

Self-Regulatory Failure and Intimate Partner Violence Perpetration

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Five studies tested the hypothesis that self-regulatory failure is an important predictor of intimate partner violence (IPV) perpetration. Study 1 participants were far more likely to experience a violent impulse during conflictual interaction with their romantic partner than they were to enact a violent behavior, suggesting that self-regulatory processes help individuals refrain from perpetrating IPV when they experience a violent impulse. Study 2 participants high in dispositional self-control were less likely to perpetrate IPV, in both cross-sectional and residualized-lagged analyses, than were participants low in dispositional self-control. Study 3 participants verbalized more IPV-related cognitions if they responded immediately to partner provocations than if they responded after a 10-s delay. Study 4 participants whose self-regulatory resources were experimentally depleted were more violent in response to partner provocation (but not when unprovoked) than were nondepleted participants. Finally, Study 5 participants whose self-regulatory resources were experimentally bolstered via a 2-week training regimen exhibited less violent inclinations than did participants whose self-regulatory resources had not been bolstered. These findings hint at the power of incorporating self-regulation dynamics into predictive models of IPV perpetration.

Keywords: intimate partner violence, aggression, self-regulation, self-control, relationships

Intimate partner violence seems puzzling, even shocking. Why would individuals deliberately inflict physical pain on a partner with whom they have chosen to merge their lives? Scholars have tackled this question since research on intimate partner violence (IPV) emerged and then quickly exploded in the 1970s and 1980s.

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A range of influential theories suggests that individuals perpetrate IPV because society socializes them to do so. Proponents of one perspective argue that men and women perpetrate violence against intimate partners because society tells them that such perpetration is “perfectly appropriate” (Gelles & Straus, 1988, p. 26; see also Straus, Gelles, & Steinmetz, 1980). Proponents of another perspective argue that men are socialized to perpetrate IPV, whereas women are not, suggesting that “men who assault their wives are actually living up to cultural prescriptions that are cherished in Western society” (Dobash & Dobash, 1979, p. 24). Various other perspectives, including social learning theory (Kwong, Bartholomew, Henderson, & Trinke, 2003; cf. Bandura, 1973), are broadly consistent with the idea that society trains individuals to enact IPV.

We approach IPV from a fundamentally different perspective, though we do not take issue with the view that individuals who are socialized to believe IPV is acceptable are especially likely to engage in such violent behavior. We suggest that many acts of IPV are immediately precipitated by perpetrators acting upon gut-level violent impulses that conflict with their more deliberative and self-controlled preferences for nonviolent conflict resolution. From this perspective, many acts of IPV are caused in large part by momentary failures in self-regulation. We define these lapses as *self-regulatory failures*, which refer to individuals’ tendencies to act on their gut-level impulses rather than on well-considered preferences that are better aligned with their long-term goals and preferences (see Baumeister, Heatherton, & Tice, 1994). We sug-

gest that most individuals who experience violent impulses during conflictual interaction with their romantic partner typically are able to override these impulses, but they may succumb to them when their self-regulation fails. We hypothesize that four factors related to self-regulation—dispositional self-control, cognitive processing time, depletion of self-regulatory resources, and bolstering of self-regulatory strength—play crucial roles in determining whether violent impulses toward one's intimate partner translate into violent behavior.

Intimate Partner Violence (IPV)

IPV refers to any behavior carried out with the primary proximal goal of causing physical harm to a romantic partner who is motivated to avoid being harmed (Anderson & Bushman, 2002; Baron & Richardson, 1994).¹ In the present article, this term refers to the initiation of violence in a specific social interaction that had theretofore been nonviolent; we do not examine IPV as self-defense, nor do we examine psychological or sexual aggression. Individuals perpetrate IPV with alarming frequency (e.g., Magdol et al., 1997; McLaughlin, Leonard, & Senchak, 1992; Straus, 2004). Every year in the United States, for example, approximately one in six heterosexual married or cohabiting couples experiences at least one act of IPV (Schafer, Caetano, & Clark, 1998; Straus & Gelles, 1986). Also, in one of the most surprising and well-replicated findings from the IPV literature, men and women perpetrate IPV at near equal rates (Archer, 2000; Ehrensaft, Moffitt, & Caspi, 2004).²

The IPV literature has developed alongside—and largely independently from—the large social psychological literature on aggression (e.g., Geen, 2001). Recently, Anderson and Bushman (2002) integrated diverse theories of aggression (e.g., Bandura, 1973; Berkowitz, 1993; Huesmann, 1998; Tedeschi & Felson, 1994; Zillman, 1983) to form a broad, flexible, and generative theory of aggression called the General Aggression Model. Although “[m]ost theories of aggression largely ignore the role that self-regulation plays in aggressive behavior” (Bettencourt Talley, Benjamin, & Valentine, 2006, p. 753), all of the theories reviewed by Anderson and Bushman (2002) are broadly compatible with the idea that individuals sometimes override violent or aggressive impulses that may arise during conflictual interaction. Of particular relevance to the present work, the General Aggression Model (a) highlights the role of person and situation factors (some of which could readily be relevant to self-regulation) in influencing the likelihood of aggression in response to a social encounter and (b) emphasizes the importance of appraisal and decision processes in determining whether individuals ultimately engage in “impulsive action” or “thoughtful action” (Anderson & Bushman, 2002, p. 34).

Interdependence Theory and IPV

Eventually, in highly interdependent relationships—those in which partners powerfully influence each other across a broad spectrum of life domains—one's romantic partner will almost certainly behave in ways that one finds upsetting, offensive, or worse. Relationships scholars argue that conflict is “an inevitable—though often unanticipated—feature of close relationships. The strong, frequent, and diverse bonds between [romantic part-

ners] set the stage for conflicting interests to surface” (Holmes & Murray, 1996, p. 650; see also Braiker & Kelley, 1979; Levinger, 1983). In the wake of potentially destructive partner behavior, individuals frequently experience a gut-level impulse to retaliate (Finkel & Campbell, 2001; Yovetich & Rusbult, 1994), and they must decide (via conscious processes, unconscious processes, or both) whether to act on this impulse or to override it. Unfortunately, many individuals respond to negative partner behavior with escalating retaliation until the negativity becomes an absorbing state (Gottman, 1998).

Sometimes, such conflict can escalate to the point where at least one partner experiences a violent impulse toward the other. In fact, such impulses might be even more likely to emerge in intimate relationships than in nonintimate relationships, given that the strong interdependence characterizing intimate relationships can increase the likelihood and intensity of conflict (Felson, 2002; Felson, Ackerman, & Yeon, 2003; Finkel, 2007, 2008). Fortunately, the association of violent impulses with violent behaviors is not absolute. For various reasons (e.g., the desire to avoid harming the relationship, the desire to live up to personal or cultural standards), violent impulses do not always manifest themselves in violent behaviors.

For greater insight into this distinction between violent impulses and violent behavior, we adopt the interdependence theory concept of the transformation process (Kelley & Thibaut, 1978; Rusbult & Van Lange, 1996). *The transformation process* refers to individuals' changing behavioral preferences in interpersonal situations from their initial, gut-level preferences (“given preferences”) to preferences based on broader considerations and values (“effective preferences”) (see Finkel, Rusbult, Kumashiro, & Hannon, 2002; Rusbult, Verette, Whitney, Slovick, & Lipkus, 1991; Van Lange et al., 1997). Through this transformation process, individuals who experience a gut-level impulse toward violence in the wake of partner provocation can override this impulse.

Why would an individual who believes that it is best to solve conflict nonviolently ever perpetrate IPV? One important reason, we suggest, is that whereas acting on one's gut-level interpersonal

¹ Some scholars distinguish between *violence* and *aggression* (with the former term limited to extremely harmful acts and the latter also including less harmful acts), but most empirical articles in the IPV literature do not allow for clear demarcations between these two constructs. Except when we review the social psychology literature on “aggression,” we use the term *violence* because of its greater prevalence in the IPV literature.

² Johnson (1995; see Johnson, 2008) distinguishes between two distinct forms of IPV. *Situational couple violence* (formerly “common couple violence”), the much more frequent of the two, emerges sometimes when conflict situations get out of hand (see also the “family-only batterers” identified by Holtzworth-Munroe & Stuart, 1994). In contrast, *intimate terrorism* (formerly “patriarchal terrorism”), which is rare but especially devastating to victims, is perpetrated toward the goal of asserting dominance and control in the relationship. Intimate terrorism is perpetrated predominantly by men, whereas situational couple violence is perpetrated at slightly higher rates by women (Archer, 2000; Johnson, 1995, 2008; Straus, 1999; but see Ehrensaft et al., 2004). Given that the self-regulatory failure account of IPV advanced herein is clearly relevant to situational couple violence and perhaps less relevant to intimate terrorism, we used representative and university samples; the overwhelming majority of IPV cases identified in such samples fit the situational couple violence prototype (Johnson, 1995; Straus, 1999).

impulses is frequently easy, overriding these impulses in favor of a more deliberate course of action frequently requires exertion (Finkel & Campbell, 2001; Yovetich & Rusbult, 1994; see also Baumeister et al., 1994). In the absence of such exertion, individuals are in danger of acting on their gut-level, default behavioral preferences (e.g., to eat fatty foods, to buy expensive things, or even to enact violent behavior), even when those preferences contradict their long-term goals and preferences (Baumeister et al., 1994; Carver & Scheier, 1998; Mischel, Shoda, & Rodriguez, 1989).

