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REVIEW PAPER

Are Bad Leaders Indeed Bad for Employees? A Meta-Analysis of Longitudinal Studies Between Destructive Leadership and Employee Outcomes

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Abstract
Does having bad leaders have long-lasting adverse effects on employees? While previous studies have primarily viewed subordinate deviant behavior as a crucial consequence of destructive leadership, aggression theory suggests that subordinate deviant behavior could also be an antecedent of destructive leadership. To address this question, we conducted a meta-analysis by focusing on longitudinal field studies (i.e., time-lagged and panel designs), and investigated the longitudinal associations as well as the reciprocal relationships between destructive leadership and employee outcomes. Results from 82 articles with 104 independent prospective and longitudinal studies ($N = 30{,}314$) showed that destructive leadership has a lagged detrimental impact on employee behavioral (e.g., OCB, workplace deviance, CWB, and avoidance) and attitudinal outcomes (e.g., job satisfaction and work commitment). There are no significant differences between destructive leadership and employee outcomes for the long-term and short-term effects. Surprisingly, after accounting for auto-regression effects, the cross-lagged analysis showed that destructive leadership did not significantly relate to employees' negative behavior over time, whereas negative employee behavior did relate to destructive leadership across time. Theoretical and practical implications are discussed.

Keywords Destructive leadership · Abusive supervision · Meta-analysis · Longitudinal studies

"*More than a decade has passed, but Mary Mawritz can still hear metal-tipped tassels flapping against leather loafers—the signature sound of her boss roaming the halls of his real estate company. 'Whenever I heard that jingling, I would get sick to my stomach because I knew he was approaching,' she says. Her boss had another characteristic sound: Yelling, and a lot of it. He would berate her in front of the whole office and threaten to fire her immediately if she didn't keep up with his never-ending barrage of deadlines and demands.*"

— Chris Woolston

The excerpt above vividly illustrates the impact of "bad" leaders on subordinates, showing that these effects are deleterious, unwarranted, and can be long-lasting (Woolston, 2018). The topic of destructive leadership (e.g., abusive supervision) has received considerable attention among scholars and practitioners due to its detrimental effects on employees and organizations (Krasikova et al., 2013). A substantial body of empirical studies (e.g., Shin & Hur, 2020), narrative review studies (e.g., Martinko et al., 2013; Tepper, 2007; Tepper et al., 2017), and meta-analyses (e.g., Cao et al., 2022; Krasikova et al., 2013; Mackey et al., 2017, 2019; Schyns & Schilling, 2013; Zhang & Liao, 2015; Zhang et al., 2019) have consistently demonstrated that destructive leadership negatively relates to a wide variety of subordinates' outcomes (e.g., performance, creativity, and well-being).

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Despite the well-established negative associations between destructive leadership and employee outcomes, several critical theoretical questions remain unanswered. First, although previous meta-analyses have demonstrated that destructive leadership is negatively related to employee outcomes (e.g., Mackey et al., 2017; Schyns & Schilling, 2013; Zhang & Liao, 2015), we still know relatively little about how destructive leadership temporally relates to employees' behavioral (e.g., OCB, job performance, creativity, proactive behavior) and attitudinal outcomes (e.g., job satisfaction, organizational identification, work commitment, and engagement), especially across a longer period. This temporal perspective is crucial because the negative effects of destructive leadership on employees can be long-lasting (Schyns & Schilling, 2013). In fact, the longitudinal effect of destructive leadership has long been theorized as more severe than its short-term effects (Tepper, 2007). Moreover, as Tepper et al. (2017) emphasized, robust research on leadership should incorporate this time perspective in field study designs, and researchers have indeed preferred longitudinal designs over cross-sectional designs (e.g., Ford et al., 2014; Tepper et al., 2011). Nonetheless, as yet still surprisingly little is known about how destructive leadership–subordinate outcome relations vary over time.

In addition, it is important to note that many previous studies have solely focused on the assumption that destructive leadership causes subordinate deviant behavior (Shin & Hur, 2020), without considering the potential for reciprocal effects between destructive supervisory behaviors and employee outcomes (Tepper et al., 2011). Despite recent conceptual developments in deviance literature that have distinguished between negative and positive deviant behaviors (e.g., Vadera et al., 2013; see Table 1), the accumulated empirical research has primarily investigated the significant impact on negative deviant behavior (e.g., Mackey et al., 2019), we thus follow this line of seminal literature and focus on the negative deviant behaviors only in this study.

