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Leaders and Followers Behaving Badly: A Meta-Analytic Examination of Curvilinear Relationships Between Destructive Leadership and Followers' Workplace Behaviors

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Abstract

We draw from social psychological and resource-based theories to meta-analytically examine the existence, form, and magnitude of curvilinear relationships between destructive leadership and followers' workplace behaviors (i.e., job performance, organizational citizenship behaviors, and workplace deviance). Overall, our meta-analytic results demonstrate weak evidence of curvilinear relationships between destructive leadership and followers' workplace behaviors. However, we did find some support for the application of social psychological theories when examining the curvilinear effects of destructive leadership on followers' workplace behaviors at extreme levels of destructive leadership (i.e., two standard deviations below and above the mean). Our findings are important because they (1) provide support for prior research that has examined the linear effects of destructive leadership on followers' workplace outcomes and (2) refine our knowledge of the effects of destructive leadership on followers' workplace outcomes by demonstrating the existence, form, and magnitude of curvilinear effects at extreme levels of destructive leadership. Overall, this study's meta-analytic regression, relative weight, and semipartial correlation results have important implications for (1) how to interpret the conclusions drawn from prior destructive leadership research, (2) how to conduct future studies that examine destructive leadership, and (3) practitioners' attempts to deter destructive leadership and limit its harmful effects on followers.

Keywords: destructive leadership; meta-analysis; performance; OCB; deviance; abusive supervision; social undermining

Destructive leadership has received a great deal of scholarly and practitioner attention in recent years due to its prevalence and impact in organizations (Krasikova, Green, & LeBreton, 2013; Schyns & Schilling, 2013). Destructive leadership is defined as volitional leader behavior that has the intent or potential to harm leaders' organizations and/or followers (Einarsen, Aasland, & Skogstad, 2007; Krasikova et al., 2013). Typically, destructive leaders use harmful methods of influencing followers that encourage followers to violate their organizations' interests (Krasikova et al., 2013). Destructive leadership is a broad construct comprised of many forms of hostility leaders direct toward followers (e.g., abusive supervision, supervisor undermining) that have negative consequences for followers' workplace behaviors (e.g., job performance, organizational citizenship behaviors [OCBs], workplace deviance). Job performance (i.e., in-role performance) and OCBs (i.e., contextual performance) are considered essential to proper organizational functioning (Cascio & Aguinis, 2008; Podsakoff, MacKenzie, Paine, & Bachrach, 2000), whereas workplace deviance consists of behaviors that violate organizational norms while harming organizations and/or their members (Berry, Ones, & Sackett, 2007). Thus, it is important to understand the existence, form, and magnitude of the relationships between destructive leadership and followers' workplace behaviors because job performance, OCBs, and workplace deviance all affect how well organizations operate.

Prior destructive leadership research has almost exclusively examined linear relationships between destructive leadership and followers' workplace behaviors. However, recent calls for examining curvilinear relationships in organizational research advocate that important curvilinear relationships may exist (e.g., Pierce & Aguinis, 2013). Surprisingly little destructive leadership research has examined curvilinear relationships between destructive leadership and followers' workplace behaviors. Further, when curvilinear relationships have been examined in prior research, they often have either been used as control variables rather than substantive variables (e.g., Mackey, Ellen, Hochwarter, & Ferris, 2013) or in the examination of specific types of workplace behaviors (e.g., creativity; Lee, Yun, & Srivastava, 2013). Additionally, curvilinear relationships have not been replicated by subsequent research (Tepper, Simon, & Park, 2017). It is possible that examining curvilinear relationships in prior destructive leadership studies would uncover meaningful curvilinear relationships that have important implications for how to interpret the findings from prior studies, how researchers conduct destructive leadership research moving forward, and how practitioners limit the impact of destructive leadership on followers' workplace behaviors.

Our motivation for this study is to provide the theoretical and empirical foundation necessary for research to examine curvilinear relationships between destructive leadership and followers' workplace behaviors. We draw from competing theoretical perspectives (i.e., social psychological and resource-based theoretical perspectives) to investigate and understand the potential curvilinear relationships between destructive leadership and followers' workplace outcomes in order to advance knowledge concerning the existence, form, and magnitude of these relationships. Extending our current understanding of curvilinear relationships generates knowledge in a nuanced perspective that can address some of the inconsistent and/or modest effects prior research has found between destructive leadership and followers' workplace behaviors. Thus, we use meta-analytic techniques (Hunter & Schmidt, 2004) to cumulate empirical research on destructive leadership and followers' workplace behaviors. Our meta-analytic results contribute much needed depth to the extant meta-analyses that examine destructive leadership by including curvilinear effects and drawing from a much larger sample of primary studies than prior meta-analyses (i.e., current study: $54 \le k \le 83$; Mackey, Frieder, Brees, & Martinko, 2017: $13 \le k \le 22$; Schyns & Schilling, 2013: $7 \le k \le 13$).

Our study makes two important contributions to destructive leadership research. First, we make a theoretical contribution by explaining why curvilinear relationships between destructive leadership and followers' workplace behaviors may exist. Specifically, we examine competing social psychological and resource-based theoretical explanations of curvilinear destructive leadership effects in order to provide a novel and compelling theoretical explanation for the existence, form, and magnitude of potential curvilinear relationships between destructive leadership and followers' workplace outcomes. Thus, our study makes an incremental improvement to our theoretical understanding of linear and curvilinear effects in a stream of research that lacks a unifying theoretical framework. Second, we make a methodological contribution by conducting the first direct meta-analytic test of curvilinear relationships that utilizes curvilinear data from prior research. We examine the relative contributions of linear and curvilinear effects via regression, relative weight, and semipartial correlation analyses, which enables us to assess the incremental validity of curvilinear effects (Cortina, 1993). Our methodological contribution provides an immediate opportunity to make incremental advancements to research in numerous literatures if researchers use our study as an example for future meta-analytic efforts that examine the incremental contribution of curvilinear effects above linear effects.

Workplace Behaviors

In this study, we examine three widely studied workplace behaviors in destructive leadership research: job performance, OCBs, and workplace deviance. Below, we describe our conceptualizations of each of these workplace behaviors and provide an overview of how each of these behaviors has been examined in destructive leadership research. Then, we develop competing hypotheses that pit the predictions of social psychological theories against the predictions of resource-based theories regarding the existence and form of curvilinear relationships between destructive leadership and followers' workplace behaviors.

Job Performance

First, job performance is defined as "the aggregated value to the organization of the discrete behavioral episodes that an individual performs over a standard interval of time" (Motowidlo, Borman, & Schmit, 1997, p. 71). Prior destructive leadership research demonstrates that destructive leadership is negatively associated with followers' self-rated (e.g., Wang, Harms, & Mackey, 2015), coworker-rated (e.g., Peng, Schaubroeck, & Li, 2014), leader-rated (e.g.,

Tepper, Moss, & Duffy, 2011), and objectively rated (e. g., Walter, Lam, van der Vegt, Huang, & Miao, 2015) job performance. Although job performance is considered an important behavioral outcome in most organizational research because it captures in-role performance, it is especially important for destructive leadership research because the negative association between job performance and destructive leadership affects numerous raters' assessments of followers' performance.

Organizational Citizenship Behaviors

Next, OCBs are discretionary behaviors that are not formally required, but nonetheless support "the social and psychological environment *in which task performance takes place*" (Organ, 1997, p. 95). Organ (1988) initially proposed altruism, civic virtue, conscientiousness, courtesy, and sportsmanship as the five specific dimensions of OCBs, but recent conceptualizations and operationalizations of OCBs capture a wide array of discretionary, extra-role behaviors that impact employee and organizational functioning. Researchers often describe OCBs as contextual performance (Hoffman, Blair, Meriac, & Woehr, 2007; Podsakoff, Whiting, Podsakoff, & Blume, 2009) directed toward organizations (i.e., OCB-Os) or individuals within organizations (i.e., OCB-Is; McNeely & Meglino, 1994). Prior destructive leadership research has found a negative association between destructive leadership and general OCBs, OCB-Is, and OCB-Os (e.g., Aryee, Chen, Sun, & Debrah, 2007; Zhang, Kwan, Zhang, & Wu, 2014). Thus, OCBs are an important behavioral outcome to examine because destructive leadership adversely affects a wide array of followers' discretionary behaviors that benefit organizations and the individuals within them.

Workplace Deviance

Finally, workplace deviance is defined as "voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both" (Robinson & Bennett, 1995, p. 556). Behaviors that violate significant organizational norms may vary by organization, but workplace deviance typically includes stealing workplace property, intentionally working slow, and taking unacceptably long breaks, whereas interpersonal deviance typically includes verbal harassment, sexual harassment, and assault (Bennett & Robinson, 2000). Meta-analytic evidence demonstrates that workplace deviance, which includes both organizational and interpersonal deviance, is associated with harmful effects on an array of organizational and personal phenomena (Berry et al., 2007). Prior research has demonstrated evidence that destructive leadership is positively associated with organization-, interpersonal-, and leader-directed deviance (e.g., Mawritz, Mayer, Hoobler, Wayne, & Marinova, 2012; Mitchell & Ambrose, 2007; Vogel & Mitchell, 2017). Thus, workplace deviance is an important behavioral outcome to examine in destructive leadership research due to its harmful impacts on organizations and their members.

Theoretical Foundations and Hypothesis Development

Social Psychological Theories

Numerous social psychological theories have been used in prior research to explain the linear effects of destructive leadership on followers' workplace behaviors. For example, Tepper's (2000) seminal study on abusive supervision drew from justice theory (Folger & Cropanzano, 2001), which advocates that employees use cognitive comparisons to evaluate the fairness of the treatment they receive from their leaders relative to the way they treat their leaders. Since then, primary studies (e.g., Tepper, Duffy, Henle, & Lambert, 2006), meta-analyses (e.g., Mackey et al., 2017), and conceptual reviews (e.g., Chan & McAllister, 2014; Klaussner, 2014) have drawn from justice theory to explain that followers' perceptions of destructive leadership typically begin as perceptions of supervisory injustice, then evolve to account for social exchange processes between leaders and followers. Thus, it is not surprising that social exchange theory is the theoretical rationale used in many recent destructive leadership studies because it shares some theoretical foundations with justice theory (Cropanzano & Mitchell, 2005).

Social exchange theory explains why and how relationships between leaders and followers develop over time through interdependent interactions (Cropanzano, Anthony, Daniels, & Hall, 2017; Cropanzano & Mitchell, 2005). Specifically, the tenets of social exchange theory argue that exchange relationships generate obligations for the parties involved because reciprocity norms compel individuals to respond in kind to the treatment they receive without knowing whether, when, or to what extent the other party may reciprocate (Cropanzano & Mitchell, 2005; Gouldner, 1960). Social exchange parties establish social standards that govern their current exchange relationships (e.g., felt obligations, reciprocity norms). Ultimately, these social reinforcement standards (i.e., the rate of past social rewards

in exchange relationships; Baron, 1966) create internal frames of reference that individuals use when engaging in social exchange relationships (Baron, 1966; Emerson, 1976). Social reinforcement standards are important because they provide a baseline for future social exchange expectations (Baron, 1966) that differs across followers because each follower has unique perceptions of their exchanges with their leaders.

Curvilinear relationships between destructive leadership and in-role performance (i.e., job performance) and extra-role performance (i.e., OCBs) likely exist because followers adjust their social reinforcement standards in accordance with their sustained perceptions of leaders' downward-directed hostility. However, we argue it is unlikely that followers continue to de-escalate their job performance and OCBs past a point identified by their social reinforcement standards due to floor effects (Wang, Zhang, McArdle, & Salthouse, 2008) that regulate the lowest acceptable standard for job performance and OCBs. Specifically, followers' social psychological assessments of their exchange relationships serve as ways of identifying unfairness in order to protect against further adverse social exchange interactions. Thus, social psychological theories advocate that destructive leadership is negatively associated with job performance and OCBs, but that this negative relationship is stronger from lower to moderate levels of destructive leadership than it is from moderate to higher levels of destructive leadership because it is subject to a floor effect that restricts the relationship to be weak or nonexistent between moderate and higher levels of destructive leadership. In summary, social psychological theories predict asymptotic (i.e., U-shaped) curvilinear relationships between destructive leadership and job performance and OCBs whereby the rate of the negative association between destructive leadership and job performance and OCBs weakens as destructive leadership increases.

In contrast, we theorize it is unlikely that followers continue to escalate their deviant behaviors in an exponential manner because harmful behaviors that violate organizational norms likely are subject to ceiling effects (Wang et al., 2008) that limit social psychological boundaries of fairness in order to protect against adverse social exchange consequences. Specifically, social psychological theories advocate that destructive leadership is positively associated with workplace deviance from lower to moderate levels of destructive leadership, but that this positive relationship is subject to a ceiling effect that restricts the relationship to weak or nonexistent effects between moderate and higher levels of destructive leadership. As a result, we hypothesize an asymptotic (i.e., inverted U-shaped) curvilinear relationship between destructive leadership and workplace deviance whereby the rate of the positive association between destructive leadership and workplace deviance weakens as destructive leadership increases. Thus, we propose the following hypothesis:

> *Hypothesis 1a-c:* Destructive leadership will demonstrate asymptotic curvilinear relationships with (a) job performance, (b) OCBs, and (c) workplace deviance that weaken as destructive leadership increases.

Resource-Based Theories

Although social psychological theories offer a useful theoretical basis from which to understand the curvilinear effects of destructive leadership, recent destructive leadership research (e.g., Mawritz, Greenbaum, Butts, & Graham, 2017) has drawn from the valuable explanations offered by resource-based theories (e.g., conservation of resources theory, ego depletion theory). For instance, the conservation of resources theory (Hobfoll, 1989, 2001) posits that individuals try to protect, retain, and build their valuable resources in order to guard against potential or actual resource loss due to addressing demands in their work environments. Resources include "anything perceived by the individual to help attain his or her goals" (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014, p. 1338). Ego depletion theory (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Baumeister, Muraven, & Tice, 2000) builds on the conservation of resources theory by positing that self-regulation is a valuable resource with a limited supply for each individual. The tenets of ego depletion theory argue that ego depletion (i.e., "a temporary reduction in the self's capacity or willingness to engage in volitional action"; Baumeister et al., 1998, p. 1253) likely results when perceived demands in the work environment (e.g., responding to destructive leadership) consume followers' self-regulatory resources. Thus, followers may become increasingly ego depleted as destructive leadership increases, which results in decreasing abilities to regulate behavioral responses to destructive leadership.

Together, resource-based theories advocate that asymptotic (i.e., inverted U-shaped) curvilinear relationships likely exist between destructive leadership and in-role (i.e., job performance) and extra-role performance (i.e., OCBs) because destructive leadership increasingly depletes followers' egos and self-regulatory resources. The depletion of followers' egos and self-regulatory resources likely renders followers increasingly unable or unwilling to engage in

the volitional action necessary to engage in performance and OCBs. As a result, we hypothesize asymptotic curvilinear relationships between destructive leadership and job performance and OCBs whereby destructive leadership is negatively associated with job performance and OCBs, but that this negative relationship is stronger between moderate and higher levels of destructive leadership than it is between lower and moderate levels of destructive leadership. Thus, we posit that resource-based theories predict that the magnitude of the relationship between destructive leadership and job performance and OCBs becomes increasingly stronger as destructive leadership increases because followers' resources become increasingly depleted.

In contrast, we hypothesize an asymptotic (i.e., U-shaped) curvilinear relationship between destructive leadership and workplace deviance whereby the magnitude of the relationship between destructive leadership and workplace deviance increases as destructive leadership increases because followers' egos and self-regulatory capabilities are progressively depleted. Specifically, resource-based theories suggest that destructive leadership is positively associated with job performance and OCBs, but that this positive relationship is stronger between moderate and higher levels of destructive leadership than it is between lower and moderate levels of destructive leadership because followers' egos and self-regulatory resources become progressively less able to inhibit them from engaging in deviant behaviors in response to perceptions of destructive leadership. Thus, we propose the following competing hypothesis:

> *Hypothesis 2a-c:* Destructive leadership will demonstrate asymptotic curvilinear relationships with (a) job performance, (b) OCBs, and (c) workplace deviance that strengthen as destructive leadership increases.

Method

Literature Search

We conducted an extensive literature search for studies that reported empirical data on destructive leadership and followers' workplace behaviors that were available as of November 2017. First, we located studies that were cited in recent reviews (e.g., Krasikova et al., 2013; Martinko, Harvey, Brees, & Mackey, 2013; Tepper et al., 2017) and meta-analyses (e.g., Mackey et al., 2017; Schyns & Schilling, 2013) of destructive leadership and interpersonal mistreatment research. Then, we searched through academic databases (e.g., Google Scholar, PsycINFO, Proquest Dissertations & Theses) for journal articles, dissertations, conference papers, book chapters, reports, and other published and unpublished studies. Next, we used Google Scholar to identify studies that cited prominent measures of destructive leadership (e.g., Duffy, Ganster, & Pagon, 2002; Shaw, Erickson, & Harvey, 2011; Tepper, 2000; Thoroughgood, Tate, Sawyer, & Jacobs, 2012). Then, we searched for in press articles on numerous websites for academic journals that have published destructive leadership research (e.g., *Personnel Psychology*). Additionally, we searched individual researchers' websites and ResearchGate profiles for studies, as well as the titles of each study's list of references.

In addition to searching the sources listed above, we searched the conference programs of the Society for Industrial and Organizational Psychology, Academy of Management (AOM), and AOM's affiliates (i.e., Eastern AOM, Midwest AOM, Southern Management Association, Southwest AOM, and Western AOM) for the programs available from 2000-2017. Ultimately, we contacted authors of the 49 conference papers we identified as potentially meeting the inclusion criteria below to request copies of the conference papers. Most conference papers were excluded from this study because they were not available or shared data with other studies that were included in the meta-analysis.

