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Self-Control and Forgiveness: A Meta-Analytic Review

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Abstract

In the 12 years since scholars first investigated the link between self-control and forgiveness (Finkel & Campbell, 2001), the literature investigating this relation has grown rapidly. The present article reports a meta-analytic review of this link across 40 independent samples and 5,105 independent observations. In addition, it investigates an array of potential moderators. Results revealed that the overall link between self-control and forgiveness is statistically robust and small-to-moderate in magnitude ($r = .18$). Consistent with prevailing theoretical models, this link is stronger when forgiveness is assessed in terms of low vengeance (resisting retaliation: $r = .31$) rather than in terms of high benevolence (fostering prosociality: $r = .16$). Discussion focuses on the potentially crucial role of forgiveness, especially vengeance inhibition, in linking self-control to relationship well-being.

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“The weak can never forgive. Forgiveness is the attribute of the strong.”
—Mahatma Gandhi

Much of the time, relationships go well. Social coordination is efficient, laughter flows readily, and conflict is absent. Under such circumstances, the relationship rolls along smoothly, and it typically requires minimal exertion to sustain this positive trajectory. Unfortunately, at other times, relationships go poorly. Social coordination is inefficient, laughter is a distant memory, and conflict seems ubiquitous. Under such circumstances, the relationship jumps off the rails, and it frequently requires significant exertion to get it back on track. A particularly vivid case involves interpersonal transgressions or betrayals, which can pose an existential threat to the relationship if the victim does not forgive. Unfortunately, the default response to being the victim of a transgression typically is antithetical to forgiveness. Consequently, achieving forgiveness requires the strength to override this grudge-oriented default response (reduced *vengeance*) in favor of a more interpersonally accepting response (enhanced *benevolence*).

In the present article, we report a meta-analytic test of the hypothesis that one component of this strength is self-control. We have two major goals in conducting this meta-analysis. First, the initial test of the hypothesis that self-control is positively linked to forgiveness was published over a decade ago (Finkel & Campbell, 2001), and there are now several dozen studies on the topic, with a total of over 5,000 participants. It is time to take stock of the rapidly expanding literature on self-control and forgiveness to determine whether the effect is robust and, if so, its magnitude. Second, the literature is now substantial enough to allow for examination of the extent to which the magnitude of the effect varies as a function of theoretical and methodological moderator variables. In short, we seek to take a snapshot of the self-control and forgiveness literature as it enters adolescence and to identify nuances and subtleties that clarify the

circumstances under which the effect is larger versus smaller as such a review can serve as a springboard for future inquiry.

Self-Control and Forgiveness: An Interdependence Theory Perspective

Despite the importance of responding to transgressions in everyday life, forgiveness did not become a mainstream topic in social and personality psychology until the 1990s. In 1991, Caryl Rusbult and her collaborators launched an influential program of research on *accommodation*, which they defined as “the willingness, when a partner has engaged in a potentially destructive act, to inhibit impulses to react destructively and instead react constructively” (Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991, p. 53). Shortly thereafter, Michael McCullough and his collaborators launched a related program of research on *forgiveness*, which they defined as “a motivational transformation that inclines people to inhibit relationship-destructive responses and to behave constructively toward someone who has behaved destructively toward them” (McCullough, Worthington, & Rachal, 1997). These two articles have been highly influential, amassing ~1,500 Google Scholar citations as of July 2013. We share McCullough and colleagues’ view that accommodation and forgiveness are similar constructs, and, due to its stronger intuitive appeal, we follow their lead in adopting “forgiveness” as the overarching term.

The theoretical backbone of much of the research examining the self-control and forgiveness link was Rusbult et al.’s (1991) conceptualization of the interdependence theory concept of transformation of motivation (Kelley & Thibaut, 1978). This conceptualization was rooted in an analysis of the structure of the situation confronted by an individual who has just been victimized by a transgression. It capitalized upon the distinction between the “given situation,” which represents “self-centered preferences” about the “fundamental structure of the

situation itself,” and the “effective situation,” which incorporates broader considerations and values (Rusbult et al., 1991, p. 55). As applied to the context of responding to transgressions, Rusbult and colleagues suggest that the forgiveness process unfolds as follows: “although a partner’s destructive act may be hurtful and seem unjustified—and although one’s fundamental, primitive impulse may be to react destructively in turn—on deeper consideration one may transform the given situation, producing an effective situation in which greater value is attached to reacting constructively” (p. 56).