Recent empirical studies have shed light on the complex nature of destructive leadership and its potential to respond to employes' undesirable performance and deviant behaviors (Khan et al., 2018; Zhang & Liu, 2018). For instance, Lian et al. (2014) employed a cross-lagged panel design (i.e., different variables are repeatedly measured at multiple time points) and revealed a reciprocal relationship between abusive supervision and organizational deviance. Similarly, Simon et al. (2015) showed reciprocal relationships between abusive supervision and supervisor-directed avoidance and counterproductive behavior in a six-wave time-lagged design. Despite the insights offered by these studies, current reviews (e.g., Tepper et al., 2017) and meta-analyses (e.g., Mackey et al., 2017; Schyns & Schilling, 2013) are almost limited to clarify the relationships between destructive leadership and employee outcomes (i.e., whether reversed effects exist, referring to a situation in which employee outcomes influence destructive leadership). In particular, none of the existing meta-analyses have investigated the potential reciprocal effects (with destructive leadership and employee behaviors influencing each other over time) between employee behavior and destructive leadership. Our meta-analysis aims to address this problem by using a meta-analytic approach (a similar method has been used in previous studies; e.g., Riketta, 2008).

Table 1 Categorizations used in the meta-analysis for behavioral outcomes

Categorizations	Sample concepts
Measured variables	
Positive behavioral related outcomes	
OCB	Citizen behavior; extra-role performance; helping behaviour; OCB; OCBI; OCBO; affiliative behaviors
Job performance	Job performance; in-role performance; objective performance; safety performance; safety behaviors; task performance
Creativity	Innovative behavior; employee creativity
Proactive behavior	Personal initiative; proactive behavior; prohibitive voice; prosocial voice and silence; voice/silence
Negative behavioral related outcomes	
Avoidance behavior	Withdrawal behaviour; avoidance; feedback avoidance; interaction avoidance; knowledge hiding; defensive silence; acquiescent silence; silence; employee silence
Resistance	Constructive resistance; dysfunctional resistance
CWB	Deviance at work; deviance toward the supervisor; instigated incivility; interpersonal deviance; organizational deviance; service sabotage; supervisor-directed deviance; co-worker directed deviance; CWB-S; CWB-O

Negative behavioral related outcomes refer to negative behaviors that employees conducted toward others or organizations that is "tit for tat", not including others deviant behaviors toward employees; For details of categorizations of all included studies, see Appendix 1. For affiliative behaviors, the authors measured used altruism, cooperation, and conscientious behaviors to indicate affiliative behaviors, so we categorized them as OCB (Li et al., 2019)

The current research makes several significant contributions to the literature on destructive leadership by adopting a meta-analytic approach to review longitudinal studies on leader–follower relationships. Specifically, our study contributes to the destructive leadership literature by (a) providing a meta-analytic review of longitudinal studies on leader–follower relationships; (b) investigating the role of time in the impact of destructive leadership, given that understanding how destructive leadership unfolds over time is essential for theoretical precision and practical relevance (Fischer et al., 2017); and (c) testing the reciprocal, cross-lagged relationships between destructive leadership and subordinate outcomes. In doing so, we first investigate the relative strength of the longitudinal associations between destructive leadership and (adverse) employee outcomes. This contributes to the destructive leadership literature by revealing the lagged effects of destructive leadership on employees and organizations. Second, we examine the role of time in destructive leadership-subordinate outcomes relations, providing insights for future longitudinal research on the appropriate time-lag setting when studying the associations between destructive leadership and subordinate outcomes. Finally, we tested the cross-lagged effects between destructive leadership and employee outcomes. This can advance theory and suggest leverage points for practitioners to develop effective intervention programs and mitigate the damaging effects of destructive leadership.