Finally, we contacted the first and/or corresponding author of every study included in this meta-analysis to request the information necessary to conduct the curvilinear analyses because the information required for these analyses was not available in any of the primary studies we found. Specifically, we sent personalized emails with custom SPSS syntax files used to calculate curvilinear terms and create correlation matrices with linear and curvilinear terms to the authors of each primary study. Ultimately, we contacted authors of 126 studies that included a total of 176 samples with 352 workplace behavior variables. Our efforts resulted in responses from the authors of 74 studies with partial or full data (i.e., 59%), the authors of 4 studies whose data were not available (i.e., 3%), and the authors of 48 studies who did not respond to the request or responded to the request without data (i.e., 38%). Overall, 56 studies with 79 independent samples ($k = 79$, $N = 22,531$) were included in the curvilinear analyses because they provided full information (i.e., bivariate zero-order correlations and descriptive statistics) and met the inclusion criteria noted below.

We obtained complete information for 293 workplace behavior variables for the linear analyses and 129 workplace behavior variables for the curvilinear analyses. Full lists of the studies and main codes included in the linear and curvilinear analyses are shown in Appendices A, B, and C. For the linear analyses (see Table 1), 54 studies examined job performance ($k = 54$, $N = 14,029$), 64 studies examined OCBs ($k = 64$, $N = 16,415$), and 83 studies examined workplace deviance ($k = 83$, $N = 22,759$). For the curvilinear analyses (see Appendix D), 31 studies examined job performance ($k = 31$, $N = 8,427$), 32 studies examined OCBs ($k = 32$, $N = 8,232$), and 32 studies examined workplace deviance ($k = 32$, $N = 9,542$).

Inclusion Criteria

We required that studies meet five inclusion criteria to be included in the final analyses. We describe the inclusion criteria and explain the rationale for each of the inclusion criteria below in order to facilitate the interpretation of our results (Kepes, McDaniel, Brannick, & Banks, 2013), enhance the transparency of our study (Aytug, Rothstein, Zhou, & Kern, 2012; Gonzalez-Mulé & Aguinis, in press), and enable replicability of our meta-analysis (Aguinis, Dalton, Bosco, Pierce, & Dalton, 2011).

First, we required that all studies were written in English. Second, we required that destructive leadership and at least one workplace behavior consistent with the definitions of job performance, OCBs, and workplace deviance provided earlier in this study were empirically measured. The coders and first author of this study reviewed the description of the destructive leadership and workplace behavior measures to ensure that the variables were operationalized in a manner that was consistent with prior theory, prior research, and the objectives of this study. Our study contains numerous forms of destructive leadership, including abusive supervision, aversive leadership, despotic leadership, petty tyranny, supervisor bullying, supervisor incivility, supervisor narcissism, and supervisor undermining. Third, we required that destructive leadership and workplace behaviors were measured and reported at the individual level (i.e., we excluded studies that reported variables at the group or organization level). Fourth, we required that workplace behaviors pertained to actual employees, rather than hypothetical employees or experimental participants. Fifth, we required that followers were the referent for the workplace behaviors variable.

We ensured that each sample of data was included in the analyses only once because meta-analytic procedures require an assumption of sample independence (Hunter & Schmidt, 2004; Wood, 2008). Specifically, we reviewed the description of each sample to ensure that we avoided data overlap. We defaulted to including published studies when data overlapped between published (e.g., journal articles) and unpublished (e.g., conference papers) studies. Also, we defaulted to the earliest published study for journal articles that shared data. Finally, we created composite variables when there were multiple effect sizes reported in a single study. We used Mosier's (1943) Equation 8 to assess the internal consistency of composite variables and calculate correlations.

Coding

The first three authors met to develop a coding protocol and pilot test several versions of the coding form used to report data to ensure that coders were consistent in their assessments of studies and judgment calls made (Aguinis et al., 2011; Geyskens, Krishnan, Steenkamp, & Cunha, 2009). Then, two authors independently coded information from each study. The coders reported numerous characteristics of study designs. First, coders recorded information about the type of publication (e.g., journal article, dissertation), whether destructive leadership was measured using an agreement or frequency scale, the sample size (i.e., n) of the study, and the internal consistency (i.e., α) of the destructive leadership measure. Finally, the coders recorded the general type of workplace behavior (i.e., job performance, OCBs, or workplace deviance), the specific type of workplace behavior (e.g., OCB-Is, OCB-Os), the rater of the workplace behavior measure (e.g., leader, follower), the internal consistency (i.e., α) of the workplace behavior measure, and the correlations (r) between destructive leadership and the workplace behavior measure. For the curvilinear analyses, the coders reported the correlations (r) between linear and curvilinear terms for destructive leadership and workplace behaviors (i.e., three total correlations: $r_{\text{Destructive Leadership \& Destructive Leadership}^2}$; $r_{\text{Destructive Leadership \& Behavior}}$; $r_{\text{Destructive Leadership}^2 \text{\& Behavior}}$).

The first author of this study reviewed all of the information reported in the coding forms, checked for errors and discrepancies between coders, finalized the coding results by consulting the original studies to resolve all discrepancies between coders, and calculated inter-rater agreement statistics. Generally, there were high levels of agreement between the coders for the information reported in the coding form. For the linear information, agreement ranged from 89%

for the correlations between destructive leadership and the workplace behavior measures to 100% for the type of publication. The coders agreed at least 90% of the time for most coding categories (i.e., 8/9 categories). The raters agreed about 99% of the time when recording the curvilinear correlations that the authors of the primary studies provided.

Sub-Group Analyses for Moderators

In addition to conducting overall analyses for job performance, OCBs, and workplace deviance, we also provide analyses for specific forms of these behaviors that have been widely examined in prior destructive leadership research. Specifically, we examined OCB-Os, OCB-Is, organization-directed deviance, interpersonal-directed deviance, and leader-directed deviance. Also, we conduct sub-group analyses within each of the specific forms of workplace behaviors noted above in order to examine the differences in results across studies that stem from theoretical and study design choices described below (i.e., publication status, source of behavioral rating, type of scale points, abusive supervision versus other forms of destructive leadership). We set the minimum number of primary studies for inclusion in the moderator analyses to 20 because 20 is the threshold for obtaining proper confidence intervals in random effects meta-analyses that assume approximate normality of effect sizes while using the Hunter and Schmidt (2004) meta-analytic technique (Aguinis, Gottfredson, & Wright, 2011; Field, 2005). We describe the moderators we examined in this study below.

Publication Status. We examined whether there were differences between published (i.e., journal articles) and unpublished (i.e., dissertations, conference papers, book chapters, and reports) studies. Examining publication status effects is a recommended and important practice for meta-analysis (Aytug et al., 2012) because non-significant results and/or small effect sizes are less likely to be published than significant results and/or large effect sizes (i.e., the file drawer problem; Rothstein, Sutton, & Borenstein, 2005).

Source of Behavioral Rating. Prior research demonstrates that the source of behavioral ratings can impact their measurement (e.g., Carpenter, Rangel, Jeon, & Cottrell, 2017; Viswesvaran, Ones, & Schmidt, 1996). Destructive leadership researchers have assessed followers' workplace behaviors via responses from leaders, peers, organizational records, and even the followers themselves. Thus, we examine differences between self- and other-ratings of followers' workplace behaviors as a moderator in our study.

Type of Scale Points. Many measures of destructive leadership were developed using frequency scale points (e.g., Duffy et al., 2002; Tepper, 2000; Thoroughgood et al., 2012). However, researchers have used a combination of various frequency and agreement scale points across subsequent studies. Examining the type of scale points used for the destructive leadership measure is important because prior research demonstrates that measurement ratings can differ when utilizing agreement scale points versus frequency scale points (e.g., Spector, Bauer, & Fox, 2010). Thus, we examine the effects of the type of scale points (i.e., agreement or frequency) as a moderator of the findings obtained in our study.

Type of Destructive Leadership. We examined the type of destructive leadership as a moderator. Abusive supervision was the most widely studied form of destructive leadership included in our study, which was expected because Schyns & Schilling's (2013) meta-analysis of destructive leadership was comprised of mostly abusive supervision studies. Thus, we conducted moderator analyses that examined the results from abusive supervision studies versus the collective results from all other forms of destructive leadership in our study.

Analyses

We used Hunter and Schmidt's (2004) psychometric meta-analytic procedures to analyze the data and calculate results for the linear effects. Specifically, we used the "Hunter & Schmidt Meta-Analysis Program" (Schmidt & Le, 2004) to run random-effects models that weighted the results by sample size. We report the number of studies included in each analysis (k), the total number of respondents in each analysis (N), weighted mean bivariate correlations ($\bar{r}$) of uncorrected correlations (r_i), standard deviations for weighted mean bivariate correlations ($SD_{\bar{r}}$), population correlation estimates that were corrected for measurement unreliability and sampling error (ρ), standard deviations for population correlation estimates (SD_{ρ}), and the percentage of variance that was attributable to artifacts for population correlation estimates. Also, we report the 80% credibility intervals (CV) and the 95% confidence intervals (CI) for population correlation estimates. The 80% credibility intervals indicate that 80% of the values in the estimated ρ

distribution fell within the interval identified, whereas the 95% confidence intervals indicate that we can be 95% certain the true value of an estimated population correlation fell within the interval identified (Hunter & Schmidt, 2004).

We were interested in bivariate relationships at the construct level (Hunter & Schmidt, 2004), so we corrected the observed correlations for measurement error. Specifically, we used Cronbach's alpha (α) as a measure of internal consistency for the destructive leadership and workplace behavior variables. We used the median internal consistency estimate from other studies for each specific workplace behavior if Cronbach's alpha was not reported in a particular study. Also, we used the median internal consistency estimate for studies that used two-item measures in order to avoid overly correcting the correlations in a manner that would upwardly bias the estimates due to the low internal consistency estimates typical of short measures. Median reliability estimates generally are preferred to mean reliability estimates in meta-analyses because they are less susceptible to systematic sources of error due to outlier values (Aguinis, Gottfredson, & Joo, 2013). We assumed perfect reliability (i.e., $\alpha = 1.00$) for objective performance reported from organizational records. Finally, we followed Viswesvaran et al.'s (1996) recommendation to use .52 as the reliability estimate for leader ratings and .42 for coworker ratings.

Next, we meta-analytically examined curvilinear relationships. To do this, we used the correlations that primary study authors provided us to meta-analytically estimate population correlation estimates (ρ) and their standard deviations (SD_ρ) for the curvilinear terms. We used Dimitruk, Schermelleh-Engel, Kelava, and Moosbrugger's (2007) Equation 12 to estimate the reliability of curvilinear terms (i.e., we used the squared value of the reliability estimate for the linear term).

Prior to estimating population correlation estimates, we used the means and standard deviations of the linear and curvilinear terms to transform the correlations we received from primary study authors to reflect the values we would have obtained if the linear terms were mean-centered prior to estimating the curvilinear terms (see Appendix E). It was important to transform the correlations in our study due to multicollinearity concerns that arose because the linear and curvilinear terms were highly correlated, so we followed prior researchers' recommendations (Disatnik & Sivan, 2016; Echambadi & Hess, 2007; Shieh, 2011) for examining curvilinear effects in a manner that facilitates the interpretation of curvilinear effects.

Then, we used the population correlation estimates (i.e., ρ) and their corresponding standard deviations (i.e., SD_ρ) to generate meta-analytic correlation matrices (Roth, Switzer, Van Iddekinge, & Oh, 2011). We used the meta-analytic correlation matrices to run Viswesvaran and Ones' (1995) regression-based procedure using an online utility created by Yu, Downes, Carter, and O'Boyle (2016; https://mgmt.shinyapps.io/masem/). Yu et al.'s utility uses the lavaan package (Rosseel, 2011) of R (R Core Team, 2017). We used Yu et al.'s utility because its procedures build on recent meta-analytic structural equation modeling practices that incorporate the effects of heterogeneity into the obtained results (Cheung, 2008, 2013a, 2013b, 2015). We used the attenuated weight (i.e., sample size) due to corrections for unreliability for the analyses (i.e., *Adjusted N = n × $\alpha_{\text{Destructive Leadership}}$ × α_{Behavior}*) and ran 500 iterations of the simulations. We report the results for Viswesvaran and Ones' (1995) regression-based procedure from Yu et al.'s utility. The regression results we report examine the incremental contribution of the curvilinear terms while controlling for the effects of the linear terms (Cortina, 1993).

Next, we created .csv files that mirrored each of the meta-analytic correlation matrices from the regression analyses in order to use the relaimpo package (Groemping, 2015) in the R program (R Core Team, 2017) to conduct relative weight analyses (Johnson, 2000; Johnson & LeBreton, 2004; Tonidandel & LeBreton, 2015). We conducted relative weight analyses to estimate the percentage of variance in the criterion variable that each predictor variable (i.e., linear and curvilinear destructive leadership terms) explained, as well as to examine the results of the curvilinear effects while controlling for the effects of linear terms. One of the benefits of relative weight analyses is that it helps with interpreting the results when multicollinearity is a concern, which likely is the case when examining linear and curvilinear terms in tandem because the linear terms were used to create the curvilinear terms.

Then, we used Jeremy Dawson's plotter for quadratic regression effects (http://www.jeremydawson.co.uk/slopes.htm) to plot the curvilinear relationships for each of the overall regression analyses across lower and higher levels of the independent variables (Aguinis & Gottfredson, 2010). We plotted lower and higher levels at one and two standard deviation(s) below and above the mean. Specifically, we entered the unstandardized regression coefficient for the independent variable and the unstandardized regression coefficient for the squared independent variable that we

obtained from the regression analyses. We retained the default setting for the mean (i.e., zero) and changed the standard deviation to one or two for each figure. We used a seven-point scale for the y-axis when job performance and OCBs were the dependent variables because this was the most frequently used set of scale points in the studies we examined. We used a five-point scale for the workplace deviance analyses due to the low means for workplace deviance variables across studies.

Finally, we meta-analyzed the semipartial correlation of the curvilinear destructive leadership terms by conducting weighted least squares regression (Cohen, Cohen, West, & Aiken, 2003; Lipsey & Wilson, 2001). The random-effects results of the semipartial correlation procedure report the correlation between the curvilinear destructive leadership term and each criterion variable that is independent of the effects of the linear destructive leadership term. Thus, we used semipartial correlation analyses to (1) examine the consistency and robustness of our results across meta-analytic techniques and (2) identify the unique variance (i.e., incremental validity) accounted for by the curvilinear terms (Cortina, 1993).

Results

Linear Results

A summary of the meta-analytic results for the linear analyses is shown in Table 1. The studies included in the linear analyses are listed in Appendix A, whereas the main coding values we used to conduct the linear meta-analyses are shown in Appendix B. Overall, the linear meta-analyses yielded results of the expected magnitudes and directions. Our results were similar to the meta-analytic results obtained by Mackey et al. (2017) and Schyns and Schilling (2013), but with at least twice as many samples across all analyses.

The moderators we examined tended to demonstrate modest effects on the obtained results. However, there were a few notable exceptions. For example, the agreement ($\rho = -.32$, 95% $CI_\rho = [-.37, -.27]$, $SD_\rho = .12$, $k = 33$, $N = 7,370$) and frequency ($\rho = -.18$, 95% $CI_\rho = [-.22, -.14]$, $SD_\rho = .10$, $k = 30$, $N = 8,922$) scale points for destructive leadership demonstrated different results for overall OCBs. Overall, the linear results demonstrated that the primary studies we found likely were representative of the extant research available. Thus, we proceeded to examine the curvilinear results.

Curvilinear Results

The main coding values we used to conduct the curvilinear meta-analyses are shown in Appendix C. The meta-analytic inputs for the curvilinear regression analyses are reported in Appendix D. The results of the regression analyses are reported in Table 2, and the corresponding relative weight analyses results are reported in Table 3. Finally, the results of the semipartial correlation analyses are reported in Table 4. Below, we briefly describe the key findings for the curvilinear results. A visual summary of the results with 95% CIs is shown in the forest plot depicted in Figure 1.

Job Performance. Hypothesis 1a predicted that destructive leadership would demonstrate an asymptotic (i.e., U-shaped) curvilinear relationship with job performance whereby the rate of the negative association between destructive leadership and job performance would weaken as destructive leadership increased. In contrast, Hypothesis 2a predicted that destructive leadership would demonstrate an asymptotic (i.e., inverted U-shaped) curvilinear relationship with job performance whereby the rate of the negative association between destructive leadership and job performance would strengthen as destructive leadership increased. As shown in Tables 2, 3, and 4, the curvilinear destructive leadership term significantly predicted overall job performance via the regression analyses ($B = .099$, 95% CI = [.062, .136], $RW = 0.9\%$, 13.8% of model R^2), but not the semipartial correlation analyses ($sr = .033$, 95% CI = [-.001, .067]). The asymptotic curvilinear relationships depicted in Figures 2 and 3 are consistent with the predictions in Hypothesis 1a. Thus, Hypothesis 1a was partially supported, whereas Hypothesis 2a was not supported.

Organizational Citizenship Behaviors. Hypothesis 1b predicted that destructive leadership would demonstrate an asymptotic (i.e., U-shaped) curvilinear relationship with OCBs whereby the rate of the negative association between destructive leadership and OCBs would weaken as destructive leadership increased. In contrast, Hypothesis 2b predicted that destructive leadership would demonstrate an asymptotic (i.e., inverted U-shaped) curvilinear relationship with OCBs whereby the rate of the negative association between destructive leadership and OCBs would strengthen as destructive leadership increased. As reported in Tables 2, 3, and 4, the curvilinear destructive leadership

term significantly predicted overall OCBs via the regression ($B = .122$, 95% CI = [.087, .157], $RW = 0.9\%$, 11.2% of model R^2) and the semipartial correlation ($sr = .054$, 95% CI = [.015, .093]) analyses. The asymptotic curvilinear relationships depicted in Figures 4 and 5 are consistent with the predictions in Hypothesis 1b. Thus, Hypothesis 1b was supported, whereas Hypothesis 2b was not supported.