Self-Regulation and IPV

Consider the following scenario: Both partners in a dating couple have become angry and suspicious of each other in recent months due to infidelity, lies, and contentious interaction. This escalating conflict spiked last Friday night, as Partner A, feeling provoked, shouted accusations and insults at Partner B. Partner B, enraged, took several steps toward Partner A, intending to strike. Before doing so, however, Partner B, via self-regulatory processes, overrode the violent impulse, turned away, and stormed out of the apartment.

This scenario illustrates a common but largely neglected phenomenon relevant to IPV: Partners sometimes experience violent impulses toward each other without these impulses leading to violent behaviors. What factors influence the likelihood that Partner B will override the violent impulse toward Partner A rather than acting on it? Such behavioral override processes are complex and multiply determined. In the present article, we consider four factors that can influence the likelihood of Partner B overriding the violent impulse.

First, we consider *dispositional self-control*, which is a stable personality trait assessing the degree to which individuals are able to control their impulses across time and situations (e.g., Caspi, 2000; Tangney, Baumeister, & Boone, 2004; see also Gottfredson & Hirschi, 1990). Dispositional self-control predicts more accommodating and forgiving responses to negative partner behavior in general (Finkel & Campbell, 2001; Finkel, Johnson, Kumashiro, & Rusbult, 2008). We suggest that dispositional self-control should also help individuals override violent impulses that arise during conflictual interaction with romantic partners.

Second, we consider *cognitive processing time*, which refers to whether individuals decide how to respond to provocative partner behavior immediately or after a delay. Taking time to react deliberately rather than immediately to interpersonal offenses increases the likelihood that individuals will accommodate rather than retaliate in response (Yovetich & Rusbult, 1994). Social-cognitive research in the prejudice and stereotyping domain suggests a plausible mechanism: Requiring that individuals respond quickly influences their controlled cognitive processes (which are related to the sort of self-regulatory processes investigated herein) but not their automatic cognitive processes (Payne, 2001). As such, we suggest that cognitive processing time will help individuals override impulses to perpetrate IPV when such impulses arise.

The third factor derives from the “strength model” of self-regulation (Baumeister, Vohs, & Tice, 2007; Muraven & Baumeister, 2000), which has been particularly influential over the past 15 years. According to this model, self-regulation functions like a muscle. Acts of self-regulation require that one exercise one’s “ego

strength” (also called “self-regulatory strength”), which refers to the unitary, depletable, and renewable resource underlying all acts of deliberate self-regulation. One implication of this strength model represents the third factor that can influence the likelihood of individuals overriding violent impulses: Self-regulatory strength can be depleted. To the degree that individuals have recently drawn on their self-regulatory resources to accomplish a self-regulatory task (e.g., declining social plans so one can meet an aversive work deadline, maintaining one’s patience while trying to soothe a fussy baby), they will have fewer such resources available for subsequent self-regulatory tasks. Indeed, this state of *ego depletion* will increase the likelihood that they will experience self-regulatory failure on a second act of self-regulation attempted shortly after the first (e.g., Baumeister, Bratslavsky, Muraven, & Tice, 1998; Finkel et al., 2006; Richeson & Trawalter, 2005; Vohs & Schmeichel, 2003). We suggest that individuals whose ego strength has been momentarily depleted will be less able to override violent impulses toward their partner than will individuals whose ego strength has not been depleted (for evidence that such aggression dynamics play out in interactions with strangers, see DeWall, Baumeister, Stillman, & Gailliot, 2007; Stucke & Baumeister, 2006).

The fourth factor is derived from another implication of the strength model: As with a muscle, adhering to a strict self-regulatory regimen can bolster individuals’ general level of self-regulatory strength over time, helping them to avoid ego depletion (Muraven, Baumeister, & Tice, 1999; Oaten & Cheng, 2006a, 2006b, 2007; for a review, see Baumeister, Gailliot, DeWall, & Oaten, 2006). In one study, for example, participants whose habitual motivation to suppress stereotypes was low exhibited impaired self-regulatory performance after an effortful stereotype suppression task, but a 2-week self-regulatory strengthening regimen eliminated this effect (Gailliot, Plant, Butz, & Baumeister, 2007). We suggest that depleted individuals who have adhered to a self-regulatory strengthening regimen will be more successful in overriding violent impulses toward their partner than will depleted individuals who have not.

Research Overview and Hypotheses

Across five studies, we examined whether self-regulatory processes lead participants to resist violent impulses when responding to partner provocation. In Study 1, participants vividly recalled the most severe argument or fight they had ever experienced with a romantic partner and reported whether they were *tempted* to engage in a series of violent behaviors toward their partner and whether they *actually* engaged in these behaviors. We tested the hypothesis that individuals are far more likely to experience a violent impulse than to enact a violent behavior.

In Studies 2–5, we investigated the four aspects of self-regulation discussed previously that predict how effective individuals are at overriding their violent impulses. In Study 2, we used a representative sample of adolescents to test the prediction that individuals characterized by high *dispositional self-control* enact fewer violent behaviors toward their partner than do individuals characterized by low dispositional self-control.

In Study 3, we examined the effects of *cognitive processing time*. Participants psychologically immersed themselves in jealousy- and anger-inducing scenarios in which their partner

flirted with another person and behaved in a potentially insulting manner toward them. Interspersed within these scenarios were a series of talk-aloud opportunities during which participants verbalized into an audio recorder the thoughts, feelings, and behavioral intentions that were currently running through their head. Half the participants performed these talk-aloud procedures immediately after the scenario was interrupted, whereas the other half did so after a 10-s delay. Given that extra processing time (vs. a lack of processing time) seems to enable individuals to enact effortful self-control (Payne, 2001), we predicted that participants who waited 10 s before performing this talk-aloud procedure would be significantly less likely to verbalize violence than would participants who performed this procedure immediately.

In Study 4, participants were assigned either to experience *ego depletion* or not, and they were orthogonally assigned either to experience provocation from their partner or not. Participants then had the opportunity to inflict physical pain on their partner. We predicted that participants who had been provoked by their partner (but not those who had not been provoked) would inflict greater pain when they were depleted than when they were not.

Finally, in Study 5, participants were assigned to complete one of two *self-regulation bolstering* regimens over a 2-week period or were assigned to a no-intervention control condition. They reported twice—once at the beginning of the 2-week study and once at the end—how likely they would be to perpetrate IPV in response to hypothetical partner transgressions. We predicted that participants who had adhered to a strengthening regimen would exhibit a significant decline over time in their IPV inclinations, whereas the IPV inclinations of participants in the control condition would remain stable over time.

Study 1: Impulses Versus Behaviors

In this first study, we sought to establish that individuals do indeed experience violent impulses during conflictual interaction with their partners much more frequently than they actually engage in violent behavior—that they sometimes experience violent impulses without acting on them. Participants vividly brought to mind the most serious argument or fight they had ever experienced with a romantic partner. After providing a written description of the incident, they reported on both (a) the extent to which they were *tempted* to enact a series of violent behaviors toward their partner and (b) the extent to which they *actually* enacted these same behaviors.³ We predicted that many participants would report experiencing violent impulses on which they never acted. Such results would provide compelling initial support for the notion that IPV perpetration would be much more prevalent if individuals failed to self-regulate when they experience violent impulses.

Method

Participants. Participants were 251 undergraduates (182 women) who volunteered to take part in partial fulfillment of the requirements for their introductory psychology course. Participants had a median age of 19 (range = 18–31) and were predominantly White (77.51% White, 12.45% Black, 4.82% Asian American, 1.61% Hispanic, 1.61% Native American, and 2.01% “other”/mixed). On average, they had been involved with their romantic partner for a little less than 1 year at the time of the argument ($M =$

10.18 months, $SD = 12.09$ months), and this relationship duration did not differ significantly for participants whose most serious argument or fight transpired with a current ($N = 81$) versus a past ($N = 170$) partner, $F(1, 243) = 1.35, p = .246$.

Procedure. Participants provided a written description of the most serious argument or fight they had ever experienced with a romantic partner and indicated (a) the degree to which they were *tempted* to engage in a variety of violent behaviors and (b) the degree to which they *actually* enacted these behaviors. The instructions encouraged participants to “bring the details of the argument to mind as vividly as you possibly can—what did your partner do, what did you do, how did each of you feel and react during the course of the argument, and so on.” After participants provided a written description of the argument, they reported on their violent impulses and violent behaviors during the argument. On 0- to 8-point scale (8 = *extremely serious*), participants rated the argument or fight as reasonably serious ($M = 6.01, SD = 1.76$), and the participants who reported on a current versus a past partner did not differ significantly in these seriousness ratings, $F(1, 248) = 0.01, p = .921$.

Questionnaires. Participants reported how much they were tempted to perpetrate IPV and how much they acted on these impulses. *IPV temptation* and *IPV behavior* were assessed with slightly modified versions of the 16-item Safe Dates Physical Violence Scale (Foshee et al., 1996),⁴ which asked participants to report how much they were tempted to engage in each of 16 violent behaviors during the argument (0 = *not at all tempted*, 8 = *very strongly tempted*) and the degree to which they actually enacted each behavior (0 = *did not do this at all*, 8 = *did this extremely*). The behaviors included “slapped him/her,” “kicked him/her,” and “hit him/her with my fist.” Given that the goal in Study 1 was to examine how frequently participants experienced a violent impulse that did not manifest itself in violent behavior, the IPV temptation and IPV behavior measures were recoded into dichotomous variables (0 = no IPV temptation/behavior, 1 = some IPV temptation/behavior), indicating whether they (a) experienced some degree of temptation to perpetrate one or more of the behaviors and (b) actually perpetrated one or more of them to some degree.