A decade later, Finkel and Campbell (2001) noted that this process has key structural features in common with self-control dilemmas. Just as a dieter frequently must override his visceral impulse to eat dessert in favor of the more considered orientation toward limiting his caloric intake, the victim of a transgression frequently must override his visceral impulse to retaliate in favor of a more considered orientation toward constructive problem-solving. Across a series of experimental and correlational studies, Finkel and Campbell (2001) found that self-control predicts forgiveness. This link between self-control and forgiveness has emerged in subsequent studies (e.g., Tangney et al., 2004; Vohs, Finkenauer, & Baumeister, 2011), although it is far from universal. For example, Gover, Jennings, Tomsich, Park, and Rennison (2011) found no association between the two constructs, and Miley and Spinella (2006) found a negative association between them.

Additionally, recent research has identified important moderators of the link between self-control and forgiveness. For example, the link is weaker among individuals with a strong rather than a weak prosocial disposition, perhaps because highly prosocial people’s default response to transgressions is forgiveness (Balliet, Li, & Joireman, 2011). The link is also weaker (and, at times, even reversed) in response to mild rather than severe transgressions, perhaps

because people's default response to mild transgressions is forgiveness (Pronk, Karremans, Overbeek, Vermulst, & Wigboldus, 2010; Stanton & Finkel, 2012). In addition, research demonstrating that high self-control sometimes undermines prosocial behaviors rather than promoting them (Righetti, Finkenauer, & Finkel, in press; Stanton & Finkel, 2012) calls into question the robustness of the link between self-control and forgiveness. As such, we sought not only to estimate the general strength of the direct link between self-control and forgiveness, but also to investigate the extent to which the magnitude of the effect varies as a function of important moderating variables. Following standard meta-analytic practice (Hunter & Schmidt, 1990), the literature must have included at least three studies investigating a particular effect for it to be included as part of our meta-analytic investigation, and we examined all meaningful moderators that met this criterion.

Operationalizations of Self-Control and Forgiveness

Scholars have operationalized both self-control and forgiveness in diverse ways, and a major goal of the present research is to integrate these various operationalizations into a single meta-analytic investigation that allows us not only (a) to capture the link between self-control and forgiveness across these various operationalizations but also (b) to test whether this link is stronger with some operationalizations than with others. On the self-control side, researchers have included trait-level and state-level assessments. We break down the trait-level assessments into three subcategories: (a) self-report or partner-report measures of trait self-control (e.g., Kruger, 2011; Righetti & Finkenauer, 2011), (b) behavioral assessments such as executive functioning tasks (e.g., Pronk et al., 2010), and (c) diabetic symptoms that serve as a proxy of trait-level self-control building on the glucose model (e.g., DeWall, Pond, & Bushman, 2010). We also break down the state-level assessments into three subcategories: (a) ego depletion

manipulations (e.g., Finkel & Campbell, 2001), (b) cognitive load manipulations and assessments that allow for versus restrict people's ability to exert self-control (e.g., Finkel, DeWall, Slotter, Oaten, & Foshee, 2009) and (c) self-reports of current regulatory strength (e.g., Finkel et al., 2013). Prior research suggests that these various assessments of self-control exert similar effects when people confront self-control dilemmas (e.g., Denson, DeWall, & Finkel, 2012; Hagger, Wood, Stiff, & Chatzisarantis, 2010), and we employ meta-analytic procedures to test whether this is the case in the forgiveness domain. In addition, regardless of the results of these moderational analyses, we report the link between self-control and forgiveness for each of the six different assessments of self-control.

On the forgiveness side, in accord with the standard definition of forgiveness as a transformation of motivation away from destructive responses in favor of more constructive responses, scholars have used combined measures of vengeance and benevolence (e.g., Pronk et al., 2010, Studies 3-4). However, some studies have focused only on one of these two components, assessing either inhibition of vengeance (e.g., Balliet et al., 2011, Study 2), or only enhanced benevolence (e.g., Pronk et al., 2010, Study 2). We test whether overcoming the urge to lash out in response to provocation is more dependent upon self-control than is enhancement of prosocial responses—whether the link between self-control and (low) vengeance is stronger than the link between self-control and benevolence. Additionally, researchers have focused on transgression-specific (e.g., Vohs et al., 2011) versus general (e.g., DeWall et al., 2010; Study 1) assessments of forgiveness, and we examine whether this distinction moderates the link between self-control and forgiveness. Finally, across studies, the relationship of the transgressor with the victim differed, and we examine whether relationship type (stranger vs. close other) moderated the self-control and forgiveness link.