Workplace Deviance. Hypothesis 1c predicted that destructive leadership would demonstrate an asymptotic (i.e., inverted U-shaped) curvilinear relationship with workplace deviance whereby the rate of the positive association between destructive leadership and OCBs would weaken as destructive leadership increased. In contrast, Hypothesis 2c predicted that destructive leadership would demonstrate an asymptotic (i.e., U-shaped) curvilinear relationship with workplace deviance whereby the rate of the positive association between destructive leadership and OCBs would strengthen as destructive leadership increased. The curvilinear destructive leadership term significantly predicted overall workplace deviance via the regression analyses ($B = -.175$, 95% CI = [-.210, -.140], $RW = 6.9\%$, 27.8% of model R^2). Further, the asymptotic curvilinear relationships depicted in Figures 6 and 7 are consistent with the predictions in Hypothesis 1c. However, the semipartial correlation analyses did not demonstrate evidence of a curvilinear relationship between destructive leadership and workplace deviance ($sr = -.041$, 95% CI = [-.091, .009]). Thus, Hypothesis 1c was partially supported, whereas Hypothesis 2c was not supported.

Discussion

Overall, we found some evidence of curvilinear relationships between destructive leadership and followers' workplace outcomes. Specifically, our findings provide partial support for Hypotheses 1a and 1c, full support for Hypothesis 1b, and no support for Hypotheses 2a, 2b, and 2c. However, we caution that even the support we found for Hypotheses 1a and 1c was weak. For example, the results of the overall relative weight analyses demonstrated that the linear terms predicted the majority of the explained variance in followers' workplace outcomes (i.e., range: 72.2% to 88.8%; see Table 3), whereas the curvilinear terms only accounted for a modest percentage of the explained variance (i.e., range: 11.2% to 27.8%). Further, the results of the partial correlations analyses demonstrated weak evidence for the incremental ability of the curvilinear terms to predict followers' outcomes beyond the linear effects ($-.041 \leq Sr_{DL}^2 \leq .054$; see Table 4).

Despite our modest findings, we did find some meta-analytic evidence of curvilinear relationships at extreme values of destructive leadership (i.e., two standard deviations below and above the mean; see Figures 3, 5, and 7). The existence and form of the curvilinear relationships we found conformed with the predictions of social psychological theories (e.g., justice theory, social exchange theory) rather than resource-based theories (e.g., conservation of resources theory, ego depletion theory). Overall, we advocate for researchers to continue to emphasize linear conceptualizations and operationalizations of destructive leadership in studies that examine job performance, OCBs, and/or workplace deviance because our results primarily lend support to the linear perspective. However, we also advocate for future research to examine the curvilinear effects of followers' destructive leadership perceptions at extreme levels and explore the potential for curvilinear relationships between destructive leadership and organizational phenomena not examined in this study.

The mixed support for a curvilinear relationship between destructive leadership and job performance is important to note. This finding likely stems from the complete lack of support for a curvilinear relationship between abusive supervision and job performance ($B = .017$, 95% CI = [-.030, .064], $RW = 1.1\%$, 23.3% of model R^2) because a majority (i.e., 83.9%) of the studies included in the curvilinear job performance analyses examined abusive supervision instead of other forms of destructive leadership. Further, job performance typically is directly monitored and rewarded by organizations, whereas OCBs and workplace deviance are voluntary behaviors that likely are more susceptible to fluctuations because they are not formally monitored or required for employment. Thus, it makes conceptual sense that curvilinear relationships between destructive leadership and discretionary workplace behaviors (e.g., OCBs) exist, whereas curvilinear relationships between destructive leadership and formally required workplace behaviors (e.g., job performance) do not.

Also, the mixed support for a curvilinear relationship between destructive leadership and workplace deviance is worth noting. This finding likely stems from the highly correlated predictors (i.e., linear and curvilinear destructive leadership terms; $.83 \leq \rho_{DL\,\&\,DL}^2 \leq .85$; see Appendix D) across all of the workplace deviance analyses. It is possible that the similarly negative connotations in destructive leadership and workplace deviance assessments led to empirical confounding. For example, the correlation between the linear and curvilinear destructive leadership terms for the

overall workplace deviance ($\rho = .84$) analyses was notably higher than the correlations between the linear and curvilinear destructive leadership terms for the overall job performance ($\rho = .68$) and overall OCBs ($\rho = .63$) analyses. Thus, the ability of the curvilinear destructive leadership term to predict incremental variance above the linear destructive leadership term was more limited in the overall workplace deviance analyses than the overall job performance and OCBs analyses. Perhaps this feature of the analyses explains why we found evidence of curvilinear relationships between destructive leadership and workplace deviance via regression analyses, but not via semipartial correlation analyses.

Ultimately, our meta-analytic study enabled us to cumulate empirical knowledge (Hunter & Schmidt, 2004) on the relationships between destructive leadership and followers' workplace behaviors that would not otherwise be available. Further, our population estimates based on psychometric correction for sampling and measurement error are of considerable scholarly and practical interest. Finally, contacting authors to gather correlations between linear destructive leadership terms, curvilinear destructive leadership terms, and followers' workplace behavior terms enabled us to conduct a novel meta-analytic examination of curvilinear relationships that provides breadth and depth to our understanding of the effects of destructive leadership on followers' workplace outcomes.

Contributions to Theory and Research

We make two important contributions to theory and research. First, we make a theoretical contribution that explains why curvilinear relationships between destructive leadership and followers' workplace behaviors exist. Our novel examination of competing social psychological and resource-based theoretical explanations for curvilinear relationships provides nuanced insight into the theoretical explanations that could be used to predict different forms of curvilinear relationships in destructive leadership research. Our theoretical contribution is important because the lack of a unifying theoretical framework for destructive leadership research has created a gap in knowledge that has limited inferences about curvilinear effects in destructive leadership research. The absence of extant research that examines the curvilinear effects of destructive leadership limits our knowledge of the effects of destructive leadership on followers' workplace outcomes, so our study contributes to extant research by identifying the relevant theoretical foundations for understanding the existence, form, and magnitude of the curvilinear relationships between destructive leadership and followers' workplace behaviors.

Overall, our results challenge the prevailing wisdom that assumes there are strictly linear relationships between destructive leadership and followers' workplace behaviors by demonstrating that curvilinear relationships may exist, especially in extreme cases of destructive leadership (i.e., at two standard deviations below and above the mean). The asymptotic curvilinear effects depicted in Figures 2-7 are consistent with the predictions of the social psychological theoretical perspective rather than the resource-based theoretical perspective, so our results have important implications for the application of social psychological to destructive leadership research. Overall, the results provide support for the notion that followers likely use social reinforcement standards to manage behavioral responses throughout their social exchange interactions with leaders, rather than simply react to the depletion of their egos and/or self-regulatory resources throughout the leadership process.

Second, we make an important methodological contribution by using curvilinear data from prior research to conduct a direct meta-analytic test of curvilinear relationships and their relative and incremental contributions to explaining workplace behaviors above and beyond linear effects. Our approach to meta-analytically examining curvilinear relationships required substantial time and effort because we had to contact authors to request data for every primary study included in our meta-analysis. We hope that the rigor and depth of this study can serve as an example for future meta-analytic studies that examine curvilinear relationships because our study design has the potential to fundamentally reshape the scope and depth of future meta-analytic efforts that examine the existence, form, and magnitude of curvilinear relationships across an array of phenomena.

Limitations

We discuss this study's limitations below and identify the limitations' implications for the validity of inferences drawn from our findings (Brutus, Aguinis, & Wassmer, 2013). First, we were limited by the quality and availability of data from primary studies, which restricts the quality of the meta-analytic data (Hunter & Schmidt, 2004). The self-report and cross-sectional nature of much of destructive leadership has been well documented (Schyns & Schilling, 2013), so we caution against drawing causal conclusions from this study. Also, studies that were not available to us may

demonstrate systematic patterns of differences from the studies included in the meta-analysis (e.g., file drawer problem; Kepes, Banks, McDaniel, & Whetzel, 2012; Rothstein et al., 2005), though we have no direct evidence that this is the case. In fact, some research demonstrates that inflation bias likely poses a minimal threat to the validity of inferences drawn from meta-analyses (Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012), so our considerable efforts to locate unpublished studies likely enabled us to minimize the effects of publication bias.

Many of the limitations noted above are common to meta-analyses. However, our study also faced the unique challenge of examining linear and curvilinear terms. For example, we were limited by the quantity of data available for curvilinear analyses because we were reliant on primary study authors to provide supplementary information for every study we included in the curvilinear analyses. Also, multicollinearity is an important limitation of our study because the linear and curvilinear destructive leadership terms were highly correlated. Although we attempted to address multicollinearity by transforming the obtained correlations, the correlation between the linear and curvilinear destructive leadership terms was still high across all of the overall analyses (i.e., $.63 \leq \rho_{DL \& DL^2} \leq .84$). Thus, inferences from our findings should account for multicollinearity concerns and future research should explicitly address multicollinearity concerns that stem from examining linear and curvilinear terms in tandem (Disatnik & Sivan, 2016; Echambadi & Hess, 2007; Shieh, 2011).

Actionable Agenda for Future Research

One of our goals is to provide an actionable agenda for future research that describes immediate and incremental opportunities for scholars to advance theory and research (Brutus et al., 2013). To that end, we advocate for future destructive leadership research to incorporate curvilinear relationships directly into study designs so researchers can examine the extent to which curvilinear relationships affect the obtained results. It is possible that there are curvilinear relationships between destructive leadership and workplace attitudes, perceptions, and behaviors that we did not examine in this study, so we encourage future research to explore this possibility.

Next, we encourage researchers to continue to examine the relationships between destructive leadership and workplace outcomes. Although we found numerous studies that already examine these relationships, the large SD_ρ values we obtained for many of our meta-analytic estimates demonstrate heterogeneity in the obtained findings that could be improved by future research. In their review of meta-analytic findings, Carlson and Ji (2011) found that the average obtained SD_ρ value across meta-analyses was .106, which is lower than many of the SD_ρ values we obtained. Further, Carlson and Ji suggested that SD_ρ values above .05 indicate enough heterogeneity to warrant additional research attention. Thus, we hope our findings spur additional research that examines the relationship between destructive leadership and followers' workplace behaviors so that future meta-analytic efforts can use advanced meta-analytic techniques without violating the assumptions necessary to meaningfully conduct the analyses (e.g., limited heterogeneity). Additionally, the predominance of abusive supervision studies within destructive leadership research (Schyns & Schilling, 2013) means that there is still much room for future research to examine the effects of specific types of destructive leadership (e.g., aversive leadership, despotic leadership) on followers' workplace outcomes.

Also, we encourage researchers to directly measure theoretical mechanisms through which curvilinear destructive leadership effects likely impact workplace outcomes. Our results support the predictions of social psychological theories, so we encourage future research that examines how followers' perceptions of justice and social exchange relationship quality with their leaders mediate the relationship between destructive leadership and followers' workplace behaviors. Additionally, we advocate for continued efforts to examine moderators of the relationship between destructive leadership and followers' workplace behaviors because we only found weak evidence of the more parsimonious explanation that relies on the existence of curvilinear relationships (Cortina, 1993).

Finally, future meta-analytic efforts can use our data collection and analysis procedures as an example when meta-analytically testing curvilinear relationships between a wide variety of organizational phenomena. For example, the regression analyses, relative weight analyses, and semipartial correlation analyses we conducted could be used in future meta-analyses that examine relative differences and the incremental validity/explanatory power for various dimensions of multi-dimensional variables, or any other set of competing predictor variables. We hope the methodological contribution we make enables scholars in a wide array of research areas to cumulate empirical knowledge that makes immediate and incremental advancements to theory and research across a variety of domains.

Implications for Practice

We make several inferences from this study's results that can meaningfully inform practice (Le, Oh, Shaffer, & Schmidt, 2007). First, although destructive leadership tends to demonstrate universally harmful effects on followers' behaviors (Schyns & Schilling, 2013), we found evidence that curvilinear relationships subject to floor and ceiling effects at extreme values (i.e., two standard deviations below and above the mean) may limit the extent to which destructive leadership is associated with followers' workplace behaviors. We advocate for practitioners' awareness that even small increases in destructive leadership from lower to moderate levels can be associated with notable decreases in OCBs and increases in workplace deviance. Further, our results indicate that most followers who report lower levels of destructive leadership than others likely demonstrate little or no deviant behaviors. Thus, the presence of any workplace deviance can be evidence of a social psychological imbalance between followers and their leaders. Additionally, we advocate that practitioners likely can identify followers who share constructive social relationships with their leaders by identifying employees who engage in higher levels of OCBs than others.

Also, we encourage organizational leaders to look beyond in-role (i.e., job performance) and extra-role (i.e., OCBs) assessments when evaluating ways of identifying poor social relationships between leaders and their followers. We found moderate correlations between destructive leadership and job performance ($\rho = -.23$, $SD_p = .16$, $k = 54$, $N = 14,029$) and overall OCBs ($\rho = -.23$, $SD_p = .13$, $k = 64$, $N = 16,415$), but a high correlation between destructive leadership and workplace deviance ($\rho = .45$, $SD_p = .14$, $k = 83$, $N = 22,759$). Thus, it likely is more beneficial for practitioners to examine changes in destructive behaviors (i.e., workplace deviance) than constructive behaviors (i.e., job performance, OCBs) when monitoring for the effects of destructive leadership. Ultimately, we advocate for organizational leaders to ensure that organizational environments contribute to constructive social relationships at work by monitoring followers' workplace behaviors and perceptions of destructive leadership, especially when extreme levels of destructive leadership may be present and/or perceived.

Conclusion

The results from our meta-analytic examination of curvilinear relationships between destructive leadership and followers' workplace behaviors (i.e., job performance, OCBs, and workplace deviance) demonstrated that linear effects dominate the prediction of followers' workplace behaviors. However, our results also demonstrate that the curvilinear effect of destructive leadership on followers' workplace behaviors may have meaningful implications at extreme values of destructive leadership (i.e., two standard deviations below and above the mean). We make an important theoretical contribution by examining competing social psychological and resource-based theories in a novel way that demonstrates support for social psychological theoretical explanations for why curvilinear relationships between destructive leadership and followers' workplace behaviors exist at extreme values. Also, we make an important methodological contribution by providing an example for future meta-analyses that examine curvilinear relationships via regression, relative weight, and semipartial correlation analyses. We hope this study's results, the actionable agenda for future research we provide, and the implications for practice we identify enable researchers and practitioners to meaningfully advance theory and research on destructive leadership, as well as deter the presence and impact of destructive leadership in organizations.

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Table 1
Meta-Analytic Results for Linear Analyses

Analysis	k	N	$\bar{r}$	$SD_{\bar{r}}$	ρ	SD_{ρ}	80% Credibility Interval (ρ)	95% Confidence Interval (ρ)	% Variance Attributable to Artifacts
Overall Job Performance	54	14,029	-.19	.12	-.23	.16	(-.43, -.03)	(-.27, -.19)	20%
Published Studies	39	10,334	-.17	.12	-.21	.16	(-.41, -.01)	(-.26, -.16)	19%
Other-Rated Performance	44	10,725	-.19	.13	-.24	.17	(-.47, -.02)	(-.30, -.19)	19%
Agreement Scale Studies	25	5,570	-.20	.11	-.25	.14	(-.43, -.08)	(-.31, -.19)	29%
Frequency Scale Studies	27	8,317	-.18	.13	-.22	.16	(-.43, -.01)	(-.28, -.15)	15%
Abusive Supervision Studies	46	11,474	-.18	.13	-.22	.17	(-.44, -.01)	(-.27, -.17)	19%
Overall OCBs	64	16,415	-.18	.12	-.23	.13	(-.40, -.07)	(-.27, -.20)	26%
Published Studies	46	12,782	-.20	.10	-.25	.10	(-.39, -.12)	(-.29, -.22)	34%
Self-Rated OCBs	23	5,991	-.19	.13	-.21	.13	(-.38, -.04)	(-.27, -.15)	20%
Other-Rated OCBs	39	10,038	-.18	.11	-.26	.13	(-.42, -.10)	(-.30, -.21)	32%
Agreement Scale Studies	33	7,370	-.24	.11	-.32	.12	(-.48, -.17)	(-.37, -.27)	33%
Frequency Scale Studies	30	8,922	-.14	.10	-.18	.10	(-.31, -.05)	(-.22, -.14)	32%
Abusive Supervision Studies	57	14,760	-.18	.11	-.22	.13	(-.39, -.06)	(-.26, -.19)	27%
OCB-Organization (OCB-O)	37	9,331	-.18	.11	-.24	.14	(-.41, -.07)	(-.29, -.19)	27%
Published Studies	27	7,236	-.17	.10	-.24	.12	(-.39, -.08)	(-.29, -.18)	30%
Other-Rated OCBs	22	6,117	-.18	.11	-.27	.15	(-.46, -.08)	(-.33, -.20)	25%
Agreement Scale Studies	23	5,664	-.21	.12	-.30	.15	(-.48, -.11)	(-.36, -.23)	26%
Abusive Supervision Studies	33	8,353	-.18	.11	-.23	.13	(-.40, -.06)	(-.28, -.18)	27%
OCB-Individual (OCB-I)	22	5,698	-.19	.10	-.25	.12	(-.40, -.10)	(-.31, -.20)	32%
Abusive Supervision Studies	20	4,966	-.17	.10	-.23	.10	(-.35, -.10)	(-.28, -.18)	43%

Table 1 (Continued)

Analysis	k	N	$\bar{r}$	$SD_{\bar{r}}$	ρ	SD_ρ	80% Credibility Interval (ρ)	95% Confidence Interval (ρ)	% Variance Attributable to Artifacts
Overall Workplace Deviance	83	22,759	.39	.15	.45	.14	(.26, .63)	(.42, .48)	14%
Published Studies	55	16,993	.40	.14	.46	.14	(.28, .64)	(.42, .50)	13%
Unpublished Studies	28	5,766	.37	.16	.43	.15	(.23, .62)	(.37, .49)	17%
Self-Rated Deviance	63	18,359	.41	.15	.46	.14	(.27, .64)	(.42, .50)	12%
Frequency Scale Studies	67	18,123	.39	.15	.45	.14	(.26, .64)	(.41, .49)	14%
Abusive Supervision Studies	78	20,661	.40	.15	.46	.14	(.28, .64)	(.43, .49)	15%
Organization-Directed Deviance	55	15,859	.35	.15	.40	.15	(.21, .59)	(.36, .44)	14%
Published Studies	32	11,313	.37	.14	.42	.14	(.24, .60)	(.37, .47)	12%
Unpublished Studies	23	4,546	.29	.15	.35	.15	(.17, .54)	(.29, .42)	22%
Self-Rated Deviance	42	12.992	.36	.15	.40	.15	(.21, .59)	(.36, .45)	12%
Frequency Scale Studies	42	11,845	.35	.15	.41	.14	(.23, .59)	(.36, .45)	15%
Abusive Supervision Studies	51	14,118	.35	.15	.41	.15	(.22, .61)	(.37, .46)	14%
Interpersonal-Directed Deviance	31	8,297	.32	.12	.38	.11	(.23, .52)	(.33, .42)	24%
Self-Rated Deviance	24	6,763	.32	.11	.36	.09	(.25, .48)	(.32, .41)	31%
Frequency Scale Studies	26	6,952	.33	.12	.39	.12	(.24, .55)	(.34, .44)	23%
Abusive Supervision Studies	29	7,471	.32	.12	.38	.12	(.22, .53)	(.33, .42)	23%
Leader-Directed Deviance	31	9,490	.49	.16	.56	.13	(.39, .73)	(.51, .61)	12%
Published Studies	22	7,416	.51	.15	.58	.13	(.42, .74)	(.52, .63)	11%
Self-Rated Deviance	25	8,175	.52	.13	.58	.12	(.42, .74)	(.53, .63)	11%
Frequency Scale Studies	25	7,124	.48	.16	.56	.14	(.38, .74)	(.50, .61)	12%
Abusive Supervision Studies	31	9,490	.49	.16	.56	.13	(.39, .73)	(.51, .61)	12%

Note. k = number of studies included in the analysis. N = total sample size of all studies included in the analysis. $\bar{r}$ = average weighted bivariate correlation across studies. $SD_{\bar{r}}$ = standard deviation of the average weighted bivariate correlations across studies. ρ = the population estimate that corrects the zero-order bivariate correlation for measurement and sampling error across studies. SD_ρ = standard deviation of the population correlation estimate across studies.