Theoretical Foundations and Hypotheses

Destructive Leadership and Employee Outcomes

Researchers have used different terms to describe destructive forms of leadership that are towards subordinates, including abusive supervision (Tepper, 2000), leader bullying (Ferris et al., 2007), and toxic leadership (Brodsky, 1976). However, due to the obvious similarities among these concepts, researchers have adopted an inclusive conceptual framework of destructive leadership (e.g., Aasland et al., 2010; Einarsen et al., 2007; Krasikova et al., 2013; Mackey et al., 2019). Aryee et al. (2007) defined destructive leadership as "leaders who behave in a destructive manner towards subordinates, by intimidating subordinates, belittling or humiliating them in public or exposing them to non-verbal aggression". Similarly, Einarsen et al. (2007, p. 208) referred to destructive leadership as "the systematic and repeated behavior by a leader, supervisor or manager that violates the legitimate interest of the organization by undermining and/or sabotaging the organization's goals, tasks, resources, and effectiveness and/or the motivation, well-being or job satisfaction of subordinates". Recently, Schyns and Schilling (2013) defined destructive leadership as "a process in which over a longer period the activities, experiences and/or relationships of an individual or the members of a group are repeatedly influenced by their supervisor in a way that is perceived as hostile and/or obstructive." Therefore, the essence of destructive leadership is that a leader systematically behaves in a destructive manner towards subordinates over a longer period, violating the legitimate interest of the organization by intimidating subordinates, belittling or humiliating them in public or exposing them to non-verbal aggression. Taking this diversity of concepts into account and in line with previous studies (Aasland et al., 2010; Ferris et al., 2007; Krasikova et al., 2013; Mackey et al., 2019), the present study uses the overarching concept of "destructive leadership", incorporating research on topics like abusive supervision, managerial tyranny, tyrannical leadership, supervisor bullying, supervisor incivility, supervisor undermining, and toxic leadership.

The negative associations between destructive leadership and employee and organizational outcomes have been well established. However, researchers have used different theoretical mechanisms to explain why destructive leadership influences employee outcomes. In the current meta-analysis, building on previous work by Inceoglu et al. (2018) and the resource-based perspective of COR theory (Hobfoll, 1989), we classify these mechanisms into five theory-driven categorizations: social-cognitive (Bandura, 1973), motivational (e.g., job demands-resources model; Demerouti et al., 2001), affective (e.g., affective events theory; Weiss & Cropanzano, 1996), relational (e.g., Social exchange theory; Blau, 1964), and identification (e.g., Social identity theory; Tajfel & Turner, 1986) mechanisms. Accordingly, we provide a systematic review of the theoretical mechanisms underlying the impact of destructive leadership on employee outcomes, along with relevant empirical studies (see Appendix 2). For instance, social learning theory suggests that individual actions are in part influenced by their environment (Bandura, 1973). Individuals learn how to engage in actions and about the potential consequences of actions by observing the behaviors, attitudes, and emotional reactions of others (Bandura, 1986).

Leaders play an important role in employees' work environment, in that this interpersonal social context is an important source of information for employees, which influences employee outcomes. In particular, being exposed to destructive leadership may lead employees to imitate these negative behaviors, as they seem acceptable to others. In this way, employees become likely to adopt the aggressive behaviors of their leader (e.g., Restubog et al., 2011). In line with these theoretical arguments, empirical studies using time-lagged designs supported these lagged effects. Similarly, meta-analytic studies have shown that destructive leadership was negatively related to subordinates' work engagement (Li et al., 2021), job satisfaction (Mackey et al.,

2017), job performance, and organizational citizenship behavior (OCB), as well as was positively linked to individuals counterproductive work behavior (CWB) (Zhang & Liao, 2015; Zhang et al., 2019) and burnout (Mackey et al., 2021). Although these meta-analyses did not directly investigate the longitudinal associations between destructive leadership and outcomes, they consistently concluded that destructive leadership is generally bad for employees. In addition, prior empirical studies have longitudinally demonstrated the detrimental effects of destructive leadership on individual and organizational outcomes. For instance, destructive leadership is longitudinally and negatively related to employee creativity (Jiang et al., 2019), proactive behavior (Chi et al., 2018), and job performance (Yu et al., 2016), whereas it is positively related to workplace deviance (Garcia et al., 2015) and turnover intentions (Schaubroeck et al., 2016).

We propose that, over time, destructive leadership will have a negative impact on individual and organizational outcomes. In particular, we examined two types of often-investigated outcomes in destructive leadership research: *behavioral outcomes,* such as job performance, organizational citizenship behaviors (OCB), and workplace deviance (e.g., CWB); and *attitudinal outcomes* (e.g., engagement). Thus, we hypothesize that:

Hypothesis 1 Destructive leadership will be negatively related to employee positive behavior-related outcomes (i.e., job performance, OCB, creativity, and proactive behavior; H1a-d) and positively related to negative behavior-related outcomes (i.e., avoidance behavior, resistance, and CWB; H1e-g) across time.

Hypothesis 2 Destructive leadership will be negatively related to employee positive attitude-related outcomes (i.e., job satisfaction, organizational identification, work commitment, and work engagement; H2a-d) and positively related to employee negative attitude-related outcomes over time (i.e., burnout, turnover intention, and emotional exhaustion; H2e-g).