Results

Supporting predictions, participants were 2.40 times more likely to report that they experienced a violent impulse to enact one or more of these 16 behaviors (50.60%) than they were actually to perpetrate one or more of them (21.12%) during the argument. As depicted in Figure 1, these estimates were comparable for participants who reported on their current partner (53.09% impulse, 25.93% behavior) or a past partner (49.70% impulse, 18.93% behavior).

³ We felt confident using self-reports of actual past IPV perpetration in Studies 1 and 2 because *interpartner agreement* (if one member of the couple reports perpetrating IPV, the other member reports being the victim) on scale measures of IPV is “very good” (Moffitt et al., 1997, p. 47). This strong interpartner agreement suggests that self-reports of IPV perpetration are likely to be reasonably accurate depictions of what actually transpired between the two partners.

⁴ In Studies 1 and 2, we omitted from this scale two additional items because they assessed sexual aggression, which is not a focus of the present article.

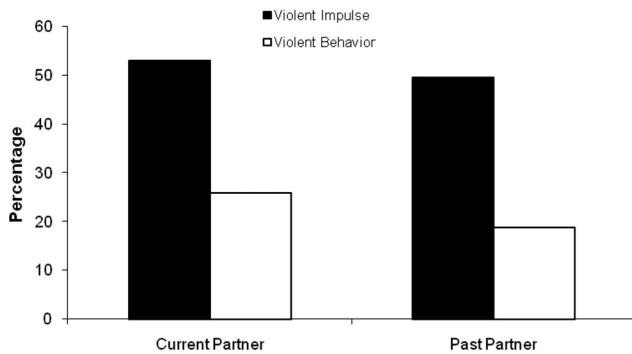


Figure 1. Study 1: The percentage of participants who experienced a violent impulse and the percentage who enacted a violent behavior during the most serious argument or fight they had ever experienced with a romantic partner. Data for participants whose most serious argument or fight took place with their current partner are on the left side of the figure; data for participants whose most serious argument or fight took place with a past partner are on the right side.

Overall, 122 participants (48.61%) neither experienced a violent impulse nor enacted a violent behavior, 51 (20.32%) both experienced a violent impulse and enacted a violent behavior, 76 (30.28%) experienced a violent impulse but did not enact a violent behavior, and 2 (0.80%) experienced no violent impulse but enacted a violent behavior. These results demonstrate that participants who experienced a violent impulse were approximately 1.5 times more likely to be nonviolent than they were to be violent (30.28% vs. 20.32%).

Another way of considering these results is to examine responses among participants whose impulses (violent vs. nonviolent) did not match their behaviors (violent vs. nonviolent). We propose that people frequently inhibit their violent impulses toward their romantic partner, lest these impulses be translated into violent behavior. If so, then more participants should report experiencing a violent impulse without engaging in violent behavior (suggesting effective self-regulation of the violent impulse) than should report not experiencing a violent impulse and engaging in violent behavior. The results strongly supported this prediction. Of the 78 participants whose impulses and behaviors mismatched, 76 (97.44%) experienced a violent impulse without enacting a violent behavior, whereas only 2 (2.56%) enacted a violent behavior without experiencing a violent impulse, a highly significant difference, McNemar's $\chi^2(1, N = 251) = 70.21, p < .001$.⁵ This effect was significant for both men, McNemar's $\chi^2(1, N = 69) = 12.80, p = .001$, and women, McNemar's $\chi^2(1, N = 182) = 58.00, p < .001$, although it was weaker for the former than for the latter, Cochran's $Q(2) = 156.16, p < .001$.

Discussion

The Study 1 results suggest that individuals involved in a serious fight with their romantic partner frequently experience a violent impulse without enacting a violent behavior. Although there are numerous reasons why individuals experiencing a violent impulse toward their romantic partner might not enact violent behavior (e.g., their partner could run away, a third party could intervene), we suggest that perhaps the most important reason is that individuals exert self-control to override the violent impulse.

In the forthcoming studies, we seek to delve deeper into self-regulatory processes, exploring the effects of (a) dispositional self-control (Study 2), (b) a manipulation that requires some individuals to respond immediately to partner provocation and others to respond after a delay (Study 3), (c) an ego depletion manipulation (Study 4), and (d) a longitudinal ego-bolstering manipulation (Study 5). In these studies, we zero in on IPV perpetration (with both self-report and behavioral measures), eschewing any additional focus on IPV impulses.

Study 2: Dispositional Self-Control

Study 2 provides an initial test of the idea that failure to inhibit violent impulses is a crucial predictor of IPV perpetration. Adolescent participants completed standardized measures of dispositional self-control and IPV perpetration at Time 1 and the same IPV perpetration measure at Time 2 (1 year later). We test the hypothesis that high dispositional self-control would predict, in both cross-sectional and residualized-lagged analyses, weaker violent tendencies.

Method

Participants and procedure. Data from the fourth and fifth waves of a six-wave study of adolescents living in a predominantly rural county in North Carolina were used (see Foshee et al., 1996). Cross-sectional data from the fourth wave ("Time 1" in the present report) were used because it was the only wave at which dispositional self-control was assessed. In addition, longitudinal analyses predicted IPV at the fifth wave ("Time 2") as a function of dispositional self-control assessed 1 year earlier. Participants were eliminated from all analyses if they indicated that they had never been on a date. Of the 1,085 participants who completed the Time 1 measures, 936 indicated that they had been on a date. Participants had a median age of 16 (range = 15–17) and were predominantly White (78.95% White, 13.03% Black; 8.02% "other"/mixed). Of the 936 participants in the final Time 1 sample, 850 (90.81%) also completed the Time 2 measures.

Questionnaires. *Self-control* was assessed with a four-item impulsivity measure from the criminology literature (Grasmick, Tittle, Bursik, & Arneklev, 1993; see also Flora, Finkel, & Foshee, 2003; Gottfredson & Hirschi, 1990).⁶ This measure asked participants to report their agreement (0 = *strongly disagree*; 3 = *strongly agree*) with statements such as, "I often act on the spur of the moment without stopping to think" (reverse scored) and "I often do whatever brings me pleasure in the here and now, even at

⁵ We ran an auxiliary repeated measures analysis, treating violent impulses and violent behaviors as continuous rather than as dichotomous variables. This analysis yielded findings similar to those using the dichotomous measures, $F(1, 250) = 73.64, p < .001$: Participants' violent impulses were significantly stronger than were their violent behaviors.

⁶ This impulsivity measure is one of six subscales in Grasmick and colleagues' (1993) full-length self-control scale. We elected to use the Impulsivity subscale rather than the full-length scale because the items in some of the other subscales appear largely irrelevant to overriding impulses (e.g., "I seem to have more energy and a greater need for activity than most other people my age" from the "physical activities" subscale). Regardless, all hypothesis tests yielded identical conclusions when substituting in the full-length scale for the impulsivity subscale.

the costs of some distant goal" (reverse scored) ($\alpha = .66$). Higher scores represent greater levels of self-control.

As in Study 1, IPV (at Times 1 and 2) was assessed with the Safe Dates Physical Violence Scale, which in Study 2 queried participants about how frequently they had perpetrated each of the 16 types of violent behavior against a person with whom they had gone on a date over the previous year. As was the case for the original version of this scale (Foshee et al., 1996), participants were instructed to report only incidents in which they *initiated* the violence (excluding instances of self-defense), indicating the frequency as "never," "1 to 3 times," "4 to 9 times," or "10 times or more." Following common IPV scoring protocols (e.g., Straus, Hamby, Boney-McCoy, & Sugarman, 1996), the number of IPV acts was calculated by taking the midpoint for the first three response categories (0, 2, and 6.5, respectively) or 15 for the "10 times or more" response category and then summing these acts across the 16 types of IPV.⁷

Results

As expected, IPV had a highly skewed distribution, with 74% of participants reporting that they had perpetrated 0 acts of IPV, 12% reporting between 1 and 5 acts, and so on. Statisticians have developed methods for analyzing count data with such distributions (Cohen, Cohen, West, & Aiken, 2003; Gardner, Mulvey, & Shaw, 1995). Poisson regression is perhaps the best known method, but psychological data (including our own) frequently do not adhere to its restrictive assumptions; as such, we used negative binomial regression because it is more conservative and provides the optimal means of testing our hypotheses (Gardner et al., 1995).

We conducted a first negative binomial regression analysis to examine the cross-sectional association of Time 1 self-control with Time 1 IPV perpetration. Consistent with predictions, participants high in self-control perpetrated significantly fewer acts of IPV than did participants low in self-control ($B = -1.50$, $\chi^2(1, N = 928) = 64.01$, $p < .001$). As depicted in the left half of Figure 2, this association implies that individuals characterized by low dispositional self-control (-1 SD) perpetrated approximately 7.5 times more acts of IPV ($M = 9.25$) than did individuals characterized by high dispositional self-control ($+1$ SD) ($M = 1.23$). The negative

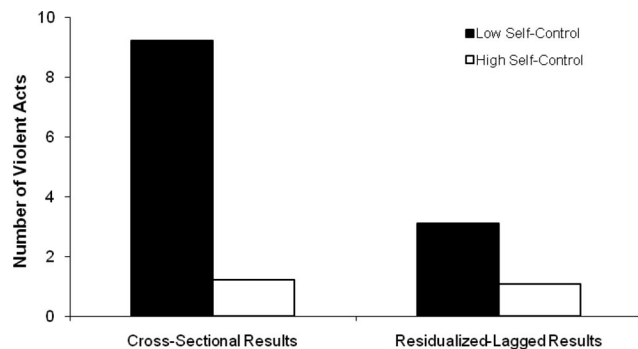


Figure 2. Study 2: The model-implied number of violent acts perpetrated against one's romantic partner for individuals who were low (-1 SD) versus high ($+1$ SD) in dispositional self-control. The residualized-lagged values predict the number of violent acts at Time 2, controlling for the number of violent acts at Time 1.

cross-sectional association of self-control with IPV perpetration was significant for both men ($B = -1.99$), $\chi^2(1, N = 397) = 32.63$, $p < .001$, and women ($B = -1.19$), $\chi^2(1, N = 525) = 24.83$, $p < .001$, although it was stronger for the former than for the latter ($B = 0.79$), $\chi^2(1, N = 922) = 4.03$, $p = .045$.