Table 2

Meta-Analytic Estimates for the Curvilinear Regression Analyses

Analysis	k	Adjusted N	B_{DL}	95% CI B_{DL}	B_{DL}^2	95% CI B_{DL}^2
Overall Job Performance	31	4,933	-.307	(-.344, -.270)	.099	(.062, .136)
Published Studies	27	4,467	-.280	(-.319, -.241)	.086	(.047, .125)
Other-Rated Performance	28	3,447	-.269	(-.312, -.226)	.045	(.002, .088)
Abusive Supervision Studies	26	3,370	-.233	(-.280, -.186)	.017	(-.030, .064)
Overall OCBs	32	4,904	-.337	(-.372, -.302)	.122	(.087, .157)
Published Studies	25	4,066	-.336	(-.373, -.299)	.138	(.101, .175)
Other-Rated OCBs	23	2,449	-.360	(-.405, -.315)	.072	(.027, .117)
Abusive Supervision Studies	29	4,509	-.320	(-.357, -.283)	.121	(.084, .158)
Overall Workplace Deviance	32	7,547	.637	(.602, .672)	-.175	(-.210, -.140)
Published Studies	22	6,536	.648	(.609, .687)	-.164	(-.203, -.125)
Self-Rated Deviance	26	6,982	.671	(.634, .708)	-.204	(-.241, -.167)
Frequency Scale Studies	21	5,148	.620	(.577, .663)	-.145	(-.188, -.102)
Abusive Supervision Studies	31	7,199	.596	(.557, .635)	-.137	(-.176, -.098)
Organization-Directed Deviance	23	5,504	.611	(.566, .656)	-.189	(-.234, -.144)

Note. k = number of studies included in the analysis. *Adjusted N* = sample size of all studies included in the analysis that was adjusted for unreliability in measurement. DL = destructive leadership. OCB = organizational citizenship behavior. B_{DL} = standardized effect size for the linear destructive leadership term on the behavior. B_{DL}^2 = standardized effect size for the non-linear destructive leadership term on the behavior. 95% CI = 95% confidence interval.

Table 3

Results of Relative Weight Analyses for the Curvilinear Regression Analyses

Analysis	k	Adjusted N	RW_{DL}	$RW_{DL}{}^2$	Model R^2	% R^2 DL	% R^2 DL^2
Overall Job Performance	31	4,933	.054	.009	.063	.862	.138
Published Studies	27	4,467	.044	.008	.052	.848	.152
Other-Rated Performance	28	3,447	.050	.009	.059	.846	.154
Abusive Supervision Studies	26	3,370	.037	.011	.049	.767	.233
Overall OCBs	32	4,904	.068	.009	.077	.888	.112
Published Studies	25	4,066	.066	.008	.074	.888	.112
Other-Rated OCBs	23	2,449	.096	.010	.106	.904	.096
Abusive Supervision Studies	29	4,509	.058	.008	.066	.876	.124
Overall Workplace Deviance	32	7,547	.180	.069	.249	.722	.278
Published Studies	22	6,536	.192	.076	.268	.716	.284
Self-Rated Deviance	26	6,982	.191	.071	.262	.730	.270
Frequency Scale Studies	21	5,148	.185	.072	.257	.720	.280
Abusive Supervision Studies	31	7,199	.165	.071	.236	.698	.302
Organization-Directed Deviance	23	5,504	.153	.059	.212	.720	.280

Note. k = number of studies included in the analysis. *Adjusted N* = sample size of all studies included in the analysis that was adjusted for unreliability in measurement. DL = destructive leadership. OCB = organizational citizenship behavior. RW_{DL} = the relative weight of the linear destructive leadership term on the behavior. $RW_{DL}{}^2$ = the relative weight of the non-linear destructive leadership term on the behavior. Model R^2 = the amount of variance explained in the behavior. % R^2 DL = the amount of the explained variance in the behavior accounted for by the linear destructive leadership term. % R^2 DL^2 = the amount of the explained variance in the behavior accounted for by the curvilinear destructive leadership term.

Table 4

Meta-Analytic Estimates for the Curvilinear Semipartial Correlation Analyses

Analysis	k	Adjusted Weight (N)	Sr_{DL}^2	95% CI Sr_{DL}^2
Overall Job Performance	31	3,997	.033	(-.001, .067)
Published Studies	27	3,359	.041	(.004, .079)
Other-Rated Performance	28	3,195	.007	(-.027, .042)
Abusive Supervision Studies	26	2,717	.005	(-.033, .042)
Overall OCBs	32	3,898	.054	(.015, .093)
Published Studies	25	3,135	.061	(.021, .101)
Other-Rated OCBs	22	2,636	.041	(-.003, .086)
Abusive Supervision Studies	29	3,328	.058	(.014, .101)
Overall Workplace Deviance	32	4,205	-.041	(-.091, .009)
Published Studies	22	3,645	-.036	(-.097, .024)
Self-Rated Deviance	26	3,863	-.050	(-.106, .007)
Frequency Scale Studies	21	3,059	-.047	(-.116, .022)
Abusive Supervision Studies	31	3,834	-.024	(-.069, .022)
Organization-Directed Deviance	23	3,048	-.034	(-.096, .029)