The Influence of Time Lags on the Relationship between Destructive Leadership and Employee Outcomes

Longitudinal designs necessarily employ a time lag between any two measurements of a study (Hassett & Paavilainen-Mäntymäki, 2013; Taris, 2000). However, little is known about how long it takes for destructive leadership to influence employee outcomes. Researchers have often suggested one year as the almost standard time lag because it controls for potential seasonal effects that could affect job demands or job performance (e.g., returning to work from a vacation; for a review, see Ford et al., 2014). Tepper (2007) has argued that the longer-term impact of destructive leadership is more severe than its short-term impact. A recent meta-analysis found that the relationship between abusive supervision and employee engagement was slightly stronger for longitudinal studies than for cross-sectional studies, but this difference was not statistically significant (Li et al., 2021). Therefore, we examine how different time lags affect the association between destructive leadership and employee outcomes.

Hypothesis 3 The relationships between destructive leadership and employee outcomes will be moderated by the length of the time lag that is used, such that these relationships will be stronger for longer time lags.

The Reversed Relationship Between Destructive Leadership and Employee Outcomes

Tepper (2007) observed that the majority of empirical research on destructive leadership employed either cross-sectional or multi-wave designs that failed to allow for examinations of potential reversed associations (Martinko et al., 2013). The argument that having a bad leader leads to adverse employee outcomes seems intuitively plausible, but it is not the sole explanation for the associations between destructive leadership and employee outcomes. For example, employee negative deviant behavior can elicit abusive supervision (Lian et al., 2014); third variables (e.g., economic downturns) may negatively impact both followers and leaders; and employees may blame their supervisor for their own destructive behaviors, which in turn contributes to their counterproductivity (Detert et al., 2007). Building on victimization theory (Aquino, 2000), researchers have proposed that victims often become aggressors when subordinates are the destructively deviant causal actors (e.g., organizational deviance), leading supervisors to act destructively toward subordinates. Empirical studies also found that subordinate organizational deviance triggered abusive supervision, but not the other way around (Lian et al., 2014). Based on these arguments, we put forward the following hypothesis:

Hypothesis 4 Deviant employee behaviors will be positively related to later destructive leadership.

To summarize, the current meta-analysis aims to systematically investigate (a) how destructive leadership relates to employee outcomes across time; (b) the extent to which the time lag between study waves accounts for the variance in the effect sizes of these associations; and (c) the presence of possible cross-lagged relationships between destructive leadership and deviant employee behaviors.

Method

Literature Search

To review the current empirical literature on destructive leadership and employee outcomes, we conducted a comprehensive search for relevant studies. Databases utilized in the search were Web of Science, PsycINFO, EBSCO, Proquest, Scopus, and Pubmed. In line with previous meta-analysis (Schyns & Schilling, 2013) and review articles (Krasikova et al., 2013), the search included various alternative terms relating to destructive leadership (i.e., abusive supervision, aversive leadership, despotic leadership, destructive leadership, petty tyranny, personalized charismatic leadership, supervisor bullying, pseudo-transformational leadership, supervisor incivility, supervisor undermining, and toxic leadership) combined with methodology terms (i.e., longitudinal, *wave, panel, and longitudinal study). Advanced search strings were developed for each database and we searched in the title, keywords, and abstract fields of all databases (for an example of Web of Science, see Supplemental file 1). This revealed 432 hits overall. Further, we manually searched the *Journal of Applied Psychology*, *Journal of Management*, *Personnel Psychology*, *Academy of Management Journal*, and *The Leadership Quarterly*, finding 71 hits in total. Finally, we conducted a search for articles citing Tepper (2000), in combination with the keyword "panel design". Among 3,126 articles, we found 322 papers. The study search was completed in May 2020. Figure 1 shows a flowchart of our literature search.

Inclusion Criteria and Study Coding

After conducting a systematic search, duplicates were removed, and the remaining titles and abstracts were screened for inclusion. To be included, articles had to meet the following criteria: (1) feature published studies (including online prepublications) that were written in English; (2) utilize longitudinal designs in which participants were employees (not students); and (3) measure both destructive leadership and employee outcomes. Two independent raters screened all articles using an online platform (https://rayyan.qcri.org). The initial agreement was 79.4%, and after resolving 71 rater disagreements through discussion, we ultimately reached an agreement of 100%. In total, 82 articles met our inclusion criteria and were included in our meta-analysis.