We then conducted a second negative binomial regression analysis to examine whether Time 1 self-control predicted Time 2 IPV perpetration, controlling for Time 1 IPV perpetration. Consistent with predictions, even after controlling for the association of Time 1 IPV perpetration with Time 2 IPV perpetration ($B = 0.04$), $\chi^2(1, N = 809) = 13.03$, $p < .001$, participants high in self-control at Time 1 perpetrated significantly fewer acts of IPV at Time 2 than did participants low in self-control ($B = -0.79$), $\chi^2(1, N = 809) = 18.59$, $p < .001$. As depicted in the right half of Figure 2, this association implies that, controlling for Time 1 IPV perpetration, a hypothetical individual scoring one standard deviation below the mean of dispositional self-control perpetrated approximately three times more acts of IPV over the ensuing year ($M = 3.12$) than did a hypothetical individual scoring one standard deviation above the mean ($M = 1.08$). The negative residualized-lagged association of self-control with IPV perpetration did not vary by participant gender, $\chi^2(1, N = 804) = 0.00$, $p = .996$.

Discussion

The Study 2 results suggest that individuals who are high in dispositional self-control perpetrate significantly fewer acts of IPV than do individuals who are low. This effect was robust in both cross-sectional and residualized-lagged analyses.

These results, however, do not establish the importance of violence-inhibiting forces per se. After all, it is possible that low self-control individuals perpetrate IPV at elevated rates because they experience especially strong violent impulses rather than because they lack the strength to override these impulses. In addition, both Studies 1 and 2 used retrospective reports, which could be subject to recall bias (but see Footnote 3). In neither study did we experimentally manipulate process-oriented variables related to self-regulation, which precludes the possibility of drawing causal conclusions about the importance of self-regulation in overriding violent impulses. To address these limitations, we used in vivo measures of IPV in Studies 3–5 and experimentally manipulated participants' ability to engage in effective self-regulation.

Study 3: Immediate Versus Delayed Responding

In Study 3, we experimentally manipulated participants' ability to engage in effective self-regulation by having them respond to insulting and jealousy-provoking hypothetical partner behavior either immediately or after a 10-s delay. The logic underlying this time delay manipulation is that individuals can become so focused in the moment on their partner's provocative behavior that their immediate responses might fail to account of the broader considerations regarding how they would ideally respond in such situations; that is, individuals may fail to engage in the transformative

⁷ Six participants at Time 1 and 1 participant at Time 2 reported the maximum number of 240 violent acts (15 instances of all 16 types of IPV). All hypothesis tests reported below revealed identical conclusions in auxiliary analyses excluding these participants.

process (Kelley & Thibaut, 1978). In the words of Holmes and Murray (1996),

the containment of conflict is seen as involving behaviors that break the momentum of a cycle, or play an 'editing function.' The ability of one or both partners to play this role depends on their being able to step back cognitively and achieve a broader, more positive perspective on localized events, to effectively overcome the myopia resulting from the heat of the moment (p. 624).

In addition, providing individuals with a few extra moments to respond (vs. requiring them to respond immediately) enhances controlled processing (akin to the sort of self-regulation investigated herein) but is unrelated to automatic processing (Payne, 2001). Building on this work, we predict that forcing individuals to delay for a few moments before responding to provocative partner behavior will enable them to use self-regulation, which will decrease the likelihood that they will verbalize violent thoughts.

To test this idea, we used a sophisticated and well-validated procedure (the "articulated thoughts in simulated situations," or ATSS, procedure) that enables researchers in an ethical manner to expose participants to well-controlled but experientially impactful partner provocations (Eckhardt, Barbour, & Davison, 1998). Participants listened to, and were instructed to immerse themselves psychologically in, simulated situations in which their partner engaged in behavior that was likely to be jealousy-provoking and disrespectful to the participant. By random assignment, half the participants verbalized their thoughts for 30 s in response to each segment of each scenario immediately after the segment concluded, whereas the other half did so after a 10-s delay. Trained coders rated these responses for verbalizations that involved physical aggression toward participants' romantic partner, hereafter referred to as *IPV verbalizations*.

Although the ATSS procedure uses hypothetical situations, its lengthy and personally involving scenarios, which are interspersed with think-aloud procedures, allow for far greater ecological validity than do most scenario procedures. This procedure also has the advantages of tight experimental control, an unstructured response format, and real-time rather than retrospective assessment—and it provides nuanced insight into individuals' moment-to-moment, inside-the-head experiences during escalating provocation.

Method

Participants. Participants were 71 undergraduates (40 women) who volunteered to take part in partial fulfillment of the requirements for their introductory psychology course. Participants had a median age of 19 (range = 18–21) and were racially diverse (55.29% White, 10.29% Black, 8.20% Asian American, 3.28% Hispanic, 1.49% Native American, and 21.45% "other"/mixed). To be eligible to participate, they were required to be involved in a romantic relationship of at least 3 months in duration. On average, they had been involved with their partner for 16.75 months ($SD = 14.95$).

Procedure. At the beginning of the session, the experimenter explained that most of the instructions and the ATSS scenarios would be administered via computer. A tape recorder captured the participant's articulated thoughts. The experimenter instructed the participant as follows:

We want you to listen to these tape-recorded scenarios and tune into what is running through your mind—and then to say these thoughts and feelings out loud. . . . There are no right or wrong answers, so please say whatever comes to your mind. Anything you say is appropriate. The more you say, the better. Imagine as clearly as you can that it is really you in each situation that you are listening to.

The experimenter then instructed the participant to don a pair of headphones attached to a computer, turned on the tape recorder, and left the participant alone in the room.

Participants listened to three 4-min audiotaped scenarios that were designed specifically for college samples. These scenarios (which are described in greater detail below) were modified from those used by Eckhardt and colleagues (1998). They were each divided into five segments. After each segment, participants talked aloud for 30 s about their current thoughts. An audio tone signaled to participants when they should begin verbalizing their thoughts; this tone sounded immediately in the no-delay condition and after 10 s in the delay condition. Both conditions also included a visual prompt ("Please speak now"), which appeared on the monitor at the same moment as the tone sounded. In the delay condition, "Please wait silently for 10 seconds" appeared at the conclusion of each segment to ensure that participants could adhere to the experimental procedures without taxing their memory resources.

For all participants, the first scenario served as a nonprovocative control in which participants overheard another couple having pleasant but idle conversation at a restaurant. This control scenario was included so participants could get accustomed to the ATSS procedure and to allow them to ask procedural questions before exposing them to the two target scenarios.

The order of the two target scenarios—the bar scenario and the apartment scenario—was counterbalanced. Both of these scenarios involved the participants overhearing their partner engaged in flirtatious behavior with a third party and included some potentially dismissing or insulting comments directed toward the participant. In these two scenarios, an opposite-sex actor played the role of the participant's romantic partner, a same-sex actor played the role of the third-party interloper, and a second same-sex actor served as the narrator. These scenarios are illustrated as our female participants experienced them; our male participants experienced virtually identical scenarios, except that "your boyfriend" was replaced with "your girlfriend," and all pronouns were modified as required.

The narrator opened the bar scenario by setting the stage:

You and your boyfriend go out to a club on a Saturday night. You have had plans all week. Because of your work schedule, you and your boyfriend don't usually go out together. You arrive at the club and proceed to the bar to get some drinks while your boyfriend finds a table. While ordering your drinks you notice a girl in your Tuesday/Thursday class sits with your boyfriend. You decide to make yourself inconspicuous and listen to what they are talking about before giving him a drink. Listen now as your boyfriend talks with a girl from your class.

This opening segment continued with the participant's boyfriend starting up conversation with the interloper: "Hey, how are you tonight? I didn't know you would be here." She responded: "You know I come here every weekend. Who was that girl you came in with?" He answered: "My girlfriend." She replied: "Your girlfriend!?"

At this point, this first segment of the bar scenario was finished, and the participant thought aloud for 30 s about whatever thoughts were in her head. As discussed above, this think-aloud procedure began either immediately following the end of the segment or after a 10-s delay. Segments 2–5 of the bar scenario involved the participant overhearing more of the discussion between her boyfriend and the interloper. These segments included the interloper flirting with the partner and making dismissive comments about the participant and about the relationship between the participant and her boyfriend. The interloper also invited the participant's boyfriend to a party at her place the following night. The participant's boyfriend was not egregiously inappropriate with the interloper, but he was an active participant in the discussion and did nothing to suppress the interloper's flirtatious behavior; he even told her that things "have definitely changed" for the worse in his relationship with the participant.

The narrator opened the apartment scenario as follows:

It's Friday and you have just gotten out of class. Usually on Friday night you go out after class with the girls, not getting home until late at night. Tonight, however, you're not really up to going out and you decide to go to your boyfriend's apartment instead. As you arrive there, you notice a strange car in the driveway. Entering his house quietly, you hear your boyfriend talking to a girl you know in the living room. They are sitting next to each other on the sofa. They did not hear you come in, and do not know that you are in the next room. You decide to keep yourself hidden and just listen to their conversation. Listen now as your boyfriend talks to a girl you know on the sofa.