Note. k = number of studies included in the analysis. *Adjusted Weight* (N) = sample size of all studies included in the analysis that was adjusted for explained variance and unreliability in measurement. Sr_{DL}^2 = semipartial correlation for the curvilinear destructive leadership term. DL = destructive leadership. OCB = organizational citizenship behavior. 95% CI = 95% confidence interval.
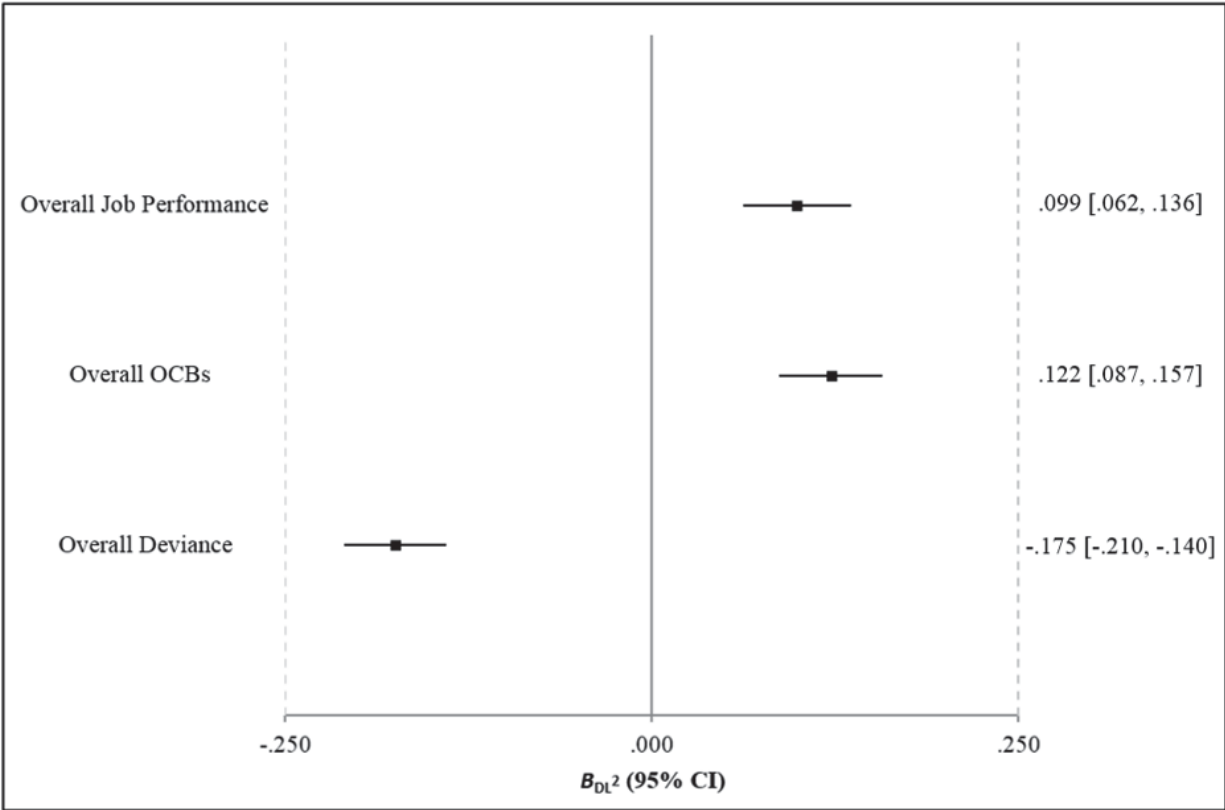
Figure 1. Forest plot of the effects of the curvilinear destructive leadership term on followers' workplace behaviors from the regression analyses.
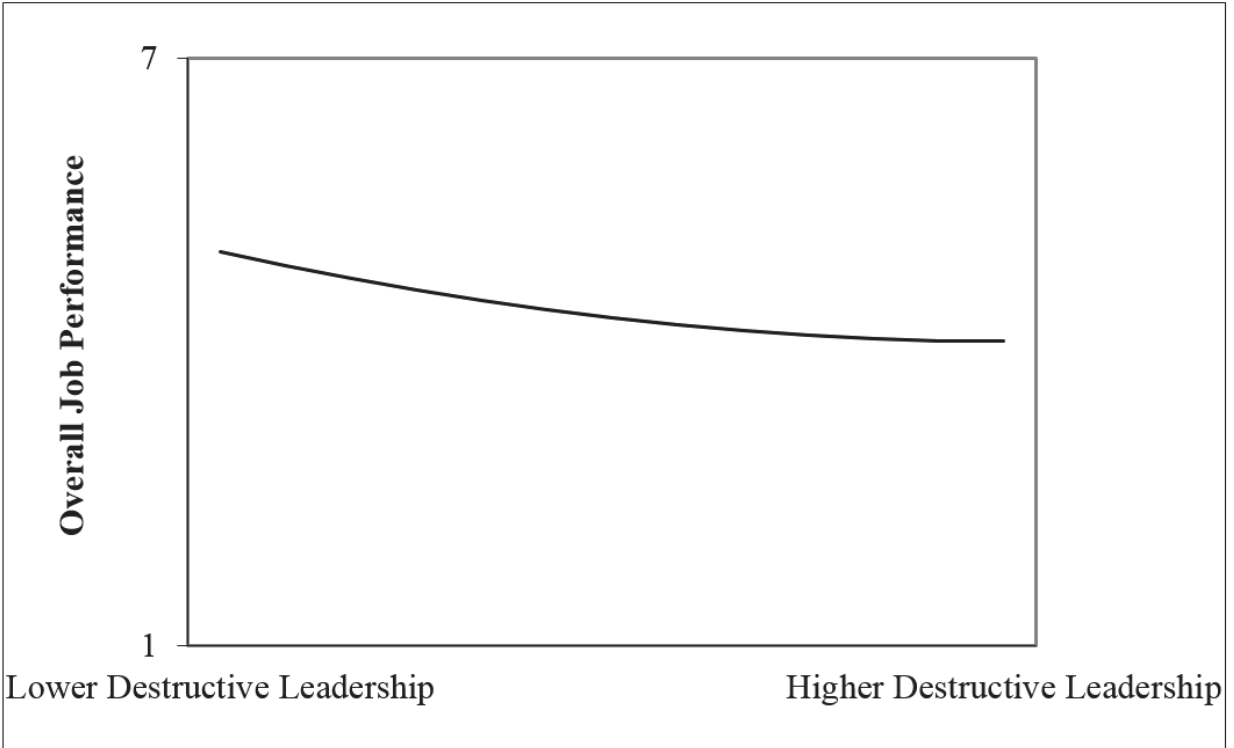
Figure 2. A plot of the curvilinear effect of destructive leadership on overall job performance at one standard deviation below and above the mean of destructive leadership.
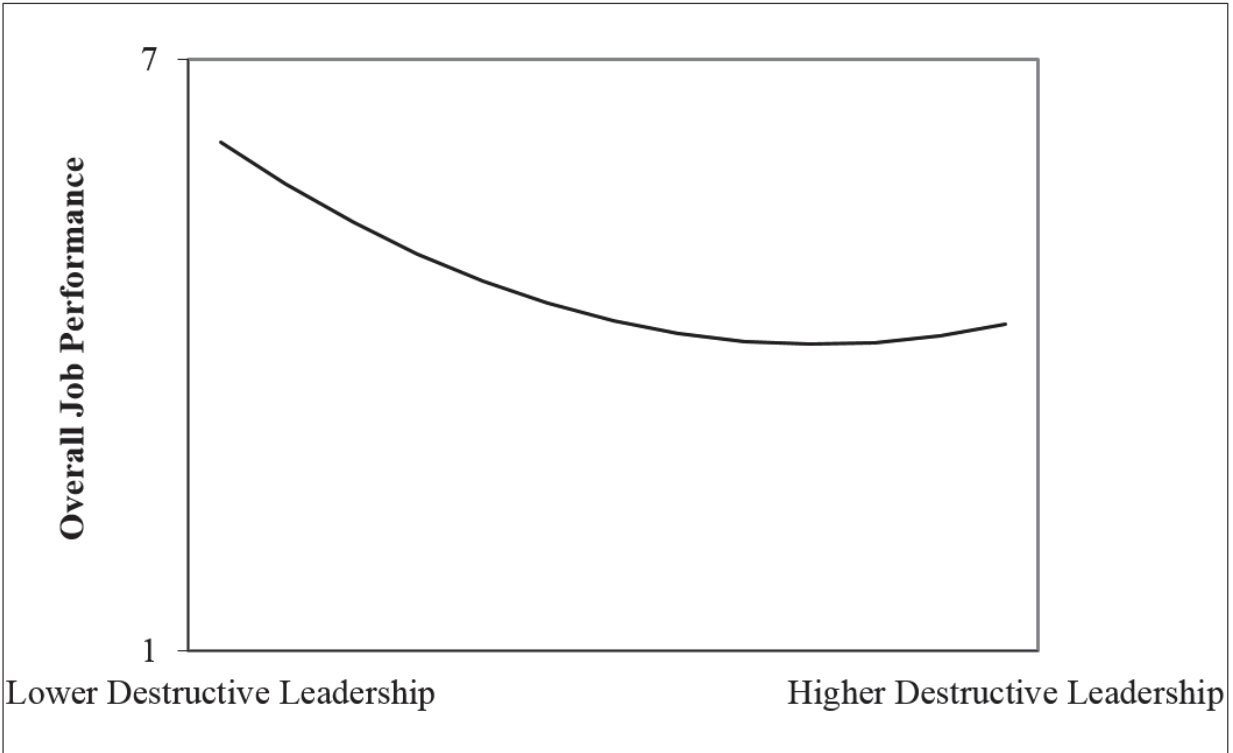
Figure 3. A plot of the curvilinear effect of destructive leadership on overall job performance at two standard deviations below and above the mean of destructive leadership.
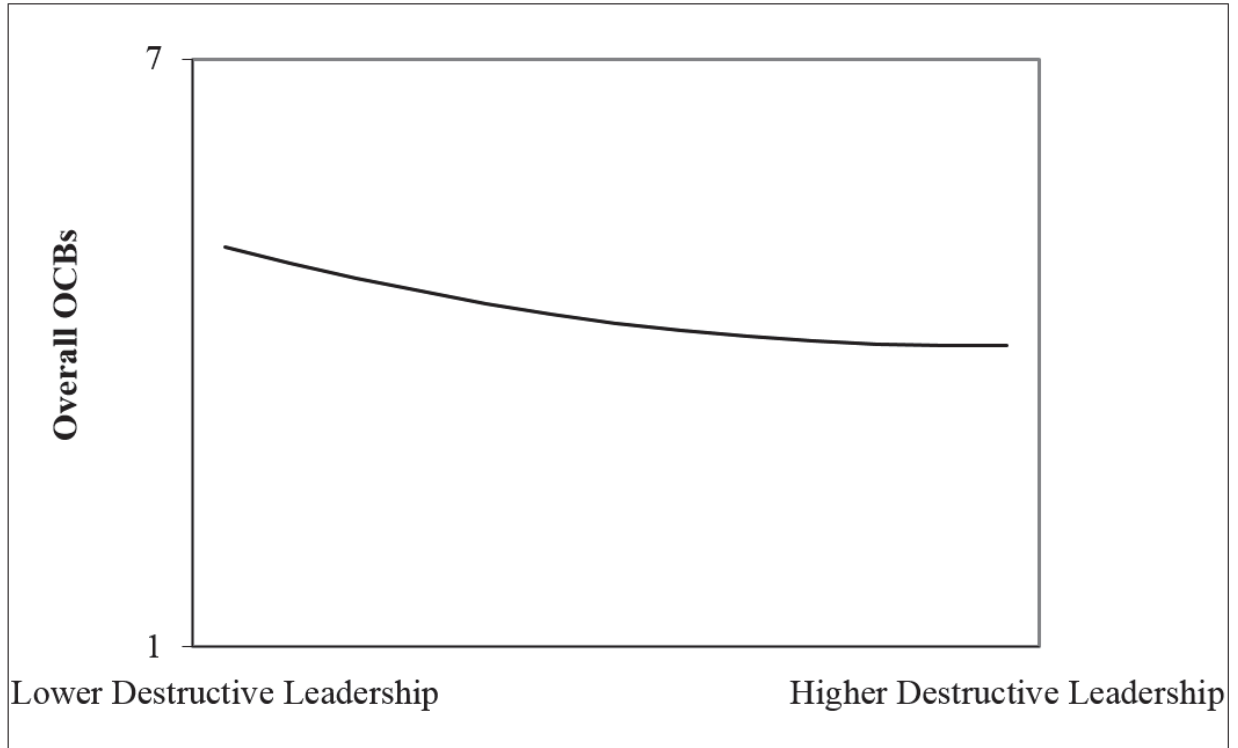
Figure 4. A plot of the curvilinear effect of destructive leadership on overall organizational citizenship behaviors (OCBs) at one standard deviation below and above the mean of destructive leadership.
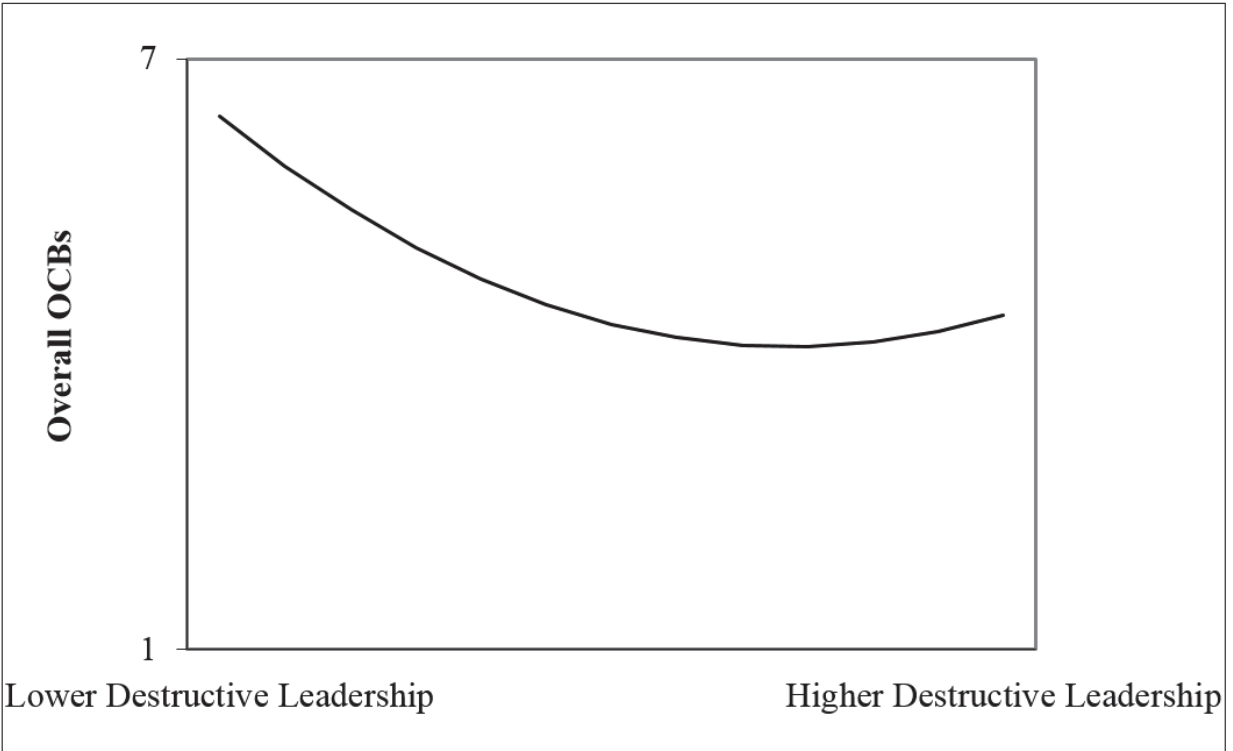
Figure 5. A plot of the curvilinear effect of destructive leadership on overall organizational citizenship behaviors (OCBs) at two standard deviations below and above the mean of destructive leadership.
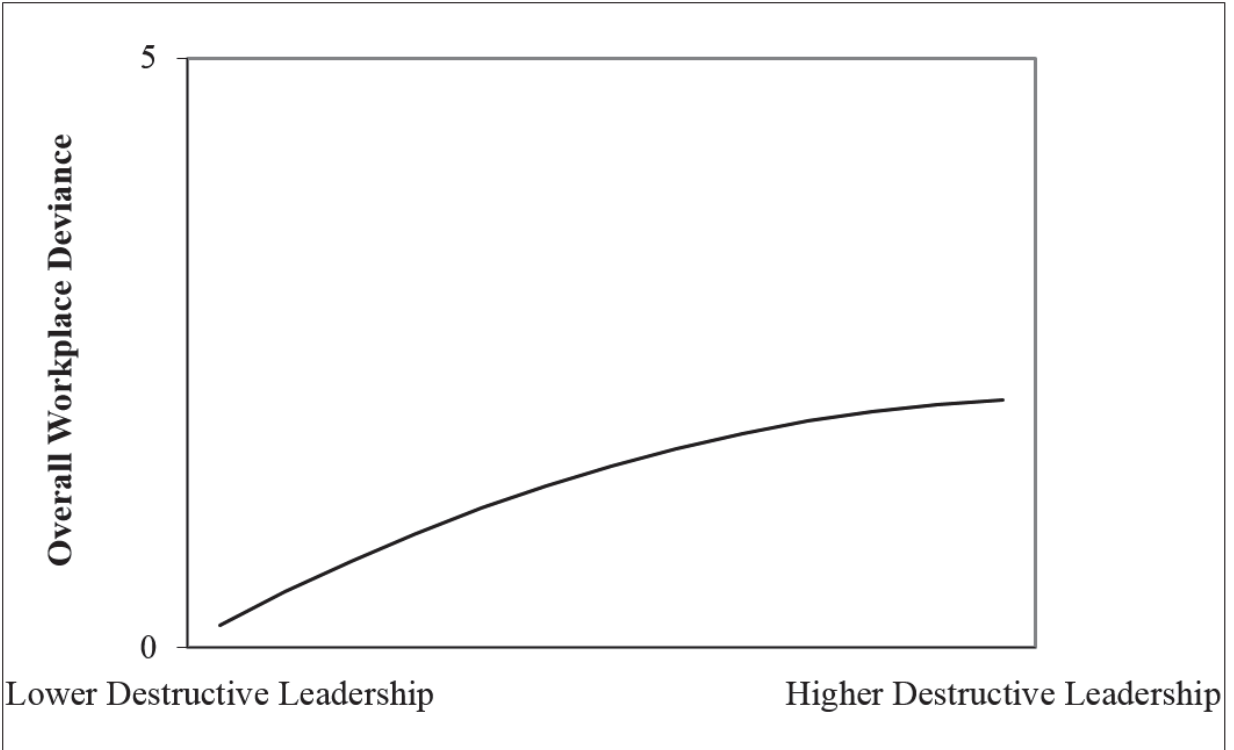
Figure 6. A plot of the curvilinear effect of destructive leadership on overall workplace deviance at one standard deviation below and above the mean of destructive leadership.
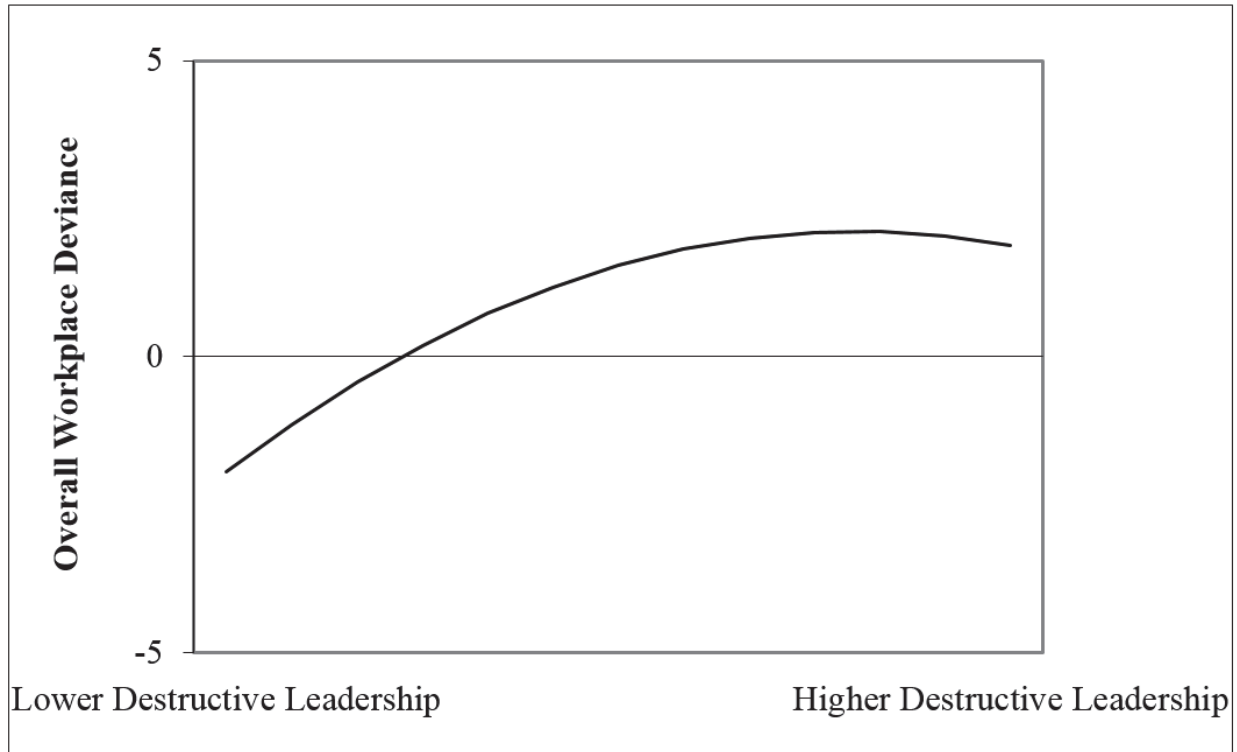
Figure 7. A plot of the curvilinear effect of destructive leadership on overall workplace deviance   at two standard deviations below and above the mean of destructive leadership.

Appendix A

Studies Included in the Meta-Analysis

Alexander, K. (2011). *Abusive supervision as a predictor of deviance and health outcomes: The exacerbating role of narcissism and social support* (Unpublished doctoral dissertation). Bowling Green State University, Bowling Green, Ohio.

Aryee, S., Chen, Z. X., Sun, L.-Y., & Debrah, Y. A. (2007). Antecedents and outcomes of abusive supervision: Test of a trickle-down model. *Journal of Applied Psychology, 92*(3), 191-201.

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Biron, M. (2010). Negative reciprocity and the association between perceived organizational ethical values and organizational deviance. *Human Relations, 63*(6), 875-897.

Bligh, M. C., Kohles, J. C., Pearce, C. L., Justin, J. E., & Stovall, J. F. (2007). When the romance is over: Follower perspectives of aversive leadership. *Applied Psychology*, *56*(4), 528-557.

Bowling, N. A., & Michel, J. S. (2011). Why do you treat me badly? The role of attributions regarding the cause of abuse in subordinates' responses to abusive supervision. *Work & Stress, 25*(4), 309-320.

Bozeman, J. (2016). *Precipitating abusive supervision: Target factors and supervisor blame attributions* (Unpublished doctoral dissertation). University of Manitoba, Winnipeg, Canada.

Burris, E. R., Detert, J. R., & Chiaburu, D. S. (2008). Quitting before leaving: The mediating effects of psychological attachment and detachment on voice. *Journal of Applied Psychology, 93*(4), 912-922.

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Camps, J. (2015). *Once upon a jerk...a follower-centered perspective on the emergence and maintenance of abusive supervision* (Unpublished doctoral dissertation). Ghent University, Ghent, Belgium.

Chang, K., Kuo, C.-C., Su, M., & Taylor, J. (2013). Dis-identification in organizations and its role in the workplace. *Industrial Relations, 68*(3), 479-506.

Chen, H. (2011). *Work ethic and workplace behavior: Essays on direct and moderated relationships across national cultures* (Unpublished doctoral dissertation). University of Texas, Dallas, Texas.

Chi, N.-W., Wang, A.-C., & Farh, C. I. C. (2016). *Turn the other cheek: The role of morality in promoting prosocial responses to abusive supervision*. Manuscript presented at the Academy of Management annual meeting in Anaheim, California.

Childers, O., Witt, L., Campion, J., Virgets, A., Johnson, L., & Romay, S. (2014). *Because nice matters: The effects of abusive supervision on deviance*. Manuscript presented at the Society for Industrial and Organizational Psychology annual meeting in Honolulu, Hawaii.

Choi, J. N., Anderson, T. A., & Veillette, A. (2009). Contextual inhibitors of employee creativity in organizations the insulating role of creative ability. *Group & Organization Management*, *34*(3), 330-357.

Chu, L.-C. (2014). Mediating toxic emotions in the workplace - the impact of abusive supervision. *Journal of Nursing Management, 22*(8), 953-963.

Daniels, M. A. (2015). *Shame as an alternate mechanism for the abusive supervision-performance relation and the role of power distance values* (Unpublished doctoral dissertation). Bowling Green State University, Bowling Green, Ohio.

Decoster, S., Camps, J., & Stouten, J. (2014). The mediating role of LMX between abusive supervision and work behaviors: A replication and extension. *American Journal of Business, 29*(1), 61-75.

Duffy, M. K., Ganster, D. C., & Pagon, M. (2002). Social undermining at work. *Academy of Management Journal, 45*, 331-351.

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Eissa, G., Chinchanachokchai, S., & Wyland, R. (2017). The influence of supervisor undermining on self-esteem, creativity, and overall job performance: A multiple mediation model. *Organization Management Journal, 14*(4), 185-197.

Ellen III, B. P., Kiewitz, C., Garcia, P. R. J. M., & Hochwarter, W. A. (in press). Dealing with the full-of-self-boss: Interactive effects of supervisor narcissism and subordinate resource management ability on work outcomes. *Journal of Business Ethics*. doi: 10.1007/s10551-017-3666-4

Eschleman, K. J., Bowling, N. A., Michel, J. S., & Burns, G. N. (2014). Perceived intent of supervisor as a moderator of the relationships between abusive supervision and counterproductive work behaviors. *Work & Stress, 28*(4), 362-375.

Ferris, D. L., Yan, M., Lim, V. K. G., Chen, Y., & Fatimah, S. (2016). An approach-avoidance framework of workplace aggression. *Academy of Management Journal, 59*(5), 1777-1800.

Frieder, R. E., Mackey, J. D., & Perrewé, P. L. (2014). *Attenuating the negative effects of abusive supervision: Resilience in the face of adversity and punishment to dissuade deviance*. In P. L. Perrewé & P. Spector (Co-Chairs): Mistreatment in organizations: The role of abusive supervision. Symposium presented at the Southern Management Association annual meeting in Savannah, Georgia.

Frieder, R. E., Hochwarter, W. A., & DeOrtentiis, P. S. (2015). Attenuating the negative effects of abusive supervision: The role of proactive voice behavior and resource management ability. *The Leadership Quarterly, 26*, 821-837.

Garcia, P. R. J. M., Wang, L., Lu, V., Kiazad, K., & Restubog, S. L. D. (2015). When victims become culprits: The role of subordinates' neuroticism in the relationship between abusive supervision and workplace deviance. *Personality and Individual Differences, 72*, 225-229.

Gardner, D., O'Driscoll, M., Cooper-Thomas, H. D., Roche, M., Bentley, T., Catley, B., Teo, S.T. & Trenberth, L. (2016). Predictors of workplace bullying and cyber-bullying in New Zealand. *International Journal of Environmental Research and Public Health, 13*(5), 448-462.

Gregory, B. T., Osmonbekov, T., Gregory, S. T., Albritton, M. D., & Carr, J. C. (2013). Abusive supervision and citizenship behaviors: Exploring boundary conditions. *Journal of Managerial Psychology, 28*(6), 628-644.

Gu, J., Song, J., & Wu, J. (2016). Abusive supervision and employee creativity in China: Departmental identification as mediator and face as moderator. *Leadership & Organization Development Journal, 37*(8), 1187-1204.