Next, two authors and two research assistants coded these 82 articles independently, using a coding guide developed by the first author. We coded the following information: bibliographic information, country of the sample, theoretical framework, study design (e.g., sample size, participants' demographic information, measurement scale, reporter, measurement error, time lags between the measurements of destructive leadership and outcomes), and the bivariate correlation coefficient estimate of the destructive leadership – employee outcome relationship.

Meta-Analytic Procedures

We used the R program to conduct our meta-analysis with the packages of "metafor" (Viechtbauer, 2010) and "metaSEM" (Cheung, 2015). Our first set of analyses estimated the correlations between destructive leadership and outcomes. We used a random-effects model (Hunter & Schmidt, 2004) and correlations were corrected for sampling error when calculating the pooled effect sizes (ρ). For each relation analysis, we report the number of included studies (k), total sample size (N), Q and I^2 homogeneity statistics. We also report the uncorrected correlations (r), and the 95% confidence and credibility intervals of ρ (95% CI).

We conducted a separate analysis for each category of outcomes (e.g., behavioral or versus attitudinal, see Tables 1 and 2). Some studies reported more than one outcome that fell into the same category, which violates the sample-independence assumptions for meta-analysis (Lipsey & Wilson, 2001). Researchers have suggested that applying a three-level structure to a meta-analytic model is a better approach for addressing the dependency of effect sizes than other methods (Assink & Wibbelink, 2016). In particular, there is sampling variance (Level 1), within-study variance (i.e., the variance between effect sizes extracted from the same study: Level 2), and between-study variance (Level 3). This allows effect sizes to vary between participants (level 1), outcomes (level 2), and studies (level 3) (Assink & Wibbelink, 2016). Accordingly, we conducted a multi-level meta-analysis for destructive leadership and employee outcomes if sufficient sample sizes were available for these associations (i.e., $k > 30$).

We conducted additional sensitivity analyses to ensure the robustness of our results. First, we corrected the effect size for measurement reliability. For studies that did not report reliability estimates, we used the mean reliability of studies that reported reliability estimates. Second, we conducted outlier analyses and applied the trim-and-fill method to adjust for potential publication bias. The third set of analyses was a moderation analysis to examine the influence of the time lag between destructive leadership and outcomes. Finally, using panel data, we conducted meta-regression analysis to investigate whether destructive leadership relates to later employee destructive outcomes, or whether the reversed effect is also plausible (i.e., employee negative behaviors relate to later destructive leadership). The metaSEM package was used to perform

