., 2009, $\alpha = 0.88$) to assess school burnout, DERS (Gratz & Roemer, 2004; $\alpha = 0.93$) to assess emotional dysregulation, and the BSCS (Tangney et al., 2004; $\alpha = 0.89$) to assess levels of self-control.

4.2.2.1. Intimate partner violence. The Conflict Tactics Scale-2 (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) was used to assess IPV victimization and perpetration over the past year. For the purpose of this study, scores from two of the five subscales (physical assault: 14 items; psychological aggression: 8 items) were summed to create global composites of victimization ($\alpha = 0.86$) and perpetration ($\alpha = 0.84$). Sample items include "I twisted my boyfriend/girlfriend's arm or hair", "My boyfriend/girlfriend pushed or shoved me", "I destroyed something belonging to my boyfriend/girlfriend", and "My boyfriend/girlfriend shouted or yelled at me." Consistent with previously established scoring methods (Straus, 2004), composites were dichotomized into 0 (there were no violent acts in the past year) and 1 (there were one or more violent acts in the past year).

4.3. Statistical analysis

Two separate logistic regression analyses were conducted examining the relationship between school burnout, self-control, and IPV perpetration and IPV victimization, respectively. The first analysis predicted IPV perpetration from centered school burnout and self-control scores (Model 1) after which the interaction term (centered self-control \times centered school burnout scores) was added (Model 2). A similar analysis was conducted with IPV victimization as the dependent variable. Follow up analyses tested the relationship between self-control and school burnout on victims and non-victims of IPV to determine whether their slopes differ significantly from 0 and then from each other.

4.4. Results and discussion

Study 3 extends the investigation of school burnout to interpersonal outcomes and shows that in the logistic regression analyses SBI scores ($M = 29.69; SD = 8.59$) and BSCS scores ($M = 29.69; SD = 8.59$) significantly interact in predicting both IPV perpetration ($b = -0.004, SE_b = 0.002, p = 0.033; \text{Exp}(B) = 0.996$) and victimization ($b = -0.004, SE_b = 0.002, p = 0.024; \text{Exp}(B) = 0.996$). Follow up simple slope regression analyses show that the relationship between school burnout and self-control was significant for perpetrators ($\beta = -0.352, SE_b = 0.047, p < 0.001$, see Fig. 2) and for victims ($\beta = -0.343, SE_b = 0.047, p < 0.001$, see Fig. 3), but not for non-perpetrators ($\beta = -0.165, SE_b = 0.096, p > 0.05$) and non-victims ($\beta = -0.191, SE_b = 0.097, p > 0.05$).

Findings from this study show that there is a significant relationship between school burnout and self-control for individuals who reported being a perpetrator (see Fig. 2) and a victim (see Fig. 3) of IPV. Conversely, for individuals who reported not being a victim or perpetrator of violent acts in the past year, there was no significant relationship between school burnout and self-control. The results of this study raise awareness of the deleterious relationship between school burnout and intimate partner violence as well as the importance of self-control for inhibiting IPV.

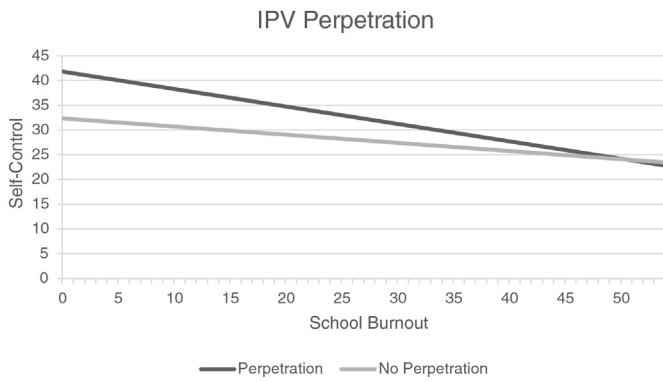


Fig. 2. Simple slope analysis testing the interaction between school burnout and self-control on intimate partner violent (IPV) perpetration. *Note.* School Burnout as measured by the School Burnout Inventory; Self-Control as measured by the BSCS.

5. General discussion

In the wake of violence on college campuses and amid growing public attention to intimate partner violence among students, it is becoming more important to explore predictors of violence and raise awareness of ways to potentially prevent it. In an effort to address this issue, researchers have identified a variety of factors at play in triggering acts of aggression, as well as protective factors buffering against such triggers. Simultaneously, the rapidly rising cost and demands of college as well as the rising level of education required for employment has focused research attention on school burnout. As of yet, little attention has been given to the link between school burnout and IPV. The current analyses not only document a direct link between these variables, but also demonstrate self-control to be an important moderator of their relationship.

5.1. The role of self-control

Existing data point to the importance of understanding the consequences of school burnout. In the current studies, both emotional dysregulation and intimate partner violence were identified as negative outcomes associated with school burnout. However, little is known about where to intervene to reduce the risk of such consequences. By identifying self-control as a moderator in the relationships between school burnout and emotional dysregulation and IPV, this research points to self-control as a potential point of intervention that could buffer the harmful effects of school burnout. Specifically, the self-regulatory strength model of self-control views self-control like a muscle that can be strengthened via self-control exercises (Baumeister & Heatherton,

1996; Finkel et al., 2009; Muraven, 2010) and previous research has shown that improving self-control capacity leads to many benefits, including increased health behaviors (Oaten & Cheng, 2006) and reduced IPV tendencies (Finkel et al., 2009).