Hamid, R. A., Juhdi, N. H., Ismail, M. D., & Abdullah, N. A. (2016). Abusive supervision and workplace deviance as moderated by spiritual intelligence: An empirical study of Selangor employees. *Malaysian Journal of Society and Space, 12*(2), 191-202.

Han, G. H., Harms, P. D., & Bai, Y. (2017). Nightmare bosses: The impact of abusive supervision on employees' sleep, emotions, and creativity. *Journal of Business Ethics, 145*(1), 21-31.

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Appendix B

Main Codes and Input Values for the Primary Studies Included in the Linear Meta-Analyses

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Alexander (2011)	abusive	organizational deviance	199	.21	.93	.74
Alexander (2011)	abusive	interpersonal deviance	199	.21	.93	.76
Alexander (2011)	abusive	leader deviance	199	.42	.93	.83
Alexander (2011)	abusive	deviance composite	199	.33	.93	.90
Aryee et al. (2007)	abusive	OCB-O	178	-.19	.89	.52
Aryee et al. (2007)	abusive	OCB-I	178	-.18	.89	.52
Aryee et al. (2007)	abusive	OCB composite	178	-.20	.89	.72
Aryee et al. (2008)	abusive	OCB-O	285	-.31	.88	.52
Aryee et al. (2008)	abusive	OCB-I	285	-.32	.88	.52
Aryee et al. (2008)	abusive	OCB composite	285	-.35	.88	.71
Ashforth (1997)	petty tyranny	performance	88	-.25	.96	.52
Avey et al. (2015)	abusive	OCB-I	603	-.08	.88	.52
Avey et al. (2015)	abusive	organizational deviance	603	.33	.88	.52
Biron (2010)	abusive	organizational deviance	275	.24	.91	.84
Bligh et al. (2007)	aversive	performance	342	-.28	.84	.52
Bligh et al. (2007)	aversive	OCB (general)	342	-.30	.84	.52
Bowling & Michel (2011)	abusive	organizational deviance	381	.66	.96	.95
Bowling & Michel (2011)	abusive	leader deviance	381	.72	.96	.96
Bowling & Michel (2011)	abusive	deviance composite	381	.71	.96	.98
Bozeman (2016)	abusive	performance composite	211	-.15	.94	.74
Bozeman (2016)	abusive	OCB-O composite	211	-.13	.94	.73
Bozeman (2016)	abusive	OCB-I composite	211	-.03	.94	.68
Bozeman (2016)	abusive	OCB composite	211	-.09	.94	.80
Bozeman (2016)	abusive	organizational dev. comp.	211	.26	.94	.62
Bozeman (2016)	abusive	interpersonal dev. comp.	211	.34	.94	.69

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Bozeman (2016)	abusive	deviance composite	211	.35	.94	.77
Burris et al. (2008)	abusive	OCB-O	499	-.21	.84	.52
Camps (2015) Study 4	abusive	OCB-O	135	-.12	.91	.42
Camps (2015) Study 4	abusive	OCB-I	135	-.14	.91	.42
Camps (2015) Study 4	abusive	OCB composite	135	-.14	.91	.64
Chang et al. (2013)	abusive	performance	304	.03	.90	.87
Chang et al. (2013)	abusive	OCB-O	304	.02	.90	.89
Chang et al. (2013)	abusive	deviance composite	304	.32	.90	.81
Chen (2011) Study 4	abusive	organizational dev. comp.	137	.57	.96	.72
Chen (2011) Study 4	abusive	interpersonal deviance	137	.48	.96	.52
Chen (2011) Study 4	abusive	deviance composite	137	.55	.96	.79
Chen (2011) Study 5	abusive	organizational dev. comp.	323	.31	.91	.73
Chen (2011) Study 5	abusive	interpersonal deviance	323	.44	.91	.52
Chen (2011) Study 5	abusive	deviance composite	323	.39	.91	.80
Chi et al. (2016) Study 1	abusive	OCB-I	202	-.08	.85	.52
Chi et al. (2016) Study 1	abusive	leader deviance	202	.35	.85	.86
Chi et al. (2016) Study 3	abusive	OCB-I	417	-.13	.87	.52
Chi et al. (2016) Study 3	abusive	leader deviance	417	.23	.87	.85
Childers et al. (2014)	abusive	interpersonal deviance	115	.22	.89	.65
Choi et al. (2009)	aversive	OCB-O	123	-.08	.74	.83
Chu (2014)	abusive	OCB (general)	212	-.28	.94	.92
Daniels (2015)	abusive	performance	211	-.27	.91	.52
Daniels (2015)	abusive	OCB (general)	211	-.15	.91	.52
Decoster et al. (2014)	abusive	performance	101	-.20	.94	.42
Decoster et al. (2014)	abusive	OCB-O	101	-.35	.94	.52
Decoster et al. (2014)	abusive	OCB-I	101	-.26	.94	.52

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Decoster et al. (2014)	abusive	OCB composite	101	-.34	.94	.71
Duffy et al. (2002)	undermining	organizational dev. comp.	343	.24	.92	.93
Duffy et al. (2006) Study 1	undermining	organizational dev	737	.22	.92	.92
Duniewicz (2015) Study 1	abusive	organizational deviance	200	.29	.94	.83
Duniewicz (2015) Study 1	abusive	leader deviance	200	.54	.94	.85
Duniewicz (2015) Study 1	abusive	deviance composite	200	.47	.94	.90
Duniewicz (2015) Study 2	abusive	organizational deviance	144	.36	.96	.89
Duniewicz (2015) Study 2	abusive	leader deviance	144	.42	.96	.88
Duniewicz (2015) Study 2	abusive	deviance composite	144	.42	.96	.93
Eissa et al. (2017)	undermining	performance	123	-.16	.95	.52
Eissa et al. (2017)	undermining	OCB-O	123	-.02	.95	.52
Ellen III et al. (in press) Study 2	narcissism	OCB (general)	199	-.20	.90	.85
Ellen III et al. (in press) Study 3	narcissism	performance	136	-.16	.86	.86
Ellen III et al. (in press) Study 3	narcissism	OCB (general)	136	-.24	.86	.86
Eschleman et al. (2014)	abusive	organizational deviance	268	.48	.93	.94
Eschleman et al. (2014)	abusive	leader deviance	268	.45	.93	.96
Eschleman et al. (2014)	abusive	deviance composite	268	.49	.93	.97
Ferris et al. (2016) Study 1	abusive	interpersonal deviance	257	.49	.96	.94
Ferris et al. (2016) Study 2	undermining	interpersonal deviance	357	.35	.98	.99
Frieder et al. (2014) Study 1	abusive	organizational deviance	73	.34	.95	.80
Frieder et al. (2014) Study 2	abusive	organizational deviance	172	.11	.96	.76
Frieder et al. (in press) Study 1	abusive	OCB-O	143	-.41	.88	.79
Frieder et al. (in press) Study 2	abusive	OCB-O	202	-.15	.91	.84
Garcia et al. (2015)	abusive	organizational deviance	156	.25	.91	1.00
Gardner et al. (2016)	destructive	performance	826	-.16	.95	1.00
Gregory et al. (2013)	abusive	OCB (general)	357	-.33	.70	.79

Appendix B (Continued)

Study	Type of DL	Correlate	*n*	*r*	α_{DL}	$\alpha_{Behavior}$
Gu et al. (2016)	abusive	OCB-O	213	-.28	.89	.84
Hamid et al. (2016)	abusive	organizational deviance	136	.22	.91	.90
Hamid et al. (2016)	abusive	interpersonal deviance	136	.25	.91	.81
Hamid et al. (2016)	abusive	deviance composite	136	.25	.91	.92
Han et al. (in press)	abusive	OCB-O	222	.05	.89	.52
Hanig (2013)	abusive	leader deviance	407	.61	.91	.87
Harris & Kacmar (2013)	abusive	performance	142	-.32	.93	.52
Harris et al. (2007)	abusive	performance composite	154	-.21	.91	.77
Harris et al. (2011) Study 1	abusive	OCB-I	121	-.29	.90	.52
Harris et al. (2011) Study 2	abusive	OCB-I	134	-.21	.92	.52
Harvey et al. (2014) Study 1	abusive	organizational deviance	396	.49	.91	.82
Harvey et al. (2014) Study 2	abusive	organizational dev. comp.	81	.38	.83	.64
Hon & Lu (2016)	abusive	performance	266	-.19	.92	.52
Hoobler & Brass (2006)	abusive	performance	210	-.17	.88	.52
Hussain & Sia (2017)	abusive	organizational dev	256	.44	.92	.90
Hussain & Sia (2017)	abusive	interpersonal deviance	256	.43	.92	.90
Hussain & Sia (2017)	abusive	deviance (general)	256	.45	.92	.90
Jian et al. (2012)	abusive	performance	324	-.22	.93	.52
Jiang et al. (2016)	abusive	OCB-O	253	-.49	.92	.52
Johnson & Griffith (2016) Study 2	abusive	performance	94	.02	.91	.52
Joo & Witt (2015)	abusive	organizational deviance	279	.59	.73	.70
Kacmar et al. (2013)	abusive	OCB (general)	111	-.33	.91	.52
Kacmar et al. (2013)	abusive	OCB-I composite	111	-.26	.91	.70
Kacmar et al. (2016)	abusive	performance	121	-.33	.96	.52
Kacmar et al. (2016)	abusive	OCB-I	121	-.31	.96	.52
Kane & Perrewé (2012)	abusive	organizational deviance	107	.16	.90	.71

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Kane & Perrewé (2012)	abusive	interpersonal deviance	107	.23	.90	.58
Kane & Perrewé (2012)	abusive	leader deviance	107	.54	.90	.64
Kane & Perrewé (2012)	abusive	deviance composite	107	.40	.90	.80
Kane-Frieder et al. (2013)	abusive	organizational deviance	130	.23	.93	.63
Kedharnath (2014) Study 1	abusive	performance	264	-.32	.94	.88
Kedharnath (2014) Study 2	abusive	performance	303	-.35	.96	.91
Khan et al. (2017)	abusive	performance	173	-.36	.78	.52
Khan et al. (in press)	abusive	performance	160	-.36	.75	.52
Kim & Yun (2015)	abusive	performance	149	-.27	.97	.52
Lam et al. (in press) Study 1	abusive	performance	219	-.23	.91	.52
Lam et al. (in press) Study 2	abusive	performance	416	-.04	.95	.52
Lee & Wang (2015)	abusive	performance	77	-.14	.97	.52
Lee & Wang (2015)	abusive	OCB (general)	77	-.15	.97	.52
Lee & Wang (2015)	abusive	organizational deviance	77	.05	.97	.52
Lee et al. (2013)	abusive	OCB-O	203	-.11	.98	.52
Li et al. (2015) Study 2	abusive	performance	357	-.27	.98	.52
Lian et al. (2012) Study 1	abusive	interpersonal deviance	264	.36	.95	.88
Lian et al. (2012) Study 2	abusive	interpersonal deviance	171	.48	.96	.42
Lian et al. (2012) Study 3	abusive	interpersonal deviance	198	.59	.97	.94
Lian et al. (2014) Study 1	abusive	organizational deviance	151	.44	.96	.93
Lian et al. (2014) Study 2	abusive	organizational deviance	125	.64	.98	.94
Liang, Lian, et al. (2016)	abusive	performance	206	-.27	.97	.52
Liang, Valdron, et al. (2016) Study 1	abusive	OCB-O	193	.03	.95	.92
Liang, Valdron, et al. (2016) Study 1	abusive	organizational deviance	193	.31	.95	.89
Liang, Valdron, et al. (2016) Study 2	abusive	OCB-O	204	-.27	.95	.90
Liang, Valdron, et al. (2016) Study 2	abusive	organizational deviance	204	.45	.95	.89

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Lim & Teo (2009)	incivility	organizational deviance	192	.38	.95	.97
Liu & Wang (2013)	abusive	OCB-O	280	.05	.92	.52
Liu & Wang (2013)	abusive	OCB-I	280	-.19	.92	.52
Liu & Wang (2013)	abusive	OCB composite	280	-.09	.92	.64
Liu et al. (2010) Study 1	abusive	leader deviance	283	.24	.95	.52
Liu et al. (2010) Study 2	abusive	leader deviance composite	222	.26	.95	.82
Liu et al. (2012)	abusive	performance	762	.03	.93	1.00
Liu et al. (2012)	abusive	OCB-O	762	-.12	.93	.52
Liu et al. (2016)	abusive	OCB-O	423	-.19	.89	.52
Lyu et al. (2016)	abusive	performance	198	-.25	.94	.52
Lyu et al. (2016)	abusive	OCB-I	198	-.26	.94	.42
Mackey, Frieder, et al. (2015) Study 1	abusive	interpersonal deviance	96	.31	.90	.85
Mackey, Frieder, et al. (2015) Study 1	abusive	leader deviance	96	.60	.90	.89
Mackey, Frieder, et al. (2015) Study 1	abusive	deviance composite	96	.51	.90	.92
Mackey, Frieder, et al. (2015) Study 2	abusive	interpersonal deviance	130	.15	.93	.74
Mackey, Frieder, et al. (2015) Study 2	abusive	leader deviance	130	.35	.93	.89
Mackey, Frieder, et al. (2015) Study 2	abusive	deviance composite	130	.29	.93	.87
Mackey, McAllister, et al. (2015) Study 1	abusive	OCB-O	109	-.23	.97	.93
Mackey, McAllister, et al. (2015) Study 2	abusive	OCB-O	228	-.10	.84	.52
Mackey, McAllister, et al. (2015) Study 3	abusive	OCB-O	213	-.33	.96	.94
Mathe & Slevitch (2013)	undermining	performance	91	-.26	.90	.42
Mawritz et al. (2012)	abusive	interpersonal deviance	288	.31	.98	.52
Mawritz et al. (2014)	abusive	organizational deviance	221	.53	.94	.52
Mawritz et al. (in press) Study 1	abusive	performance	165	-.45	.95	.52
Mawritz et al. (in press) Study 1	abusive	leader deviance	165	.26	.95	.52
Mawritz et al. (in press) Study 2	abusive	performance	121	-.39	.99	.52

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Mawritz et al. (in press) Study 2	abusive	leader deviance composite	121	.55	.99	.83
McAllister & Mackey (2014)	abusive	leader deviance	157	.59	.94	.89
Meng et al. (in press)	abusive	OCB (general)	857	-.21	.98	.94
Michel et al. (in press) Study 1	abusive	organizational deviance	355	.68	.96	.96
Michel et al. (in press) Study 1	abusive	leader deviance	355	.73	.96	.96
Michel et al. (in press) Study 1	abusive	deviance composite	355	.73	.96	.98
Michel et al. (in press) Study 2	abusive	organizational deviance	256	.22	.96	.87
Michel et al. (in press) Study 2	abusive	leader deviance	256	.48	.96	.90
Michel et al. (in press) Study 2	abusive	deviance composite	256	.40	.96	.92
Mitchell & Ambrose (2007)	abusive	organizational deviance	427	.17	.89	.79
Mitchell & Ambrose (2007)	abusive	interpersonal deviance	427	.21	.89	.82
Mitchell & Ambrose (2007)	abusive	leader deviance	427	.40	.89	.82
Mitchell & Ambrose (2007)	abusive	deviance composite	427	.31	.89	.91
Mitchell & Ambrose (2012) Study 2	abusive	interpersonal deviance	278	.40	.90	.85
Mitchell & Ambrose (2012) Study 2	abusive	leader deviance	278	.61	.90	.84
Mitchell & Ambrose (2012) Study 2	abusive	deviance composite	278	.54	.90	.91
Mitchell & Ambrose (2012) Study 3	abusive	interpersonal deviance	243	.24	.89	.81
Mitchell & Ambrose (2012) Study 3	abusive	leader deviance	243	.32	.89	.86
Mitchell & Ambrose (2012) Study 3	abusive	deviance composite	243	.31	.89	.90
Nandkeolyar et al. (2014) Study 1	abusive	performance	363	-.09	.89	1.00
Nandkeolyar et al. (2014) Study 2	abusive	performance	105	.00	.93	.52
Nandkeolyar et al. (2016) Study 1	abusive	organizational deviance	286	.17	.94	.52
Naseer et al. (2016)	despotic	performance	480	-.32	.92	.42
Naseer et al. (2016)	despotic	OCB-O	480	-.29	.92	.42
Naseer et al. (2016)	despotic	OCB-I	480	-.34	.92	.42
Naseer et al. (2016)	despotic	OCB composite	480	-.33	.92	.42

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Neves (2014)	abusive	performance	193	-.27	.90	.52
Neves (2014)	abusive	OCB-O	193	-.25	.90	.52
Ogunfowora (2009)	abusive	OCB (general)	297	-.17	.86	.86
Ogunfowora (2009)	abusive	OCB-O	297	-.14	.86	.80
Ogunfowora (2009)	abusive	OCB-I	297	-.14	.86	.82
Ogunfowora (2009)	abusive	organizational deviance	297	.09	.86	.77
Ogunfowora (2009)	abusive	interpersonal deviance	297	.15	.86	.84
Ogunfowora (2013)	abusive	deviance (general)	297	.09	.86	.77
Onyishi (2012)	abusive	OCB (general)	335	-.20	.89	.92
Onyishi et al. (2017)	abusive	deviance composite	215	.51	.88	.86
Ouyag et al. (2015)	abusive	OCB composite	350	-.16	.97	.79
Peng (2013)	abusive	organizational deviance	241	.11	.90	.42
Peng (2013)	abusive	interpersonal deviance	241	.01	.90	.42
Peng (2013)	abusive	leader deviance	241	.19	.90	.42
Peng (2013)	abusive	deviance composite	241	.12	.90	.73
Peng et al. (2014)	abusive	performance	358	-.22	.92	.42
Peng et al. (2014)	abusive	OCB-I	358	-.12	.92	.42
Powell (2013) Study 2A	abusive	organizational deviance	274	.21	.92	.86
Powell (2013) Study 2A	abusive	interpersonal deviance	274	.22	.92	.87
Powell (2013) Study 2A	abusive	deviance composite	274	.24	.92	.91
Powell (2013) Study 2B	abusive	organizational deviance	200	.56	.97	.95
Powell (2013) Study 2B	abusive	interpersonal deviance	200	.59	.97	.94
Powell (2013) Study 2B	abusive	deviance composite	200	.59	.97	.97
Powell (2013) Study 2C	abusive	organizational deviance	268	.38	.95	.92
Powell (2013) Study 2C	abusive	interpersonal deviance	268	.36	.95	.89
Powell (2013) Study 2C	abusive	deviance composite	268	.39	.95	.95