The Present Review

In the present meta-analytic review, we establish the strength and direction of the link between self-control and forgiveness. We examine the link between self-control and forgiveness in 40 independent samples totaling over 5,000 participants and across a range of relationship contexts (with strangers, single, dating, married), ages (15-76), and countries (Holland, Singapore, South Africa, South Korea, Thailand, USA). We also explore four potential moderators of this link—not only the theoretically important moderator of type of forgiveness assessment (vengeance or benevolence), but also the more exploratory moderators of type of self-control assessment, specific versus general forgiveness assessment, and relationship type.

Method

Search Strategy and Inclusion Criteria

We conducted an initial search using the following electronic databases: ABI Inform, ERIC, PsycInfo, Dissertation Abstracts International, and Google Scholar. Search terms included various combinations of the independent variable and dependent variable keywords. Specifically, we included combinations of the presumed independent variables: “executive funct*,” “cognitive control,” “executive control,” “deplet*,” “self-regulat*,” “self-control,” “cognitive load,” and “sleep” with each of the presumed DVs: “forgiv*,” “revenge,” “venge*,” “intimate partner violence,” “benevolence,” and “accommodat*.” We also conducted a legacy search by “back-tracking” each article using reference lists to detect additional articles that may have been missed in the electronic search. Our search started with the work of Finkel and Campbell (2001) and concluded on June 1, 2012. This initial search yielded 4,473 possible citations relevant to self-control and forgiveness (see Table 1). However, “accommodat*,” which we included to search for variables related to accommodation produced citations related to medical terminology that

was not directly related to forgiveness. Thus, this initial estimate of citations is inflated. The vast majority of studies that were excluded from the meta-analysis were eliminated because either (a) self-control processes and/or forgiveness were discussed in the manuscript but were not measured empirically or, more frequently, (b) the search terms produced citations unrelated to forgiveness (e.g., medical research on brain injuries). To obtain unpublished and in-press articles, we sent a request to the Listservs for (a) the Society for Personality and Social Psychology and (b) Forgiveness Research. Additionally, we contacted individual scholars who are productive in the area. We identified 28 citations (i.e., published articles, unpublished data) for possible inclusion in the meta-analysis.

These 28 citations were further analyzed (based on the abstract and, where relevant, the full text of the article) to examine whether two key inclusion criteria were met. First, sufficient information for computing a bivariate association (e.g., d , r , group means) that could be used to calculate an effect size must have been included (or could be obtained from an author). Second, self-control in a quantifiable form and at least one forgiveness-related outcome must have been included. Decisions about ambiguous cases were made through conversation among the authors of the current paper, with an emphasis on theoretical relevance. Two citations failed to meet these inclusion criteria. Thus, final analyses included 26 citations—published articles, theses, and unpublished data—with a total of 40 independent samples and an overall N of 5,105. Self-control was typically assessed with some form of trait-level assessment (83%). Forgiveness was assessed using a variety of measures, with the Transgression-Related Interpersonal Motivations (TRIM; McCullough et al., 1998) (23%) and Exit-Voice-Loyalty-Neglect (EVLN; Rusbult, Zembrodt, & Gunn, 1982) (18%) measure being the most widely used. In studies assessing (as opposed to manipulating) self-control and reporting reliability, this predictor variable was

generally reliable (mean Cronbach's $\alpha = .84$). In studies assessing forgiveness and reporting reliability, the outcome variable was generally reliable as well (mean Cronbach's $\alpha = .73$).

Most of the research reports contributing data to the meta-analysis were published (62.5%), but a substantial minority was unpublished (37.5%). The participants ranged in age from 15 to 76, with a mean age of 26. Across all studies providing demographic data, 63% of the participants were female. Samples from the United States made up the majority (65%).

Meta-Analytic Procedures

Effect size estimation. The majority of effects reported in the research included in our analysis were in the form of correlations (r s). Studies that reported standardized regression coefficients (β s) were included by converting the β to an r using the procedure suggested by Peterson and Brown (2005). Other effect sizes were converted to the r statistic following the recommendations of Borenstein (2009).