This opening segment continued with the participant's boyfriend starting up conversation with the interloper: "I'm so glad you came over tonight!" She replied: "Me too. So what would you like to do tonight? Go get something to eat? See a movie?" He responded: "You know what I was thinking? It would be so much better if we could just stay in tonight. Okay?"

At this point, this first segment of the apartment scenario was finished, and the participant thought aloud (either immediately or after a 10-s) for 30 s about whatever thoughts were in her head. As in the bar scenario, Segments 2–5 of the apartment scenario involved the participant overhearing more of the discussion between her boyfriend and the interloper. These segments also included the interloper flirting with the partner (including physical contact in the form of a shoulder massage) and making dismissive comments about the participant and about the relationship between the participant and her boyfriend.

Coding the scenarios. Four or five undergraduate research assistants, all of whom were blind to participant condition, coded each participant's verbalized thoughts in response to the ATSS scenarios. Adapting procedures from Eckhardt and colleagues (1998), coders were trained to rate, among other constructs, the degree to which participants articulated IPV-related (i.e., physically aggressive) thoughts toward their partner. An example of an IPV verbalization from one of our female participants was, "I would beat his ass," and an example from one of our male participants was, "If she ever talked about me that way, I swear I'd smack her." For each of the 30-s response segments across the two provoking scenarios (for a total of 10 segments across the two target scenarios), coders rated on a scale from 0 (*no verbalized physical aggression*) to 6 (*extreme verbalized physical aggression*) the extent of the participants' IPV verbalizations.

Cronbach's alpha was calculated to assess interrater reliability for these IPV verbalizations, dropping one of the coders in those cases in which doing so increased the reliability of the measure. The IPV verbalization code exhibited acceptable interrater reliability across all 10 segments (5 segments from each target scenario), with an overall alpha of .88 and a range across segments from .72 to .99. These codes were summed across the 10 segments and the IPV verbalization measure recoded into a dichotomous variable indicating whether participants verbalized IPV tendencies or not (0 = no verbalized IPV, 1 = some verbalized IPV).

Results

To test the hypothesis that participants who were assigned to the immediate response condition would be more likely to verbalize tendencies toward IPV than participants who were assigned to the delayed response condition, we conducted a chi-square analysis of the relationship between the delay manipulation (immediate vs. delayed response) and violent verbalization. As illustrated in Figure 3, participants were 2.17 times more likely to verbalize a tendency toward IPV when they verbalized their responses to partner provocation immediately (46.51%) than when they did so after a 10-s delay (21.43%), $\chi^2(1, N = 71) = 4.59, p < .05$, an effect that did not vary by participant gender, $\chi^2(1, N = 71) = 0.00, p = 1.00$.⁸

Discussion

In Study 3, we experimentally manipulated whether participants responded to partner provocation immediately or after a 10-s delay. As predicted, individuals who responded immediately were more likely to verbalize IPV tendencies than were individuals who responded after a 10-s delay. Consistent with our hypothesis that self-regulatory, impulse-restraint processes require processing time (see Holmes & Murray, 1996; Payne, 2001), it seems that some of our participants were able to tamp down their violent behavioral intentions during the delay.

Although we manipulated in Study 3 the availability of cognitive resources (i.e., time to process the social circumstances) participants could use to override violent impulses, we did not manipulate a specific component of self-regulatory strength per se. Rather, we manipulated the degree to which participants had sufficient cognitive resources to engage in self-regulation before they began verbalizing their thoughts. However, the Study 3 results do not rule out the alternative explanation that participants could have experienced a violent impulse in response to the partner provocations that simply dissipated over time (i.e., that a second,

⁸ We ran an auxiliary analysis treating our coded IPV measure as continuous rather than as dichotomous. Given that each participant contributed 10 IPV scores to the data set (1 for each coded segment from each scenario), we conducted a multilevel modeling analysis predicting the continuous IPV score from experimental condition (immediate vs. delayed response), placing each segment's IPV code on a separate row in the data set. This analysis yielded findings similar to those using the dichotomized dependent variable ($\beta = -.09, t(2928) = -1.94, p = .052$: Participants who responded immediately to partner provocation verbalized significantly stronger tendencies toward IPV than did participants who responded after a 10-s delay.

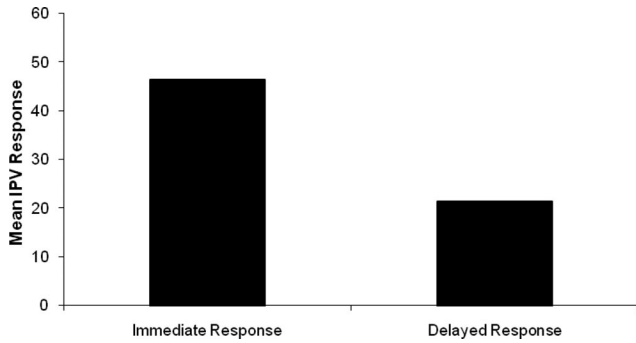


Figure 3. Study 3: The percentage of participants who verbalized intimate partner violence (IPV) as a function of experimental condition (immediate response vs. delayed response).

self-regulatory process, which occurs after and separate from the initial impulse, is irrelevant). In the final two studies, we used manipulations designed to either weaken (Study 4) or bolster (Study 5) self-regulatory strength; because these studies manipulate self-regulatory strength rather than time delay, they are not subject to the alternative explanation for the Study 3 results that the violent impulses simply dissipate over time.

Study 4: Ego Depletion and Provocation

In Study 4, we experimentally manipulated both ego depletion and partner provocation, and we devised a behavioral, laboratory-analog measure of IPV perpetration (for evidence that laboratory-analog measures of physically aggressive behavior have strong external validity, see Anderson & Bushman, 1997; Berkowitz & Donnerstein, 1982). Both members of romantic couples attended the laboratory session together. They were first assigned to either a depleting or a nondepleting attention control task before their partner (ostensibly) either provoked them (by evaluating them negatively and being potentially selfish) or did not.

The analog IPV measure—a new measure developed for this study—was the duration for which participants assigned their partner to maintain physically painful body poses. The experimenter informed participants that they would complete a two-person task with their partner in which one person (the actor) would maintain a series of such poses, and the other (the director) would determine how many poses his or her partner must complete and for how long the partner must hold each of them. The experimenter informed participants that holding the body poses tends to be physically uncomfortable but that doing so does not cause long-term physical damage. This procedure, therefore, allowed participants to inflict physical pain on their partner. A rigged drawing “randomly” assigned all participants to the director role.

Method

Participants. Participants were both members of 33 undergraduate heterosexual romantic couples (66 individuals) who had been romantically involved for at least 1 month. One member of each couple volunteered to take part in partial fulfillment of the requirements for their introductory psychology course, and the other participated in exchange for \$5 (U.S. currency). Participants

had a median age of 18 (range = 17–24) and were predominantly White (83.87% White, 9.68% Black, 3.23% Asian American, and 3.23% Native Hawaiian or other Pacific Islander).

Procedure and materials. Both members from each couple arrived at the laboratory for a study ostensibly concerning how people in relationships perform tasks separately and together. The experimenter escorted the partners into separate rooms and informed them sequentially that they would complete several tasks alone and one task with their partner during the experiment. The experimenter then instructed participants that they would first compose a drawing that contained five objects: one house, one car, two people, and one tree. The experimenter handed them a blank sheet of paper and a box of colored pencils, and she placed an index card with a list of the five objects on the desk for easy reference. Participants had 5 min to compose their drawing.

After completing the drawing, participants then viewed a 6-min videotape (without audio) depicting a woman being interviewed by an interviewer located off camera. In addition to the woman being interviewed, a series of common one-syllable words (e.g., *tree*) appeared at the bottom of the screen for 10 s each. By random assignment, half the participants were assigned to the depletion condition, wherein the experimenter instructed them “not to read or look at any words that may appear on the screen” and to redirect their gaze immediately if they caught themselves looking at the words instead of the woman’s face. Insofar as attention orients automatically toward novel stimuli in the environment (e.g., Shiffrin & Schneider, 1977), participants in the depletion condition were required to exert self-control by overriding the natural tendency to orient their attention to the frequently changing words, instead maintaining their focus on the woman. Participants in the no-depletion condition, in contrast, were not given any specific instructions for watching the video clip. This attention control procedure, which was adapted from the cognitive load literature (Gilbert, Krull, & Pelham, 1988), has been used in several previous experiments to manipulate self-regulatory strength (e.g., DeWall et al., 2007; Schmeichel, Vohs, & Baumeister, 2003).

Participants then completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) before they received feedback ostensibly from their partner on the creativity of their drawing. The experimenter explained to the participants that their partner was instructed to give the participant \$0.25 for every point on the creativity rating sheet that the participant had earned. Because the creativity scale ranged from 1 (*not all at creative*) to 20 (*extremely creative*), participants were informed that their partner could give them up to \$5. Participants were also told that any money their partner did not give them for their drawing would be deposited into a lottery that only their partner could win. Participants were randomly assigned to one of two feedback conditions: positive or negative. Participants assigned to the positive feedback condition were told that their partner gave them \$4.25 for their drawing (indicating a highly positive evaluation) and kept \$0.75 for him- or herself for the lottery. Participants in the negative feedback condition, in contrast, were informed that their partner gave them \$0.75 for their drawing (indicating a highly negative evaluation) and kept \$4.25 for him- or herself for the lottery. As part of the cover story, all participants were told that they would be given a chance to evaluate their partner’s drawing later in the experiment, although this evaluation never actually took place.