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Pyc (2011)	abusive	performance composite	232	.00	.95	.73
Rafferty & Restubog (2011)	abusive	OCB-O composite	175	-.28	.98	.76
Restubog et al. (2011) Study 1	abusive	leader deviance	184	.58	.97	.88
Restubog et al. (2011) Study 2	abusive	leader deviance	188	.53	.95	.67
Rice et al. (2016)	abusive	OCB (general)	123	-.09	.94	.52
Schaubroeck et al. (in press)	abusive	performance	560	-.02	.91	.52
Scott (2007)	bullying	OCB-O	252	-.29	.96	.75
Scott (2007)	bullying	OCB-I	252	-.29	.96	.83
Scott (2007)	bullying	OCB composite	252	-.30	.96	.88
Shao et al. (2011)	abusive	OCB-I	490	-.13	.95	.89
Shao et al. (2011)	abusive	interpersonal deviance	490	.28	.95	.85
Shao et al. (2016) Study 1	abusive	performance	213	-.06	.89	1.00
Shao et al. (2016) Study 2	abusive	performance	158	-.22	.94	.52
Shoss et al. (2013) Study 2	abusive	performance	254	-.20	.91	.52
Shoss et al. (2013) Study 2	abusive	OCB-O	254	-.16	.91	.52
Shoss et al. (2013) Study 3	abusive	performance composite	187	-.16	.87	.85
Shoss et al. (2013) Study 3	abusive	OCB-O	187	-.17	.87	.42
Shum et al. (2014)	abusive	performance	573	-.37	.95	.52
Skyvington (2014) Study 1	abusive	OCB (general)	193	.03	.96	.52
Skyvington (2014) Study 1	abusive	organizational deviance	193	.32	.96	.89
Skyvington (2014) Study 2	abusive	OCB-I	96	-.04	.96	.86
Steinert (2015)	abusive	OCB (general)	219	.20	.96	.94
Steinert (2015)	abusive	deviance composite	219	.57	.96	.97
Taylor (2004)	abusive	organizational deviance	175	.30	.95	.87
Taylor & Kluemper (2011)	abusive	organizational deviance	163	.25	.94	.52
Taylor & Kluemper (2011)	abusive	interpersonal deviance	163	.27	.94	.52

Appendix B (Continued)

Study	Type of DL	Correlate	*n*	*r*	α_DL	α_Behavior
Taylor & Kluemper (2011)	abusive	deviance composite	163	.29	.94	.71
Tepper et al. (2008) Study 1	abusive	organizational deviance	243	.28	.94	.69
Tepper et al. (2008) Study 2	abusive	organizational deviance	247	.18	.93	.75
Tepper et al. (2011)	abusive	performance	183	-.39	.96	.52
Thau et al. (2009) Study 1	abusive	organizational deviance	373	.32	.94	.68
Thau et al. (2009) Study 1	abusive	interpersonal deviance	373	.33	.94	.76
Thau et al. (2009) Study 1	abusive	deviance composite	373	.38	.94	.81
Thau et al. (2009) Study 2	abusive	organizational deviance	1,477	.47	.95	.93
Thau et al. (2009) Study 2	abusive	leader deviance	1,477	.59	.95	.93
Thau et al. (2009) Study 2	abusive	deviance composite	1,477	.56	.95	.96
Thau & Mitchell (2010) Study 1	abusive	organizational deviance	216	.07	.91	.79
Thau & Mitchell (2010) Study 1	abusive	leader deviance	216	.57	.91	.80
Thau & Mitchell (2010) Study 1	abusive	deviance composite	216	.39	.91	.85
Thau & Mitchell (2010) Study 2	abusive	organizational deviance	371	.41	.95	.89
Thau & Mitchell (2010) Study 2	abusive	leader deviance	375	.54	.95	.93
Thau & Mitchell (2010) Study 2	abusive	deviance composite	371	.51	.95	.95
Thoroughgood et al. (2012)	abusive	organizational deviance	670	.34	.94	.86
Thoroughgood et al. (2012)	abusive	interpersonal deviance	670	.29	.94	.81
Thoroughgood et al. (2012)	abusive	deviance composite	670	.36	.94	.90
Velez & Neves (2016)	abusive	organizational deviance	170	.25	.87	.52
Vogel et al. (2016)	abusive	deviance composite	150	.22	.93	.91
Vogel & Mitchell (in press) Study 1	abusive	organizational deviance	172	.29	.93	.85
Vogel & Mitchell (in press) Study 2	abusive	organizational deviance	221	.17	.95	.87
Vogel & Mitchell (in press) Study 2	abusive	leader deviance	221	.37	.95	.87
Vogel & Mitchell (in press) Study 2	abusive	deviance composite	221	.30	.95	.92
Vogel & Mitchell (in press) Study 3	abusive	organizational deviance	844	.47	.94	.89

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Vogel & Mitchell (in press) Study 3	abusive	leader deviance	844	.64	.94	.91
Vogel & Mitchell (in press) Study 3	abusive	deviance composite	844	.58	.94	.95
Walter et al. (in press) Study 2	abusive	performance composite	169	-.18	.81	.82
Wan & Qinxuan (in press)	abusive	OCB-O	319	-.28	.75	.52
Wang & Hu (2015)	abusive	performance composite	183	-.15	.92	.93
Wang & Jiang (2014)	abusive	leader deviance	403	.35	.87	.83
Wang & Jiang (2015) Study 1	abusive	OCB-O	196	-.21	.92	.87
Wang & Jiang (2015) Study 2	abusive	OCB-O composite	379	-.18	.86	.89
Wang et al. (2012)	abusive	organizational deviance	283	.23	.95	.84
Wang et al. (2012)	abusive	interpersonal deviance	283	.22	.95	.79
Wang et al. (2012)	abusive	leader deviance	283	.24	.95	.52
Wang et al. (2012)	abusive	deviance composite	283	.28	.95	.86
Wang et al. (in press)	abusive	performance	376	-.27	.95	.89
Wang et al. (in press)	abusive	interpersonal deviance	376	.38	.95	.84
Wei & Si (2013)	abusive	organizational deviance	198	.23	.93	.52
Wu & Song (2014)	abusive	performance	255	-.20	.97	.52
Xia et al. (in press)	abusive	OCB-I	262	-.41	.92	.93
Xu et al. (2012) Study 1	abusive	performance	366	-.11	.85	.52
Xu et al. (2012) Study 1	abusive	OCB-O	366	-.17	.85	.52
Xu et al. (2012) Study 1	abusive	OCB-I	366	-.13	.85	.52
Xu et al. (2012) Study 1	abusive	OCB composite	366	-.16	.85	.74
Xu et al. (2012) Study 2	abusive	performance	54	-.06	.85	1.00
Xu et al. (in press) Study 1	abusive	OCB-O	165	-.16	.84	.52
Xu et al. (in press) Study 2	abusive	OCB-O	226	-.12	.87	.52
Yoo (2013)	undermining	performance	469	-.23	.94	.87
Yoo & Frankwick (2013)	undermining	organizational deviance	469	.41	.94	.72

Appendix B (Continued)

Study	Type of DL	Correlate	n	r	α_{DL}	$\alpha_{Behavior}$
Yoo & Frankwick (2013)	undermining	interpersonal deviance	469	.36	.94	.75
Yoo & Frankwick (2013)	undermining	deviance composite	469	.49	.94	.79
Yu & Campbell (2015) Study 1	abusive	performance	422	-.19	.92	.52
Yu et al. (in press)	abusive	performance	480	-.01	.91	.52
Zellars et al. (2002)	abusive	OCB (general)	278	-.14	.93	.52
Zhang et al. (2014)	abusive	OCB-O	235	-.19	.94	.52
Zhou (2016)	abusive	performance composite	82	-.39	.96	.90
Zhou (2016)	abusive	OCB composite	82	-.42	.96	.91

Note. n = sample size. *r* = zero-order correlation. α_{DL} = Cronbach's alpha estimate of internal consistency for the measure of destructive leadership. $\alpha_{Behavior}$ = Cronbach's alpha estimate of internal consistency for the measure of behavior (i.e., job performance, OCBs, or workplace deviance). DL = destructive leadership. OCB = organizational citizenship behaviors. OCB-O = organizational citizenship behaviors directed toward organizations. OCB-I = organizational citizenship behaviors directed toward individuals. deviance = deviance. comp. = composite.

Appendix C

Main Codes and Input Values for the Primary Studies Included in the Curvilinear Meta-Analyses

Study	Type of DL	Correlate	n	r_{DL} & DL^2	r_{DL} & B	r_{DL}^2 & B
Bligh et al. (2007)	aversive	performance	342	.655	-.281	-.242
Bligh et al. (2007)	aversive	OCB (general)	342	.655	-.299	-.215
Bowling & Michel (2011)	abusive	organizational deviance	381	.788	.668	.617
Bowling & Michel (2011)	abusive	leader deviance	381	.788	.726	.661
Bowling & Michel (2011)	abusive	deviance composite	381	.788	.718	.654
Burris et al. (2008)	abusive	OCB-O	499	.766	-.208	-.116
Chi et al. (2016) Study 3	abusive	OCB-I	417	.343	-.130	-.147
Childers et al. (2014)	abusive	interpersonal deviance	115	.735	.218	.068
Daniels (2015)	abusive	performance	211	.762	-.269	-.217
Daniels (2015)	abusive	OCB (general)	211	.762	-.153	-.152
Decoster et al. (2014)	abusive	performance	101	.854	-.257	-.170
Decoster et al. (2014)	abusive	OCB-O	101	.854	-.351	-.325
Decoster et al. (2014)	abusive	OCB-I	101	.854	-.299	-.255
Decoster et al. (2014)	abusive	OCB composite	101	.854	-.363	-.327
Eissa et al. (2017)	undermining	performance	123	.836	-.158	-.068
Eissa et al. (2017)	undermining	OCB-O	123	.836	-.020	.020
Ferris et al. (2016) Study 1	abusive	interpersonal deviance	257	.705	.485	.447
Frieder et al. (2014) Study 1	abusive	organizational deviance	73	.809	.340	.085
Frieder et al. (2014) Study 2	abusive	organizational deviance	172	.794	.107	-.017
Gardner et al. (2016)	destructive	performance	826	.720	-.124	-.026
Gu et al. (2016)	abusive	OCB-O	213	.657	-.279	-.171
Han et al. (in press)	abusive	OCB-O	222	-.587	.052	.107
Harris et al. (2007)	abusive	performance composite	154	.869	-.183	-.174
Harris et al. (2011) Study 1	abusive	OCB-I	121	.874	-.298	-.256
Harris et al. (2011) Study 2	abusive	OCB-I	134	.779	-.213	-.197

Appendix C (Continued)

Study	Type of DL	Correlate	n	r_{DL} & DL^2	r_{DL} & B	r_{DL}^2 & B
Harvey et al. (2014) Study 1	abusive	organizational deviance	396	.800	.472	.330
Harvey et al. (2014) Study 2	abusive	organizational dev. comp.	81	.697	.366	.145
Hon & Lu (2016)	abusive	performance	266	-.147	.230	-.048
Hoobler & Brass (2006)	abusive	performance	210	.840	-.171	-.159
Jiang et al. (2016)	abusive	OCB-O	253	.466	-.486	-.076
Johnson & Griffith (2016) Study 2	abusive	performance	94	.854	.054	-.004
Joo & Witt (2015)	abusive	organizational deviance	279	.439	.585	.293
Kacmar et al. (2013)	abusive	OCB-I composite	111	.819	-.269	-.279
Kacmar et al. (2016)	abusive	performance	121	.746	-.329	-.325
Kacmar et al. (2016)	abusive	OCB-I	121	.746	-.315	-.308
Kane & Perrewé (2012)	abusive	organizational deviance	107	.853	.161	.054
Kane & Perrewé (2012)	abusive	interpersonal deviance	107	.853	.229	.093
Kane & Perrewé (2012)	abusive	leader deviance	107	.853	.523	.403
Kane & Perrewé (2012)	abusive	deviance composite	107	.853	.375	.217
Kane-Frieder et al. (2013)	abusive	organizational deviance	130	.809	.253	.137
Khan et al. (in press)	abusive	performance	160	.278	-.365	-.161
Lam et al. (in press) Study 1	abusive	performance	219	.629	-.197	-.133
Lam et al. (in press) Study 2	abusive	performance	416	.672	.011	-.021
Lee & Wang (2015)	abusive	performance	77	.654	-.135	.016
Lee & Wang (2015)	abusive	OCB (general)	77	.654	-.146	-.142
Lee & Wang (2015)	abusive	organizational deviance	77	.654	.053	.047
Lee et al. (2013)	abusive	OCB-O	203	.670	-.112	-.204
Liang, Lian, et al. (2016)	abusive	performance	206	.809	-.270	-.341
Liu et al. (2016)	abusive	OCB-O	423	.234	-.279	.002
Lyu et al. (2016)	abusive	performance	198	.417	-.254	-.004
Lyu et al. (2016)	abusive	OCB-I	198	.417	-.261	-.018

Appendix C (Continued)

Study	Type of DL	Correlate	n	r_{DL} & DL^2	r_{DL} & B	r_{DL}^2 & B
Mackey, Frieder, et al. (2015) Study 1	abusive	interpersonal deviance	96	.847	.307	.183
Mackey, Frieder, et al. (2015) Study 1	abusive	leader deviance	96	.847	.597	.524
Mackey, Frieder, et al. (2015) Study 1	abusive	deviance composite	96	.847	.486	.323
Mackey, Frieder, et al. (2015) Study 2	abusive	interpersonal deviance	130	.809	.145	.054
Mackey, Frieder, et al. (2015) Study 2	abusive	leader deviance	130	.809	.345	.210
Mackey, Frieder, et al. (2015) Study 2	abusive	deviance composite	130	.809	.305	.169
Mackey, McAllister, et al. (2015) Study 1	abusive	OCB-O	109	.915	-.233	-.163
Mackey, McAllister, et al. (2015) Study 2	abusive	OCB-O	228	.287	-.104	.138
Mackey, McAllister, et al. (2015) Study 3	abusive	OCB-O	213	.857	-.329	-.299
Mawritz et al. (2014)	abusive	organizational deviance	221	.852	.527	.504
McAllister & Mackey (2014)	abusive	leader deviance	157	.830	.589	.410
Meng et al. (in press)	abusive	OCB (general)	857	.861	-.083	.046
Michel et al. (in press) Study 1	abusive	organizational deviance	355	.791	.676	.641
Michel et al. (in press) Study 1	abusive	leader deviance	355	.791	.734	.681
Michel et al. (in press) Study 1	abusive	deviance composite	355	.791	.727	.681
Michel et al. (in press) Study 2	abusive	organizational deviance	256	.834	.224	.052
Michel et al. (in press) Study 2	abusive	leader deviance	256	.834	.476	.337
Michel et al. (in press) Study 2	abusive	deviance composite	256	.834	.392	.213
Nandkeolyar et al. (2014) Study 1	abusive	performance	363	.804	-.094	-.107
Nandkeolyar et al. (2014) Study 2	abusive	performance	105	.708	-.004	.103
Nandkeolyar et al. (2016) Study 1	abusive	organizational deviance	286	.764	.166	.192
Naseer et al. (2016)	despotic	performance	480	-.106	-.318	.077
Naseer et al. (2016)	despotic	OCB-O	480	-.106	-.285	.062
Naseer et al. (2016)	despotic	OCB-I	480	-.106	-.335	.062
Naseer et al. (2016)	despotic	OCB composite	480	-.106	-.328	.067
Neves (2014)	abusive	performance	193	.799	-.273	-.198

Appendix C (Continued)

Study	Type of DL	Correlate	n	$r_{DL \& DL^2}$	$r_{DL \& B}$	$r_{DL^2 \& B}$
Neves (2014)	abusive	OCB-O	193	.799	-.251	-.161
Peng (2013)	abusive	organizational deviance	241	.883	.111	.073
Peng (2013)	abusive	interpersonal deviance	241	.883	.024	.029
Peng (2013)	abusive	leader deviance	241	.883	.205	.230
Peng (2013)	abusive	deviance composite	241	.883	.122	.114
Peng et al. (2014)	abusive	performance	358	.840	-.220	-.098
Peng et al. (2014)	abusive	OCB-I	358	.840	-.117	.024
Rafferty & Restubog (2011)	abusive	OCB-O composite	175	.794	-.279	-.328
Schaubroeck et al. (in press)	abusive	performance	560	.682	-.041	.004
Shao et al. (2011)	abusive	OCB-I	490	.742	-.131	-.049
Shao et al. (2011)	abusive	interpersonal deviance	490	.742	.277	.157
Shoss et al. (2013) Study 2	abusive	performance	254	.568	-.199	-.096
Shoss et al. (2013) Study 2	abusive	OCB-O	254	.568	-.164	-.098
Shoss et al. (2013) Study 3	abusive	performance composite	187	.454	-.167	-.063
Shoss et al. (2013) Study 3	abusive	OCB-O	187	.454	-.168	-.021
Shum et al. (2014)	abusive	performance	573	.310	-.360	-.144
Thau et al. (2009) Study 1	abusive	organizational deviance	373	.718	.283	.112
Thau et al. (2009) Study 1	abusive	interpersonal deviance	373	.718	.295	.149
Thau et al. (2009) Study 1	abusive	deviance composite	373	.718	.335	.151
Thau et al. (2009) Study 2	abusive	organizational deviance	1477	.778	.470	.392
Thau et al. (2009) Study 2	abusive	leader deviance	1477	.778	.591	.483
Thau et al. (2009) Study 2	abusive	deviance composite	1477	.778	.563	.464
Thau & Mitchell (2010) Study 1	abusive	organizational deviance	216	.868	.086	.025
Thau & Mitchell (2010) Study 1	abusive	leader deviance	216	.868	.574	.413
Thau & Mitchell (2010) Study 1	abusive	deviance composite	216	.868	.401	.267
Thau & Mitchell (2010) Study 2	abusive	organizational deviance	371	.823	.370	.367