5.1.1. School burnout and emotional regulation

Results of the current investigation suggest that emotional dysregulation is another potential consequence of school burnout, and show that one's capacity for self-control is critical for understanding the conditions under which high levels of school burnout may induce dysregulation. Emotional dysregulation is important to investigate as it puts individuals at risk for a multitude of adverse outcomes including poor psychological well-being (Bradley, DeFife, et al., 2011; Bradley, Westen, et al., 2011), physical health (Gross, 1998b) and aggression (McNulty & Hellmuth, 2008). Therefore, the identification of school burnout as a potential source of dysregulation underscores the importance of research aiming to address ways to treat and/or reduce such strain among students.

5.1.2. School burnout and intimate partner violence

The discovery of a direct relationship between school burnout and intimate partner violence provides unique insight into the experiences of emerging adults. The shifting climate of college campuses coupled with an increased media coverage has created greater awareness among the general population of the stress and strain faced by college students as well as the prevalence of violence on campuses. Thus the issues of school burnout and IPV are receiving more attention in society and the current investigation supports the position that not only are these two constructs associated but that their relationship is moderated by dispositional self-control. The role of self-control in the relationship between school burnout and IPV is best understood in the context of the strength model of self-regulatory control (Baumeister & Heatherton, 1996). Stressors, such as school burnout, can activate a variety of negative emotions with the potential of impacting behaviors and well-being (Feldman et al., 1999). When strength for inhibiting behaviors in pursuit of a desired outcome is high, one is better able to refrain from violence, even in the face of a stressor that taxes self-control resources like school burnout. Therefore, the present findings support the importance of self-control as a potential buffer against the consequences of school burnout on emotional dysregulation and intimate partner violence. The investigation of interventions that could aid in bolstering the strength of individual self-control may advance attempts to prevent both school burnout and IPV.

5.2. Limitations and future directions

Although the findings of the current studies extend the literature through novel investigations of school burnout, emotional dysregulation, self-control and IPV, they are not without limitations. The cross-sectional nature of the data limits our ability to infer direction of effects. Researchers aiming to further understand the impact of school burnout and the role of self-control would benefit from longitudinal analysis of these variables. Future research might also consider experimental designs that manipulate state levels of self-control to further understand its role as a buffer against the effects of school burnout. Additionally, given the activation of negative emotions following stress (Feldman et al., 1999) and the role of self-control in impeding impulsive responses to stress (Baumeister & Heatherton, 1996), future research might add the measurement of negative emotions associated with stress and the role they play in the relationships found in the current study.

Studies 2 and 3 examined dispositional self-control and thus do not speak directly to the possibility that burnout depletes self-control resources. To understand school burnout as a factor depleting self-control strength, future research should examine levels of state depletion on a daily basis in conjunction with academic stress. Prior research has demonstrated that dispositional self-control can serve as protection from

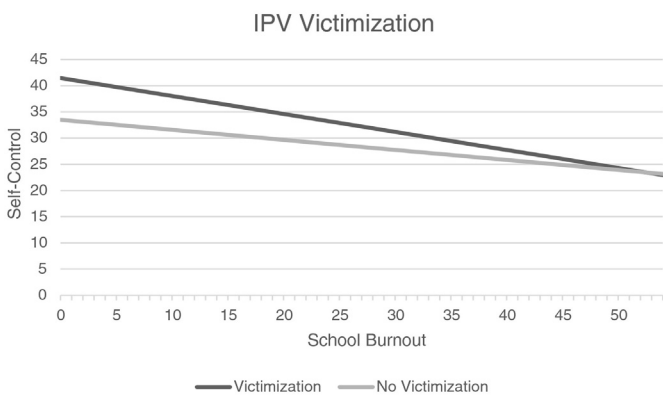


Fig. 3. Simple slope analysis testing the interaction between school burnout and self-control on intimate partner violent (IPV) victimization. *Note.* School Burnout as measured by the School Burnout Inventory; Self-Control as measured by the BSCS.

state depletion (DeWall et al., 2007) and that sensitivity to depletion effects varies from person to person such that individuals who score high in self-control, may deplete at different rates (Salmon, Adriaanse, De Vet, Fennis, & De Ridder, 2014). Therefore, future studies examining the effects of self-control depletion should account for individual differences in dispositional self-control.

Given the limited nature of our samples, caution is also needed in generalizing our results, making the need for research on more diverse samples quite apparent. For example, the samples in the current investigation consisted of a majority of women (<15% male), limiting the investigation of gender differences. Previous researchers have repeatedly found gender differences when investigating IPV victimization and perpetration (Melton & Belknap, 2003). Future research examining the role of self-control and emotion regulation in the relationship between school burnout and IPV should aim to test gender differences in these associations. Further, substance use has also been found to be a strong predictor of dating violence (Shorey, Stuart, & Cornelius, 2011; Shorey, Stuart, McNulty, & Moore, 2014; Temple, Shorey, Fite, Stuart, & Le, 2013) and future research examining the relationship between self-control, school burnout and IPV should incorporate it as a control variable (or potentially a moderator or a mediator).

Despite the above limitations, clinicians and school counselors alike might benefit from assessing for tendencies towards aggressive behavior in romantic relationships as well as dispositional self-control when treating students expressing high levels of school burnout. It may be advantageous for interventions found to replenish self-control resources to be adapted into clinical practice to help ameliorate the negative consequences of school burnout on difficulties in emotion regulation. Further, clinical researchers should aim to investigate and continue to develop interventions targeted at strengthening dispositional self-control.

5.3. Conclusions

Understanding the stressors faced by college students and the consequences of school burnout is an important aim of recent research and the current studies advance this endeavor. Specifically, this research identifies previously unknown consequences associated with school burnout: emotional dysregulation, IPV, and the moderating role of self-control. The link between school burnout and IPV has important implications for research designed to better understand the experiences of emerging adults. Future researchers should continue to clarify the ways in which school burnout impacts IPV perpetration and victimization among college students, as well as the role of self-control in ameliorating the deleterious consequences of school burnout on psychosocial factors such as IPV.

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