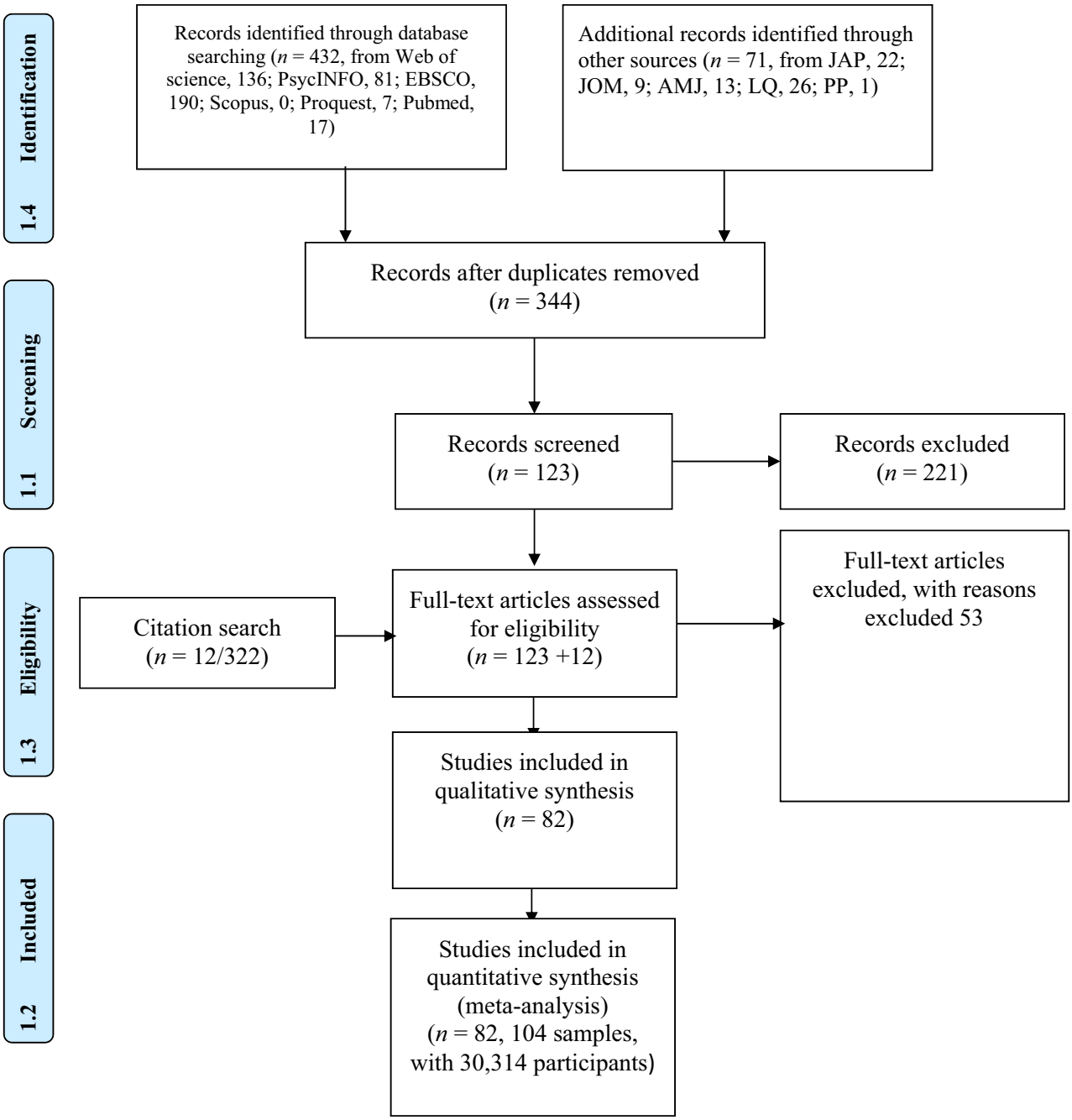

Fig. 1 The flow diagram of the searching process. *Note*. Figure is adapted from Moher, Liberati, Tetzlaff, Altman, The PRISMA Group, 2009

the analyses in R (Cheung, 2015). Specifically, in the first step, the bivariate correlations between destructive leadership and outcomes were extracted from each relevant study (including auto-correlation, i.e., the correlation for the same variable at different time lags; lagged effects, i.e., the relationships between Time t destructive leadership and Time $t+1$ employee outcomes or Time t employee outcomes and Time $t+1$ destructive leadership). Next, we combined the relevant effect sizes into matrices to calculate a pooled correlation matrix; in the second stage, we estimated the cross-lagged effects by fitting a structural equation model to the pooled meta-analytic correlation matrix.

Table 2 Categorizations used in the meta-analysis for attitudinal and relational related outcomes

Categorizations	Sample concepts
Positive attitudinal related outcomes	
Job satisfaction	Job satisfaction; career satisfaction
Organizational identification	Group identification; organizational identification; organization-based self-esteem;
Work commitment	Affective commitment; commitment; organizational commitment;
Work engagement	Engagement; vigor;
Negative attitudinal related outcomes	
	Burnout; turnover intention; emotional exhaustion

For details of categorizations of all included studies, see Appendix 1

Results

Multi-Level Meta-Analysis Results for Behavior-Related Outcomes

The multi-level meta-analysis results showed that the overall association between destructive leadership and *employee negative behavior-related outcomes* was 0.391 ($SE = 0.049$). This overall effect was significant ($t(83) = 8.032$, $p < 0.001$), and the 95% confidence interval ranged from 0.294 to 0.487. This overall effect can be regarded as moderate (Cohen, 1992). In addition, we found that about 7.86% of the overall variance could be attributed to Level 1 (sampling variance), 82.17% to Level 2 (within-study variance), and as much as 9.97% to Level 3 (between-study variance).

The multi-level meta-analysis result for the overall association between destructive leadership and *employee positive behavior-related outcomes* was − 0.165 ($SE = 0.042$; 95% *CI* ranged from − 0.249 to -0.080). About 15.53% of the overall variance can be attributed to Level 1 (sampling variance), 70.31% to Level 2 (within-study variance), and 14.16% to Level 3 (between-study variance). However, when the three-level model was compared to the two-level model (sampling variance & within-study variance), the results showed no significant difference between the two models for AIC and BIC ($p = 0.150$), meaning that the three-level model did not significantly improve upon the two-level model. Accordingly, when calculating the pooled effect sizes for the association between destructive leadership and positive behavioral outcomes, we conducted a two-level model (sampling variance & within-study variance). These results showed that the variance of effect sizes was mostly due to within-study variance, which means that the impact of destructive leadership might vary across different outcomes. Next, we tested how destructive leadership was associated with specific outcomes (for this analysis, we only included one effect size per study).