Statistical independence. A shifting unit of analysis approach (Cooper, 2010) was employed in calculating average effect sizes for the overall analysis and for moderator analyses. This approach retains the maximum amount of information from each study while preserving independence of observations. The overall average effect size was obtained by treating the study as the unit of analysis. Thus, all self-control and forgiveness correlations reported for a single sample (e.g., multiple forgiveness assessments reported for same sample) were averaged together using a weighted average (Borenstein, Hedges, Higgins, & Rothstein, 2009) for the test of the overall relationship between self-control and forgiveness. In other words, each sample contributed only one correlation to the estimation of the average strength of association between self-control and forgiveness. However, for moderator analyses, correlations from the same sample were not averaged together if they belonged to different moderator categories. For

example, in a moderator analysis targeting the different operationalizations of forgiveness, correlations from the sample were not averaged if the study reported separate correlations between self-control and forgiveness for measures that tapped inhibition of vengeance and enhanced benevolence.

Model and analysis approach. We used a random effects model, as recommended when the between-study heterogeneity in effect sizes is expected to be influenced by more than just sampling error (Borenstein et al., 2009). Analyses examining both the overall effect and moderation were conducted using Comprehensive Meta-Analysis software Version 2 (Borenstein, Hedges, Higgins, & Rothstein, 2005).

Outlier detection. We searched for outliers through a visual inspection of the data, searching for any effect size more than three standard deviations from the population coefficient, and evaluating overall effect size movement through a “one-study removed” analysis (Borenstein et al., 2009). When influential cases were detected, we returned to the original article and confirmed magnitude and direction. We identified just one possible outlier across all effects analyzed, but the one-study removed analysis indicated that this effect was not a true outlier, so we retained it in analyses.

Publication bias. We tested for publication bias by using Duval and Tweedie’s (2000) trim-and-fill procedure. Using this procedure, the analyst examines the asymmetry of the distribution of effect sizes, trims the required number of studies to achieve a symmetrical distribution, and then determines the number of studies potentially missing due to systematic suppression. In trim and fill, asymmetry is equated with publication bias because sampling error is random and thus should be evenly distributed around the population effect size. We also report

results for publication status (yes vs. no) as a potential moderator across the links between self-control and forgiveness.

Results

Mean Effect Size

The overall estimated effect size for the link between self-control and forgiveness was $r = .18$, 95% CI [.14, .23]—a small to moderate effect (Cohen, 1992). This overall effect suggests that, across measures and contexts, higher levels of self-control are associated with greater levels of forgiveness. We provide a more detailed breakdown of findings in Table 1.

Publication Bias

We used Duval and Tweedie's (2000) trim-and-fill technique to calculate an adjusted value of the overall effect of self-control on forgiveness, $r = .15$, 95% CI [.10, .19]. The adjusted effect size provided by this analysis suggests the possibility of a small influence of publication bias on our results. A follow-up analysis using publication status (yes vs. no) as a moderator revealed a slightly lower overall effect for unpublished studies ($r = .15$; 95% CI = .10-.20) than for published studies ($r = .20$; 95% CI = .14-.26); however, this difference did not approach statistical significance, $Q_b(1) = 1.50, p = .22$.

Tests of Heterogeneity

Tests of heterogeneity using a random effects model indicated significant heterogeneity in the effect sizes that contributed to the overall effect size estimate, $Q(39) = 200.77, p < .001$. In an attempt to explain the heterogeneity in these effect sizes, we conducted a series of targeted analyses involving the four moderators discussed in the introduction, starting with assessment of forgiveness as reduced vengeance versus enhanced benevolence.

Moderator Analyses

Vengeance inhibition versus benevolence. First, we tested whether the magnitude of the association between self-control and forgiveness varied when forgiveness was measured in terms of low vengeance versus high benevolence. For example, an operationalization of forgiveness as vengeance might use the “Exit” or “Neglect” subscale of the EVLN, whereas an operationalization as benevolence would use the “Voice” or “Loyalty” subscale. This analysis revealed that the operationalization significantly moderated the effect of self-control on forgiveness, $Q(1, 49) = 50.14, p < .001$, suggesting that self-control is especially crucial in helping people override the urge to lash out angrily in response to transgressions. The link between self-control and reduced vengeance, $r = .31, 95\% \text{ CI} [.28, .35]$, was significantly stronger than the link between self-control and increased benevolence, $r = .16, 95\% \text{ CI} [.12, .20]$.¹