The experimenter then informed participants that they would complete a two-person task with their partner in which one person (the “actor”) would complete a series of yoga poses, and the other person (the “director”) would determine how many yoga poses (out of 20) the actor completes and for how long he or she should hold each pose. On the basis of a rigged drawing, all participants were assigned to the role of the director. The experimenter also informed participants that the yoga positions tend to be physically uncomfortable but that the positions do not cause any long-term physical damage.

Participants were told that they could assign pose duration times ranging from 5 to 120 s for each position and were encouraged to have their partner hold at least some of the positions for at least 30 s ostensibly so the experimenter could garner as much information as possible from the experiment. The experimenter also informed participants that the pose assignments they made would not influence how long the experiment lasted. To ensure privacy, participants completed the pose assignment sheet alone.

Finally, participants completed a three-item measure intended to measure their perceptions of their partner’s attitudes toward yoga: “My partner is interested in yoga,” “My partner has been involved in activities related to yoga,” and “My partner would be interested in joining a yoga class” ($\alpha = .94$). These items were assessed on scales ranging from 1 (*not at all*) to 10 (*extremely*) and were included to test whether any effects of the experimental manipulations were robust beyond participants’ perceptions of their partner’s attitudes toward yoga.

Results

Both members of each couple were “randomly” assigned to the director role, so both assigned their partner to maintain yoga poses for certain durations. These two observations—one from each member of a given couple—violate the ordinary least squares regression assumption of independence. As such, we used multilevel modeling (Kenny, Kashy, & Bolger, 1998; Raudenbush & Bryk, 2002) to examine the effects of the feedback and depletion manipulations on assigned pose duration.

We hypothesized that results would reveal a Depletion \times Feedback interaction effect on pose duration, such that depletion would cause participants to force their partner to maintain painful body poses for relatively long durations, but only when their partner had provoked them with negative feedback; depletion should not predict violence when their partner had not provoked them (i.e., had given them positive feedback). As depicted in Figure 4, the predicted Depletion \times Feedback interaction effect on pose duration was significant ($B = 20.82$), $t(32) = 2.61$, $p = .014$. Follow-up tests of simple effects revealed that, in the wake of partner provocation, participants assigned to the depletion condition were significantly more violent than were participants assigned to the no-depletion condition ($B = 17.49$), $t(16) = 2.82$, $p = .012$, but they were not more violent in the absence of provocation ($B = -3.33$), $t(16) = -0.66$, $p = .518$. This Depletion \times Feedback interaction effect did not vary by participant gender ($B = 6.15$), $t(28) = 0.39$, $p = .702$, and it remained robust ($B = 18.57$), $t(28) = 2.33$, $p = .027$, in an analysis simultaneously controlling for (a) perceptions of the degree to which the partner likes yoga, (b) positive affect, and (c) negative affect.

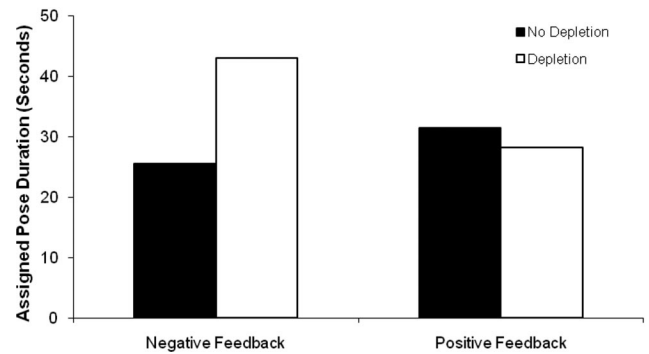


Figure 4. Study 4: The effects of the feedback and depletion manipulations on assigned pose duration.

Discussion

Study 4 included experimental manipulations of both partner behavior (provocative vs. not) and participant depletion (depleted vs. not), and it included a laboratory-analog, behavioral measure of IPV (assigning the partner to maintain painful body poses for certain durations). Results suggest that self-regulatory resources are needed to inhibit violent impulses from being translated into violent behavior toward one’s romantic relationship partner. In the absence of provocation, however, the depletion of self-regulatory resources does not influence IPV.

Although the findings from Study 4 are intriguing, their practical value is somewhat limited; after all, who wants to develop manipulations that make individuals *more* violent toward their romantic partner? To be sure, training individuals to recognize that they are experiencing depletion could help them become vigilant at those times to avoid heated arguments, but what if it were possible to use an experimental manipulation not to deplete ego strength, but to bolster it? Whereas the Study 4 procedures involved experimentally manipulating depletion in a single laboratory session to test whether self-regulatory strength factors are causally related to IPV, in Study 5 we tested this idea with markedly different procedures. In Study 5, we investigated whether individuals who are assigned to a self-regulatory bolstering regimen would express less violent intentions toward their partner over time relative to individuals who are assigned to a no-intervention control condition.

Study 5: Ego Bolstering

As discussed previously, a series of compelling recent studies has shown that experimental self-regulation regimens can indeed bolster self-regulatory strength over time, helping individuals maintain self-regulatory resources in the face of depleting circumstances (for a review, see Baumeister et al., 2006). Assigning individuals to such a regimen improves their self-regulation both in their everyday lives (e.g., impulsive spending, unhealthy eating habits) and when confronted with laboratory-based ego depletion tasks. These findings suggest that self-regulation functions like a muscle that can be strengthened through sustained exertion over time. In Study 5, we applied this self-regulation bolstering approach to the study of IPV.

Participants who were involved in dating relationships of at least 4 months in duration took part in two laboratory sessions 2 weeks apart. At each session, all participants first experienced an ego-depleting attention control task (the same one used in Study 4) before completing a self-report measure of IPV inclinations toward one's partner. At the conclusion of the first laboratory session, participants were randomly assigned to one of three conditions relevant to the 2-week period between the laboratory sessions. Two of these conditions involved interventions previously demonstrated to bolster ego strength over time (e.g., Gailliot et al., 2007), whereas the third served as a no-intervention control condition. In the first ego-strengthening condition, participants exerted themselves to use their nondominant hand in mundane tasks (e.g., eating, brushing their teeth). In the second condition, they exerted themselves to regulate certain aspects of their habitual speech processes (e.g., avoiding sentences that begin with the word "I", saying the word "yes" instead of "yeah").

At both laboratory sessions, participants used a validated questionnaire to report the degree to which they would be likely to enact IPV in response to a series of provocative and upsetting partner behaviors. In accord with the procedures used in previous studies employing self-regulation bolstering regimens (see Baumeister et al., 2006), participants completed this IPV inclination measure shortly after engaging in the depleting attention control task. These procedures enabled us to focus on the aggression-inducing condition in Study 4 (when participants were both provoked and depleted; see the white bar on the left side of Figure 4) to examine whether self-regulation bolstering regimens can reduce the violent inclinations of depleted individuals who have been provoked. We hypothesized that the self-regulation bolstering manipulation would interact with laboratory assessment time (the first vs. the second laboratory session) to predict IPV, with the violent inclinations of participants assigned to either of the ego-bolstering manipulations declining from the first assessment to the second and the violent inclinations of participants assigned to the control condition not changing over time.

Method

Participants. Participants were 40 undergraduates (29 women) who volunteered to take part in partial fulfillment of the requirements for their introductory psychology course. Participants had a median age of 19 (range = 18–45) and were predominantly White (67.50% White, 20.00% Eurasian, 10.00% Asian, and 2.50% "other"). To be eligible to participate, they were required to be involved in a romantic relationship of at least 4 months in duration. On average, they had been involved with their romantic partner for 21.10 months ($SD = 47.41$).

Procedure and materials. As mentioned previously, participants attended two laboratory sessions, which were separated by 2 weeks. Each session consisted of two key parts. In the first part, all participants experienced the ego-depleting attention control task from Study 4. In the second part (which followed a brief filler task), participants completed a self-report measure of IPV inclinations toward their partner. This IPV inclinations measure was a modified version of a previously validated scale entitled Proximal Antecedents to Violent Episodes (PAVE; Babcock, Costa, Green, & Eckhardt, 2004). Participants indicated on a scale ranging from 1 (*not at all likely*) to 9 (*extremely likely*) how likely it is that they

would become "physically aggressive" in response to each of 20 upsetting and provocative partner behaviors. Specifically, the written instructions read as follows:

Sometimes, there are situations when people are more likely to become PHYSICALLY aggressive than other times. Sometimes, people feel that violence is justified, given the situation. Please indicate how likely it is that YOU would be physically aggressive in each of the following types of situations, if they were to arise.

Example situations included, "My partner ridicules or makes fun of me," "My partner does something to offend or 'disrespect' me," and "I walk in and catch my partner having sex with someone" (Time 1 $\alpha = .95$; Time 2 $\alpha = .94$).

At the conclusion of the first laboratory session, participants were randomly assigned to one of three conditions relevant to the 2-week interim period between these two laboratory sessions. Two of these experimental conditions involved interventions that have been previously demonstrated to bolster ego strength over time (e.g., Gailliot et al., 2007), whereas the third served as a no-intervention control condition. In the first ego-bolstering task—the *physical regulation* task—the experimenter instructed participants to use their nondominant hand for the following everyday tasks: brushing their teeth, opening doors, cutting food with a knife, using scissors, striking a match or using a lighter, carrying items, operating a computer mouse, drinking with a glass or mug, and stirring (e.g., stirring sugar into coffee). She also instructed them that they only had to follow these nondominant hand instructions every other day (rather than every day).