Table 3 reported the results of our meta-analysis of destructive leadership and specific behavior-related outcomes. The results were in line with our hypotheses, showing that destructive leadership was negatively related to overall positive employee behavior-related outcomes ($k = 34$, $\rho = -0.184$). Specifically, it was negatively related to *creativity* ($k = 6$, $\rho = -0.277$), *job performance* ($k = 12$, $\rho = -0.144$; for *objective performance*, $k = 4$, $\rho = -0.104$; for *subjective performance,* $k = 8$, $\rho = -0.165$; between groups $t = 0.361$, $p = 0.548$), *OCB* ($k = 11$, $\rho = -0.191$), and *voice behavior* ($k = 2$, $\rho = -0.159$). In addition, destructive leadership was positively related to overall negative behavior-related outcomes ($k = 54$, $\rho = 0.330$). Specifically, we found positive effects for *resistance behavior* ($k = 3$, $\rho = 0.267$), *avoidance behavior* ($k = 6$, $\rho = 0.385$), *CWB* ($k = 37$, $\rho = 0.348$), and *silence* ($k = 8$, $\rho = 0.221$). Accordingly, Hypotheses 1a-g received support.

Hypothesis 2 stated that destructive leadership would have a negative effect on *employee positive attitude-related outcomes* and a positive effect on *employee negative attitude-related outcomes*. Table 4 showed that destructive leadership was negatively related to overall positive employee attitudinal outcomes ($k = 27$, $\rho = -0.273$). Specifically, we found negative effects for *job satisfaction* ($k = 11$, $\rho = -0.275$), *organizational identification*, ($k = 5$, $\rho = -0.162$), *work commitment* ($k = 9$, $\rho = -0.290$), and *work engagement* ($k = 2$, $\rho = -0.419$). In addition, destructive leadership was positively related to overall negative attitudinal outcomes ($k = 26$, $\rho = 0.312$) (for *burnout*: $k = 3$, $\rho = 0.296$; for *emotional exhaustion*: $k = 11$, $\rho = 0.270$; and for *turnover intention*: $k = 12$, $\rho = 0.354$). Thus, Hypotheses 2 a-g were supported.

Sensitivity Analysis and Publication Bias-analysis (trim-and-fill)

Tables 3 and 4 showed that the between-study heterogeneity was quite high ($I^2 > 75\%$), which may be due to one or more studies with extreme effect sizes (an exception is voice behavior). We reanalyzed our pooled effect sizes by removing potential outliers (i.e., studies reporting effects that were outside the confidence intervals of the overall pooled

Table 3 Meta-analytic results for relationship of destructive leadership with subordinate behavioral outcomes

Variable	*k*	*N*	*r*	*ρ*	*SEρ*	Lower	Upper	*p*	Q	I^2	H^2	*z*Fisher	$\rho_{-sensitivity\ analysis}$	*kTrim-and fill*	*ρTrim-and fill*	$\rho_{-measuremmt}$
Overall positive	34	8945	− 0.178	− 0.184	0.026	− 0.233	− 0.134	< 0.001	198.045***	83%	5.90	− 0.186	− 0.216	45	− 0.102	− 0.219
Creativity	6	1682	− 0.266	− 0.277	0.055	− 0.374	− 0.173	< 0.001	23.940***	79.10%	2.19	− 0.284	− 0.232	6	− 0.277	− 0.307
Job Performance	12	3653	− 0.139	− 0.144	0.052	− 0.242	− 0.042	< 0.001	93.499***	89.39%	9.42	− 0.144	-0.124	15	− 0.070	− 0.161
OCB	11	2199	− 0.186	− 0.191	0.045	− 0.275	− 0.105	< 0.001	45.891***	76.81%	4.31	− 0.194	− 0.192	14	− 0.129	− 0.207
voice behavior	2	517	− 0.157	− 0.159	0.044	− 0.242	− 0.073	< .001	0.519(*ns*)	0.00%	1	− 0.159	No	No	No	− 0.190
Overall negative behavior	54	12,942	0.305	0.330	0.030	0.277	0.382	< 0.001	558.486***	91.25%	11.43	0.343	0.302	65	0.384	0.363
CWB	37	8183	0.320	0.348	0.036	0.281	0.412	< 0.001	376.023***	91.32%	11.52	0.363	0.321	45	0.406	0.384
Silence	8	1448	0.214	0.221	0.043	0.139	0.300	< 0.001	18.33*	61.96%	2.63	0.224	no	9	0.198	0.240
Avoidance behavior	6	2243	0.349	0.385	0.113	0.182	0.557	< 0.001	118.723***	96.40%	27.81	0.406	0.316	6	0.385	0.420
Resistance	3	1068	0.259	0.267	0.069	0.137	0.388	< 0.001	10.24**	79.55%	4.89	0.2735				0.290