Level of self-control assessment. Next, we next examined whether the level of the self-control assessment moderated the strength of its link to forgiveness. Specifically, we tested whether self-control assessed at the trait-level differed from self-control assessed or manipulated at the state-level. The type of self-control assessment significantly moderated the effect of self-control on forgiveness, $Q(1, 41) = 7.98, p < .05$. Results from this moderator analysis demonstrated that self-control assessed at the trait-level was more strongly associated with forgiveness, $r = .20, 95\% \text{ CI} [.18, .22]$, than self-control assessed or manipulated at the state-level, $r = .14, 95\% \text{ CI} [.08, .20]$. We provide a more detailed breakdown of method of self-control assessment in Table 2.

¹ We conducted a separate moderator analysis for operationalization of forgiveness with three levels: vengeance, benevolence, and combined. In this analysis, the combined category was comprised of effects including TRIM and EVLN total scores. Results revealed that the combined category ($r = .31, 95\% \text{ CI} [.25-.36]$) was not significantly different from the vengeance category ($r = .30; 95\% \text{ CI} [.25-.35]$). Both the combined category and the vengeance category differed significantly from the benevolence category ($r = .18, 95\% \text{ CI} [.15-.20]$).

Method of assessing forgiveness. Next, we tested whether the specificity with which forgiveness was assessed moderated the strength of self-control's link to it. Specifically, we tested whether the link between self-control and forgiveness varied as a function of whether forgiveness was assessed in a transgression-specific versus a general manner. The specificity of assessing forgiveness did moderate the effect of self-control on forgiveness, $Q(1, 49) = 22.47, p < .01$. The association of self-control with forgiveness was significantly stronger when forgiveness was assessed using general measures, $r = .23, 95\% \text{ CI } [.21, .25]$ than when assessed via transgression-specific measures, $r = .15, 95\% \text{ CI } [.11, .17]$.

Relationship type. Finally, we tested whether relationship type (stranger vs. close other) moderated the effect of self-control on forgiveness. This moderator analysis revealed that the association of self-control with forgiveness was comparable for strangers, $r = .18, 95\% \text{ CI } [.10, .26]$, and close others, $r = .19, 95\% \text{ CI } [.13, .24]$, $Q(1, 20) = 1.11, p > .05$.

Discussion

The present meta-analytic review investigated the link between self-control and forgiveness across 40 samples and 5,105 observations. Consistent with early work examining the link between self-control and forgiveness (Finkel & Campbell, 2001), this review demonstrated that the link is positive and small-to-moderate in magnitude ($r = .18$). Of potentially greater theoretical interest, this link was much larger when forgiveness is operationalized in terms of inhibiting vengeance rather than in terms of expressing benevolence ($r = .31$ versus $.16$). This moderation effect echoes evidence that ego depletion effects are much stronger for negative affect than for positive affect (Hagger et al., 2010). It also aligns with cognitive neuroscience models suggesting that self-regulatory failure emerges when current self-regulatory strength is insufficient to overpower the self-regulation-undermining impulse (Heatherton & Wagner,

2010). As applied to the present meta-analysis, it seems that inhibiting the urge to lash out in vengeance is more self-control-dependent than is promoting the tendency to engage in benevolent responding. Additional, more exploratory moderation analyses revealed that the link between self-control and forgiveness is somewhat stronger when self-control was assessed at the trait-level compared to the state-level and when the forgiveness measure was general rather than transgression-specific.

The finding that the ability to overcome the desire to retaliate may require even more self-control than benevolence may help to explain why self-control is such an important predictor of relationship well-being (e.g., Kelly & Conley, 1987; Vohs et al., 2011). After all, scholars who study close relationships, especially marriage, have repeatedly demonstrated that the destructive effects of negative behaviors (such as vengeance) are far more powerful than the constructive effects of positive behaviors (such as benevolence). Furthermore, a significant predictor of distressed marriages is negative reciprocity (Gottman, 1994, 1998). In short, resisting the urge to retaliate in response to transgressions appears to be a major hallmark of successful relationships. Thus, the finding that self-control is especially strongly linked to low tendencies toward such retaliation can help to explain why self-control is such an important predictor of relationship success.