In the second ego-bolstering task—the *verbal regulation* task—the experimenter instructed participants that they should try to modify their verbal behavior (i.e., their speech) in the following ways: only say "yes" (as opposed to "yeah" or other colloquialisms) when speaking in the affirmative, only say "no" when speaking in the negative, use complete sentences, avoid using sentences beginning with the word "I", avoid using slang expressions (including swearing), and avoid the use of abbreviated speech and shorthand terms (e.g., say "gymnasium" instead of "gym"). She also instructed them that they only had to follow these verbal behavior instructions between 8:00 a.m. and 6:00 p.m.

The experimenter told the participants in the two ego-bolstering conditions (a) that they "should exert as much effort as possible" when performing the physical or verbal regulation tasks; (b) that these tasks were unrelated to the laboratory tasks (an assertion that was false but essential for the cover story); and (c) that they should record their progress on these tasks in diaries she provided them, which they were to return to her at the end of each week. She contacted the participants twice during the 2-week interim period to ensure they were adhering to their assigned self-regulatory task. She also contacted the participants in the control condition twice so they experienced the same amount of contact with the experiment throughout the study.

Results

We hypothesized that results would reveal a Bolstering Condition \times Laboratory Session interaction effect on IPV inclinations (PAVE scores), such that the IPV inclinations of participants assigned either to the physical or to the verbal self-regulation regimens would decline over time, whereas the IPV inclinations of

participants assigned to the control condition would not. To test this hypothesis, we conducted a mixed-model regression analysis predicting IPV inclinations from the between-subjects variable of bolstering condition and the within-subjects variable of laboratory session (the first vs. the second session). Consistent with predictions, the Bolstering Condition \times Laboratory Session interaction effect was significant, $F(2, 37) = 4.65, p = .016$, an effect that did not vary by participant gender, $F(2, 34) = 0.26, p = .771$. To probe the nature of this interaction effect, we performed follow-up analyses to examine whether IPV inclinations declined significantly from Session 1 to Session 2, separately for each of the three experimental conditions. As depicted in Figure 5, participants in both the physical regulation condition, $F(1, 13) = 14.21, p = .002$, and the verbal regulation condition, $F(1, 14) = 12.56, p = .003$, exhibited a significant decrease over time in their inclinations to engage in IPV perpetration, whereas participants in the control condition did not, $F(1, 10) = 0.11, p = .744$. Mean decreases in IPV perpetration (PAVE score) across these three conditions were 1.08, 1.11, and 0.03, respectively. Finally, to ensure that these results could not be explained by a failure of random assignment, we conducted a one-way analysis of variance on the Session 1 IPV scores. As expected, these scores did not vary by experimental condition, $F(2, 37) = 1.67, p = .202$.

Of course, the mixed-model regression approach we took in the preceding paragraph is only one of the ways we can analyze the data. Another reasonable approach involves conducting an analysis of covariance predicting IPV inclinations at Session 2 from experimental condition, controlling for IPV perpetration at Session 1. For this analysis, participants in either self-regulation bolstering condition were scored with an ego-bolstering condition value of .5, and participants in the control condition were scored with an ego-bolstering condition value of $-.5$. Consistent with predictions, after controlling for the robust association of Session 1 IPV inclinations with Session 2 IPV inclinations ($\beta = .59$), $t(37) = 4.39, p < .001$, ego-bolstering condition accounted for unique variance in Session 2 IPV perpetration ($\beta = -.35$), $t(37) = -2.61, p = .013$. In short, the mixed-model regression approach and the covariance approach both supported our hypotheses: Participants' IPV inclinations declined from Session 1 to Session 2 if they were assigned to either of the ego-bolstering conditions, but it did not if they were assigned to the control condition.

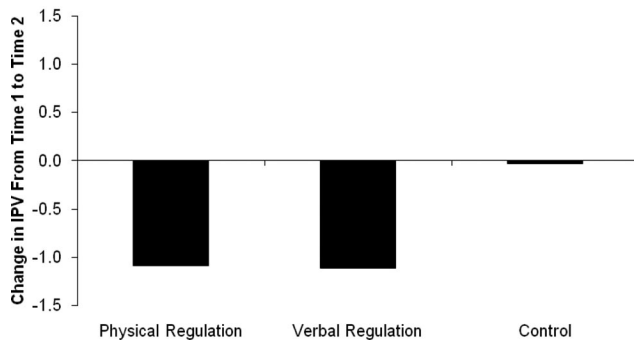


Figure 5. Study 5: Change in intimate partner violence (IPV) inclinations from Time 1 to Time 2 as a function of ego-bolstering condition.

Discussion

The Study 5 results suggest that assigning individuals to a self-regulation bolstering intervention may reduce their violent inclinations toward their romantic partner in response to partner provocation. To be sure, assessing self-reports of how one would behave in response to a range of hypothetical partner provocations is not the same thing as assessing violent behaviors per se. Still, given that behavioral intentions of how one intends to behave in a specific situation (e.g., situations such as those on the PAVE questionnaire in Study 5) appear to be the best predictor of how one will actually behave in that situation (Ajzen, 1991), a reasonable conclusion from Study 5 is that self-regulation bolstering interventions may well reduce IPV perpetration. Definitive conclusions, however, await behavioral intervention studies.

General Discussion

The findings from Studies 1–5 provide strong support for our hypothesis that self-regulatory failure is an important predictor of IPV perpetration. We used a within-subjects assessment of IPV impulses versus behaviors in Study 1, longitudinal procedures involving a representative sample of rural adolescents in Study 2, and experimental procedures in Studies 3, 4, and 5.

Study 1 demonstrated that people are more likely to experience violent impulses during severe conflict with their romantic partner than they are to enact violent behavior, which suggests that individuals would perpetrate IPV with substantially greater frequency if they lacked behavioral restraint processes to help them override their violent impulses. These results could also shed new light on the hundreds of studies in which participants have reported whether they did or did not enact violent behaviors toward their partner by suggesting that the IPV perpetration rates revealed by those studies, alarming as they are, may well pale by comparison to the rates of violent impulses those participants experienced. We examined four different aspects of self-regulation in Studies 2–5 that can help individuals override violent impulses: strong dispositional self-control (Study 2), sufficient cognitive processing time to enable controlled self-regulation (Study 3), having self-regulatory resources that have not been depleted by an effortful preceding task (Study 4), and having self-regulatory resources that have been strengthened via a self-regulatory bolstering regimen (Study 5).

These studies measured IPV perpetration in diverse ways: self-reports of actual past behavior (Studies 1 and 2), stream-of-consciousness verbalizations of current mental contents (Study 3), laboratory behavior (Study 4), and self-reports of behavioral intentions in response to standardized partner provocations (Study 5). To be sure, each of these measures has certain limitations. The consistency of our findings across these diverse measures, however, provides converging evidence regarding the relationship between self-regulation and IPV.

Addressing the topic of IPV, Straus and colleagues (1996) argued that, “Conflict is an inevitable part of all human association, whereas violence as a tactic to deal with conflict is not” (p. 284). Engaging in violent behavior toward the conflict partner is one (especially) destructive way of handling conflict, but it is not the only one. Scholars have examined a broad array of other aggressive behaviors, including verbal aggression, relational ag-

gression, direct and indirect aggression, displaced aggression, active and passive aggression, and so forth (for a review, see Bushman & Huesmann, in press). A review of these various forms of aggression is beyond the scope of the present article, but we suggest that the self-regulation perspective could well apply to them in the same way it applies to physical aggression in romantic relationships. Saying either verbally abusive things to a conflict partner or reputationally damaging things to a third party are, sadly, not rare events. Sometimes, such behavior is premeditated and strategic. At other times, however, it is impulsive, frequently leading the aggressor to experience regret in its wake. Future research could explore the potentially important role of self-regulatory failure in these impulsively aggressive acts.

Implications

A central issue underlying the present research is whether impulses toward IPV perpetration are monopolized by a select group of deviant or patriarchal individuals or whether most humans have the potential to experience such impulses on occasion during conflict with their romantic partner. The present results suggest that it is not rare for individuals to experience violent impulses during intense relationship conflict; for example, even with the limited dating experience of participants in Study 1 (median age = 19), approximately 50% of them reported experiencing a violent impulse during the most conflictual interaction they had experienced with a romantic partner.

Given the frequency of reports of violent impulses, it is essential, for both theoretical and practical reasons, to understand the psychological mechanisms by which individuals override these impulses in favor of nonviolent conflict behavior. This shift in emphasis to self-regulatory processes might require a parallel shift in the basic questions asked about IPV (e.g., “Which people are effective at inhibiting violent impulses, and what makes them so?” and “Under which circumstances are individuals especially likely to succumb to their violent impulses?”). Such a shift could promote a more thorough and productive understanding of IPV perpetration, especially insofar as efforts to train individuals to override their impulses may well be more successful than efforts to train them not to experience those impulses in the first place (Baumeister, 2005). To be sure, individuals vary not only in how successful they are at self-regulation (and the circumstances under which they are most successful), but also in the strength of the violent impulses they are likely to experience and the circumstances under which these impulses are especially strong (see Finkel, 2007, 2008; Finkel, Bodenhausen, & Bushman, 2009). One important direction for future research is to identify the Person \times Situation dynamics that predict both the intensity of violent impulses and the effectiveness of self-regulatory processes to override them.