Appendix C (Continued)

Study	Type of DL	Correlate	n	r_{DL} & DL^2	r_{DL} & B	r_{DL}^2 & B
Thau & Mitchell (2010) Study 2	abusive	leader deviance	375	.823	.535	.474
Thau & Mitchell (2010) Study 2	abusive	deviance composite	371	.823	.492	.457
Velez & Neves (2016)	abusive	organizational deviance	170	.671	.254	.052
Vogel et al. (2016)	abusive	deviance composite	150	.794	.215	.080
Vogel & Mitchell (in press) Study 1	abusive	organizational deviance	172	.799	.284	.216
Vogel & Mitchell (in press) Study 2	abusive	organizational deviance	221	.860	.171	.152
Vogel & Mitchell (in press) Study 2	abusive	leader deviance	221	.860	.375	.283
Vogel & Mitchell (in press) Study 2	abusive	deviance composite	221	.860	.310	.244
Vogel & Mitchell (in press) Study 3	abusive	organizational deviance	844	.762	.353	.239
Vogel & Mitchell (in press) Study 3	abusive	leader deviance	844	.762	.477	.279
Vogel & Mitchell (in press) Study 3	abusive	deviance composite	844	.762	.444	.275
Walter et al. (in press) Study 2	abusive	performance composite	169	.562	-.209	-.052
Wang & Jiang (2014)	abusive	leader deviance	403	.529	.355	.234
Wang & Jiang (2015) Study 1	abusive	OCB-O	196	.108	-.151	.196
Wang & Jiang (2015) Study 2	abusive	OCB-O composite	379	.481	-.127	.003
Wang et al. (in press)	abusive	performance	376	.861	-.274	-.227
Wang et al. (in press)	abusive	interpersonal deviance	376	.861	.376	.253
Xia et al. (in press)	abusive	OCB-I	262	.099	-.410	.014
Xu et al. (2012) Study 2	abusive	performance	54	.582	-.288	-.084
Yoo (2013)	undermining	performance	469	.530	-.431	-.037
Yoo & Frankwick (2013)	undermining	organizational deviance	469	.573	.427	.043
Yoo & Frankwick (2013)	undermining	interpersonal deviance	469	.573	.363	.101
Yoo & Frankwick (2013)	undermining	deviance composite	469	.573	.495	.091
Yu et al. (in press)	abusive	performance	480	.756	.006	-.006
Zhou (2016)	abusive	performance composite	82	.382	-.393	-.013
Zhou (2016)	abusive	OCB composite	82	.382	-.412	-.042

Appendix C (Continued)

Note. *n* = sample size. *r* = zero-order correlation. DL = destructive leadership. B = behavior. OCB = organizational citizenship behaviors. OCB-O = organizational citizenship behaviors directed toward organizations. OCB-I = organizational citizenship behaviors directed toward individuals. deviance = deviance. comp. = composite.

Appendix D

Meta-Analytic Estimates Used as Inputs for the Curvilinear Analyses

Analysis	k	N	$\rho_{DL\,\&\,DL^2}$	$SD_{\rho\,DL\,\&\,DL^2}$	$\rho_{DL\,\&\,B}$	$SD_{\rho\,DL\,\&\,B}$	$\rho_{DL^2\,\&\,B}$	$SD_{\rho\,DL^2\,\&\,B}$
Overall Job Performance	31	8,427	.68	.31	-.24	.18	-.11	.11
Published Studies	27	7,472	.70	.31	-.22	.17	-.11	.11
Other-Rated Performance	28	6,756	.65	.34	-.24	.19	-.13	.12
Abusive Supervision Studies	26	6,187	.72	.27	-.22	.18	-.15	.10
Overall OCBs	32	8,232	.63	.37	-.26	.14	-.09	.15
Published Studies	25	6,724	.62	.40	-.25	.13	-.07	.15
Other-Rated OCBs	23	5,338	.56	.42	-.32	.14	-.13	.15
Abusive Supervision Studies	29	7,287	.66	.34	-.24	.13	-.09	.15
Overall Workplace Deviance	32	9,542	.84	.08	.49	.15	.36	.17
Published Studies	22	7,905	.84	.08	.51	.12	.38	.17
Self-Rated Deviance	26	8,466	.84	.08	.50	.13	.36	.17
Frequency Scale Studies	21	6,411	.83	.09	.50	.16	.37	.20
Abusive Supervision Studies	31	9.073	.85	.07	.48	.15	.37	.17
Organization-Directed Deviance	23	7,368	.85	.08	.45	.16	.33	.19

Note. k = number of studies included in the analysis. N = total sample size of all studies included in the analysis. ρ = the population estimate that corrects the zero-order bivariate correlation for measurement and sampling error across studies. SD_ρ = standard deviation of the population correlation estimate across studies. DL = destructive leadership. OCB = organizational citizenship behavior. B = Behavior.

Appendix E

Equations Used to Transform Uncentered Correlations that Included a Curvilinear Term into Mean-Centered Correlations
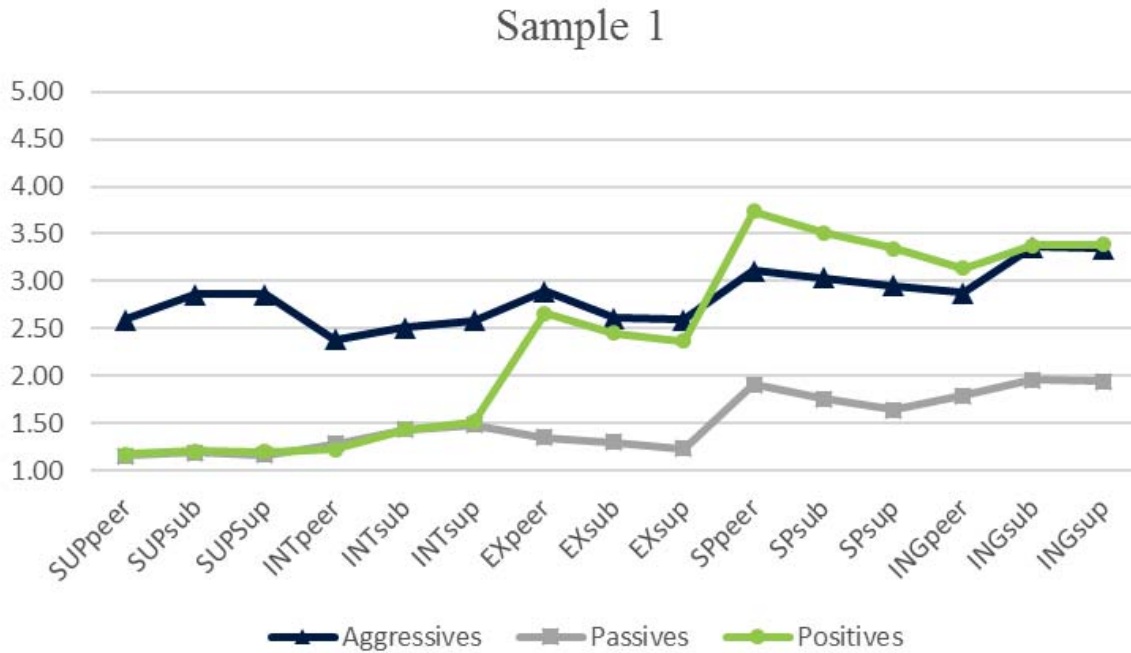
$$\text{Mean-Centered } r_{DL, DL^2} = \frac{r_{DL, DL^2} \times s_{DL} \times s_{DL^2} - (2 \times x_{DL} \times s_{DL}^2)}{\sqrt{s_{DL}^2 \times (s_{DL^2}^2 + [4 \times x_{DL}^2 \times s_{DL}^2] - [4 \times x_{DL} \times r_{DL, DL^2} \times s_{DL} \times s_{DL^2}])}}$$

$$\text{Mean-Centered } r_{DL^2, B} = \frac{r_{DL^2, B} \times s_{DL^2} - (2 \times x_{DL} \times s_{DL} \times r_{DL, B})}{\sqrt{s_{DL^2}^2 + (4 \times x_{DL}^2 \times s_{DL}^2) - (4 \times x_{DL} \times r_{DL, DL^2} \times s_{DL} \times s_{DL^2})}}$$

Note. r = uncentered zero-order correlation. s = standard deviation. s^2 = variance. x = mean. DL = destructive leadership. B = behavior

Figure 1

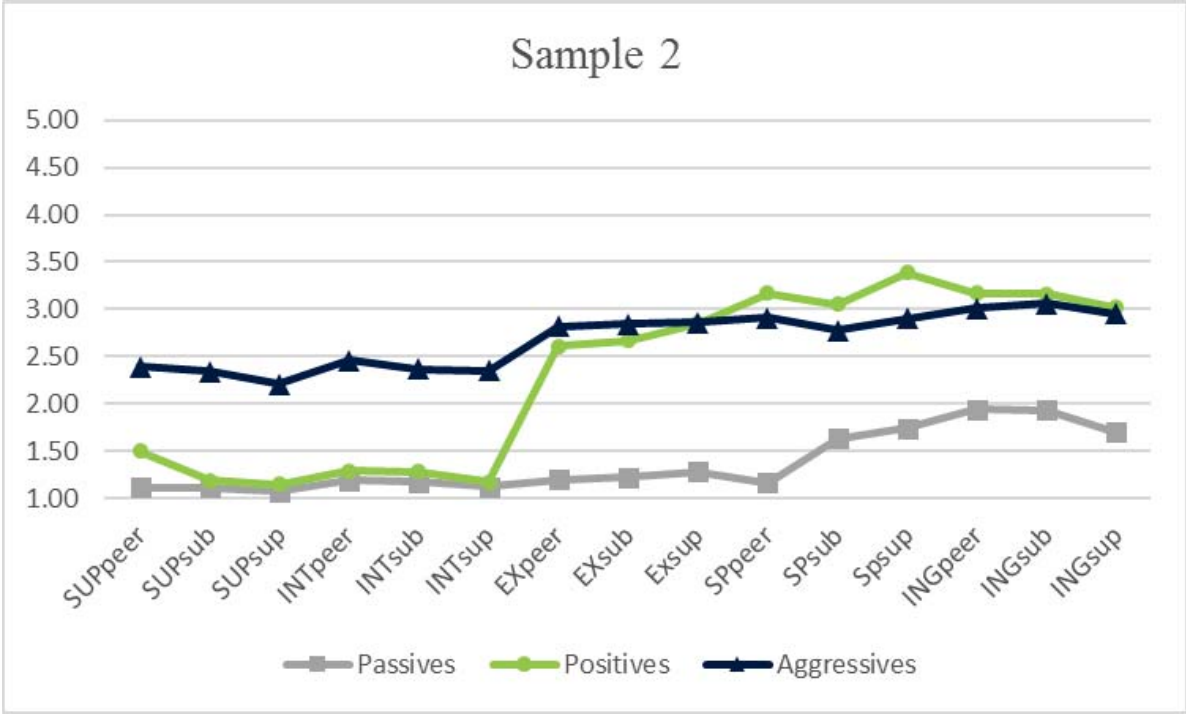Profiles of Impression Management for Sample 1

SUP = supplication, INT = intimidation, EX = exemplification, SP = self-presentation, ING = ingratiation. For subscripts, peer = peers/colleagues, sub = subordinates/support staff, sup = supervisor.
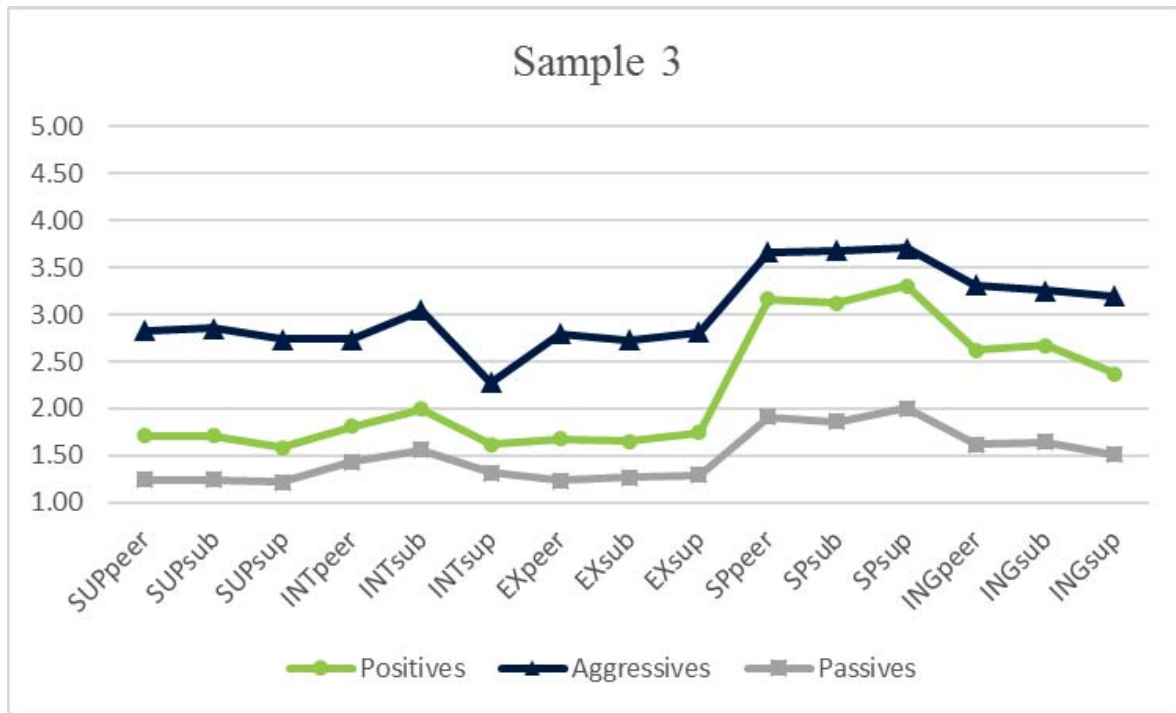
Figure 2

Profiles of Impression Management for Sample 2

SUP = supplication, INT = intimidation, EX = exemplification, SP = self-presentation, ING = ingratiation. For subscripts, peer = peers/colleagues, sub = subordinates/support staff, sup = supervisor.
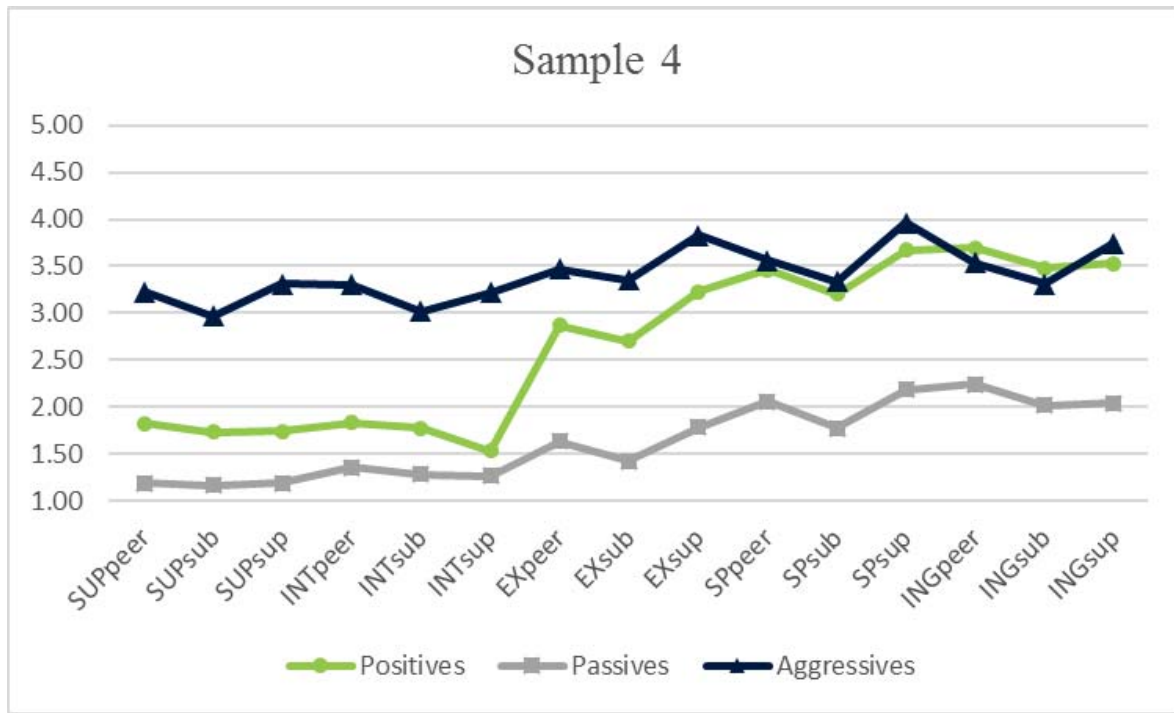
Figure 3

Profiles of Impression Management for Sample 3

SUP = supplication, INT = intimidation, EX = exemplification, SP = self-presentation, ING = ingratiation. For subscripts, peer = peers/colleagues, sub = subordinates/support staff, sup = supervisor.

Figure 4

Profiles of Impression Management for Sample 4

SUP = supplication, INT = intimidation, EX = exemplification, SP = self-presentation, ING = ingratiation. For subscripts, peer = peers/colleagues, sub = subordinates/support staff, sup = supervisor.