Limitations and Future Directions

Even with the rapid expansion of the literature linking self-control to forgiveness, this literature possesses limitations, which means that the conclusions of the present meta-analysis await corroboration before definitive conclusions can be drawn. For example, the literature did not allow for a clean test of the size of the link between self-control and forgiveness after controlling for potential confounding factors. Second, it did not allow us to test an overall

process model of the link between self-control and forgiveness. Third, the literature did not allow us to test the influence of potentially important theoretical moderators that have been identified in the published literature. For example, research suggests that the positive link between self-control and forgiveness is stronger when offenses are severe rather than mild (e.g., Pronk et al., 2010; Stanton & Finkel, 2012) and when individuals are less rather than more prosocial (e.g., Balliet et al., 2011), but too few studies have tested these effects to allow for meta-analytic synthesis. An important direction for future research is to develop a better understanding of the moderators outlined in the current paper. The present review takes some notable strides in that direction, but many additional constructs remain to be examined (e.g., relationship commitment, offense severity). Fourth, the literature employs various measures of both self-control and forgiveness, and combining such diverse assessments can create between-study heterogeneity and, under some circumstances, bias findings (e.g., Puhan, Soesilo, Guyatt, & Shünemann, 2006). On the other hand, such diversity allows for more generalizability across relationship types and offenses, which is a strength of the present research. Additionally, the current paper sheds light on how differences in assessments of both the independent and dependent variable strengthen or weaken the overall relation. For example, the effect is slightly stronger for more general measures of forgiveness rather than transgression-specific assessments. Fifth, some of the sample sizes for the methodological moderator analyses were small, which can bias the effect size upwards (Reynolds & Day, 1984).

Despite these limitations, the present meta-analysis provides the first empirical integration of the literature examining the link between self-control and forgiveness, which is a timely contribution in light of the surge in research on both of these topics over the past 15-20 years. The current meta-analysis provides clear evidence for a small-to-moderate link between

self-control and forgiveness across studies using diverse methods (e.g., cross-sectional and experimental) and relationship types (e.g., strangers, romantic partners, family). It also provides clear evidence that this link is stronger for assessments of forgiveness that focus on the inhibition of vengeance than on the promotion of benevolence. Considering the costs of destructive behaviors in relationships and the benefits of acting more constructively (e.g., Freedman & Enright, 1996; Gottman, 1998; Karremans & Van Lange, 2004), the present meta-analysis points to the important role that self-control plays in fostering relationship well-being.

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Table 1
Summary of Overall and Moderator Effects

Effect	<i>k</i>	<i>n</i>	<i>r</i>	95% CI
Overall effect	40	5105	.18	[.14, .23]
Moderator: Vengeance vs. benevolence				
Reduced vengeance	13	1402	.31	[.28, .35]
Enhanced benevolence	37	4548	.16	[.12, .20]
Moderator: Method of self-control assessment				
Trait	33	4555	.20	[.18, .22]
State	9	700	.14	[.08, .20]
Moderator: Method of forgiveness assessment				
Transgression specific	19	1861	.15	[.12, .18]
General	27	3968	.23	[.21, .25]
Moderator: Relationship type				
Stranger	7	717	.18	[.10, .26]
Close other	14	1426	.19	[.13, .24]

Note. *k* = number of studies; *n* = sample size; *r* = observed effect size; 95% CI = 95% confidence interval around *r*.

Table 2
Detailed Breakdown of Effects by Method of Self-Control Assessment

Self-Control Method	Sample citation	<i>k</i>	<i>n</i>	<i>r</i>	95% CI
Trait self-control					
Self/partner report	Vohs et al., 2011; Study 3	24	3607	.22	[.20, .24]
Behavioral task	Pronk et al., 2010; Studies 1-4	7	620	.10	[.05, .15]
Diabetic symptoms	DeWall et al., 2010; Studies 1-4	4	693	.19	[.12, .26]
State self-control					
Ego depletion	Stanton & Finkel, 2012; Study 1	5	385	.12	[.05, .20]
Cognitive load	Karremans & Aarts, 2007; Study 4	3	239	.21	[.08, .33]
State self-report	Finkel, Burnette, & Scissors, 2007	2	76	.28	[.21, .35]

Note. *k* = number of studies; *n* = sample size; *r* = observed effect size; 95% CI = 95% confidence interval around *r*.