In addition to these theoretical implications, the present research also has practical implications. To contextualize these practical implications, one must first understand how extant legal and clinical interventions for IPV perpetration generally work. A systematic analysis of legal standards across the United States for treating IPV perpetrators whose violence has embroiled them in the court system revealed that the “content of standards characterizes spouse abuse as a societal, macro problem requiring social change beyond what individual therapy might achieve” (Austin & Dankwort, 1999, pp. 165–166). In contrast, topics such as anger management and stress man-

agement were “rarely mentioned as fitting components of the curriculum” (p. 163). These standards have been developed in the absence of evidence that they are efficacious for reducing IPV perpetration (Austin & Dankwort, 1999), and recent meta-analytic and narrative reviews of IPV interventions indicate that present intervention practices are ineffective (Babcock, Green, & Robie, 2004; Dutton & Corvo, 2006). Fortunately, scholars have started to recognize that one-size-fits-all intervention approaches are unlikely to be effective; interventions must be tailored to the particular IPV circumstances in question (e.g., Kelly & Johnson, 2008).

To the degree that the self-regulatory dynamics studied in the present article are relevant to a sizable subset of the IPV perpetrations that land people in the court system (and we acknowledge that these dynamics may well be less relevant to the average court-mandated perpetrator than to the average high school or college perpetrator), the results from the studies reported herein suggest that self-regulation training might be a useful addition to the legal standards for treating perpetrators. Indeed, the results from Study 5 showed that 2 weeks of practicing simple acts of self-regulation reduced violent intentions toward one’s romantic partner. A similar self-regulatory bolstering intervention could perhaps provide chronic IPV perpetrators with the means to inhibit their violent impulses. In addition, training perpetrators to recognize internal signs that they are becoming angry and teach them to take a 10-s “time-out” could also reduce the frequency of IPV perpetration (see Study 3).

These possibilities notwithstanding, it is premature to recommend incorporating the present results into legal or clinical interventions. Should the time come for such incorporation, however, we do make one recommendation: The self-regulatory processes reported herein are only relevant to individuals who perpetrate (or could potentially perpetrate) violent behaviors that exceed the amount of force that they believe—in their most rational moments—is appropriate during conflictual interaction with their partner (for discussions of attitudinal acceptance of and norms regarding IPV, see Bethke & DeJoy, 1993; Simon et al., 2001; Sorenson & Taylor, 2005; Straus, Kantor, & Moore, 1997). For instance, individuals who sometimes enact violent behavior during conflictual interaction with their partner that they subsequently regret may be especially strong candidates for self-regulation-based interventions. In contrast, such interventions are unlikely to be effective for individuals who believe that their level of violent behavior is appropriate; after all, these individuals are not internally motivated to override their violent impulses, so their violent behavior should not be viewed as a consequence of self-regulatory failure.⁹

Self-Regulation, Culture, and IPV Perpetration

Throughout this article, we have emphasized the importance of self-regulatory processes in helping individuals override violent impulses toward their romantic partner. The preceding discussion

⁹ Along these lines, the social psychological literature on aggression distinguishes between (a) hostile aggression, which is impulsive and motivated by the desire to hurt someone, and (b) instrumental aggression, which is premeditated and motivated by the desire to obtain a goal (Feshbach, 1964; for a review, see Bushman & Anderson, 2001). The self-regulatory analysis of IPV advanced in this article may be especially relevant to the degree that the violent impulses are inspired largely by hostile concerns rather than by instrumental concerns.

of the importance of individuals' beliefs about whether (and when) perpetrating IPV is appropriate suggests, however, that cultural and subcultural dynamics also play an important role in IPV perpetration (e.g., Kaufman Kantor, Jasinski, & Aldarondo, 1994). For example, compelling evidence suggests that cultures in which men hold greater power than women exhibit a tendency for men to perpetrate IPV more frequently than women do (Archer, 2006; Levinson, 1989). This tendency contrasts with the more gender-neutral perpetration rates from the U.S. and other Western nations (Archer, 2000) and suggests that power dynamics and cultural mores influence IPV perpetration in important ways.

How does this emphasis on the importance of culture in predicting IPV perpetration dovetail with the present emphasis on the importance of self-regulation? Given that cultural and subcultural norms influence how much, when, and for whom perpetrating IPV is acceptable, we suggest that these norms are important in determining when individuals will strive to exert self-regulation versus succumbing to their violent impulses. As discussed previously, self-regulatory processes can only help individuals override impulses toward IPV when those individuals believe—in their most rational moments—that IPV is an inappropriate way of handling the relevant relationship conflict. Future research can test the straightforward hypotheses that (a) individuals feel less driven to exert self-regulation to override their violent impulses to the extent that their cultural norms sanction IPV perpetration for individuals like themselves, and (b) individuals from cultures that sanction IPV perpetration for them in the relevant situation show a smaller discrepancy between their violent impulses and their violent behaviors than do individuals from cultures that do not.

Limitations, Future Directions, and Strengths

We note three limitations of the present research. First, all of our samples involved relatively young participants, with median ages ranging from 16 to 19. It is important for future research to establish that the self-regulation analysis advanced herein applies also to older individuals. That said, IPV perpetration tends to be especially high in younger samples (Archer, 2000), and IPV among adolescents and young adults may represent “an important juncture in the developmental pathway to adult partnership violence” (Wekerle & Wolfe, 1999, p. 435). As such, one could perhaps view the present studies' focus on younger individuals as a strength.

A second limitation is that our self-regulatory failure analysis may not apply to a small but important subset of the individuals who perpetrate IPV. The present analysis may not apply to perpetrators of “intimate terrorism” (see Footnote 2), wherein individuals enact violent behavior toward the instrumental goal of exerting control over the victim (Johnson, 1995, 2008). In extreme cases, individuals who are determined to exert control over their partner might even recruit self-regulatory resources to *increase* their violent behavior. The role of self-regulatory dynamics in predicting intimate terrorism is a potentially valuable direction for future research.

A third limitation is that although the present set of studies goes a long way toward identifying the self-regulatory mechanisms that help individuals override violent impulses (e.g., cognitive processing time, nondepleted self-regulatory resources, bolstered self-regulatory resources), it does not establish precisely what happens

as participants exert this self-regulation. For example, when individuals respond after a brief delay rather than immediately (Study 3) or respond after a nondepleting task rather than after a depleting task (Study 4), what do they do with that extra processing time or with those extra self-regulatory resources to override their violent impulses (one possibility is that they compare their impulsive behavioral preferences with their ideal behavioral preferences; cf. Carver & Scheier, 1998)? Also, given that our Study 5 participants were depleted immediately prior to the IPV inclination assessment, it is not clear whether the IPV-reducing effects of our self-regulation bolstering regimen also apply to individuals who are not depleted.¹⁰ In addition, as in other research on self-regulation bolstering (see Baumeister et al., 2006), participants in these regimens both (a) engaged in self-regulatory tasks and (b) kept a diary of their performance of these tasks; it is not clear whether both of these manipulations are required for the intervention to be effective, or whether one of them is the crucial ingredient.

Despite these limitations, the present research also possesses important strengths. For example, we used widely divergent methods in the five studies (e.g., experimental and longitudinal, self-report and behavioral) to establish that self-regulatory failure is an important factor in IPV perpetration. In these studies, we identified self-regulation-relevant mechanisms that drive this effect (cognitive processing time, self-regulatory depletion, self-regulatory bolstering), providing strong causal evidence for our hypothesized processes. Experimental studies are all too rare in the IPV literature; articles combining nonexperimental studies of actual IPV perpetration with laboratory-based experiments are likely to provide the optimal combination of external and internal validity.

Conclusion

Baumeister and Boden (1998) argued that “breakdowns in self-control processes are the proximate causes of the majority of violent and aggressive actions that occur spontaneously in peacetime society” (p. 111; see also Baumeister, 1997). Although this perspective has recently enjoyed empirical validation in social psychology (DeWall et al., 2007; Stucke & Baumeister, 2006) and other disciplines (e.g., criminological work by Gottfredson & Hirschi, 1990), it has not made significant contributions to researchers' understanding of IPV perpetration. On the contrary, many of the most influential scholars in that literature have downplayed the importance of inner processes, such as self-regulation, and instead have argued that individuals perpetrate IPV primarily because socialization processes instruct them to do so (e.g., Dobash & Dobash, 1979; Straus et al., 1980).

Across five methodologically diverse studies, the present report provided support for the hypothesis that self-regulatory failure is an important predictor of violent behavior toward one's romantic partner. Even though self-regulation failure appears to be a crucial predictor of IPV perpetration, however, the available evidence

¹⁰ We know from Study 4 and from related literatures (for reviews, see Baumeister, 1997; Baumeister et al., 1994) that people are especially likely to enact violent behavior when they are depleted, which means that IPV inclinations were examined in the Study 5 procedures under those circumstances when such behavior is especially likely. Still, future research could fruitfully examine whether the IPV-bolstering regimen would reduce tendencies toward IPV among nondepleted individuals.

suggests that engaging in violent behavior is not uncontrollable; many such acts are “neither a premeditated action nor an irresistible impulse” (Baumeister, 1997, p. 13; see also Baumeister et al., 1994). By helping individuals improve their ability to engage in effective self-regulation, researchers, clinicians, and policymakers may well be able to reduce the frequency and severity of violence within romantic relationships.

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New Editors Appointed, 2011–2016

The Publications and Communications Board of the American Psychological Association announces the appointment of 3 new editors for 6-year terms beginning in 2011. As of January 1, 2010, manuscripts should be directed as follows:

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Manuscript submission patterns make the precise date of completion of the 2010 volumes uncertain. Current editors, Cynthia García Coll, PhD, Annette M. La Greca, PhD, and Keith Rayner, PhD, will receive and consider new manuscripts through December 31, 2009. Should 2010 volumes be completed before that date, manuscripts will be redirected to the new editors for consideration in 2011 volumes.