k = number of independent samples included; *ρ* = sample-size-weighted mean observed correlation; *SEρ* = standard error for population estimate; I^2 is an index of heterogeneity computed as the percentage of variability in effects sizes that are due to true differences among the studies; Q provides information on whether there is statistically significant heterogeneity (i.e., yes or no heterogeneity). Overall social factors-two level-single = only include one effect size for each study; Overall social factors-two level-nested = for some studies included several effect sizes, which may not independent; $\rho_{-sensitivity\ analysis}$ = outlier removed sensitivity analyses; *kTrim-and fill* = number of independent samples included for trim-and-fill analysis; $\rho_{Trim\text{-}and\ fill}$ = trim-and-fil results; $\rho_{-measurement\ =}$ mean score correlation (corrected for unreliability for both variables and sampling error variance)

Table 4 Meta-analytic results for the relationship between destructive leadership with subordinate attitudinal outcomes

Variable	*k*	*N*	*r*	*ρ*	*SEρ*	Lower	Upper	*p*	Q	I^2	H^2	*z*Fisher	$\rho_{-sensitivity\ analysis}$	*kTrim-and fill*	*ρTrim-and fill*	$\rho_{-measuremmt}$
Overall positive	27	9888	− 0.249	− 0.273	0.047	− 0.356	− 0.185	< 0.001	377.424***	95.18%	20.75	− 0.280	− 0.222	27	− 0.273	− 0.306
Job satisfaction	11	5010	− 0.252	− 0.275	0.078	− 0.410	− 0.128	< 0.001	143.638***	96.25%	26.68	− 0.282	− 0.216	11	− 0.275	− 0.311
Organizational identification	5	1632	− 0.159	− 0.162	0.048	− 0.253	− 0.069	< 0.001	13.942**	70.81%	3.43	− 0.164	No outlier	7	− 0.106	− 0.180
Work commitment	9	2616	− 0.261	− 0.290	0.092	− 0.446	− 0.117	< .001	146.569***	95.30%	21.26	− 0.298	− 0.205	9	− 0.290	− 0.326
Work engagement	2	630	− 0.379	− 0.419	0.245	− 0.729	0.034	0.068	36.436***	97.26%	36.44	− 0.447				− 0.454
Overall negative behavior	26	8578	0.292	0.312	0.036	0.248	0.373	< 0.001	214.730***	90.21%	10.21	0.322	0.303	26	0.312	0.347
Burnout	3	874	0.283	0.296	0.074	0.158	0.422	< 0.001	8.605*	74.16%	3.87	0.305				0.347
Emotional exhaustion	11	3410	0.262	0.270	0.030	0.215	0.323	< 0.001	25.686**	63.96%	2.77	0.277	0.269	11	0.269	0.296
Turnover intention	12	4294	0.323	0.354	0.069	0.230	0.466	< 0.001	166.048***	94.69%	18.82	0.370	0.325	12	0.354	0.392

k = number of independent samples included; *ρ* = sample-size-weighted mean observed correlation; *SEρ* = standard error for population estimate; I^2 is an index of heterogeneity computed as the percentage of variability in effects sizes that are due to true differences among the studies; Q provides information on whether there is statistically significant heterogeneity (i.e., yes or no heterogeneity). Overall social factors-two level-single = only include one effect size for each study; Overall social factors-two level-nested = for some studies included several effect sizes, which may not independent; $\rho_{-sensitivity\ analysis}$ = outlier removed sensitivity analyses; *kTrim-and fill* = number of independent samples included for trim-and-fill analysis; $\rho_{Trim\text{-}and\ fill}$ = trim-and-fil results; $\rho_{-measurement\ =}$ mean score correlation (corrected for unreliability for both variables and sampling error variance)

effect size, Harrer et al., 2019). The results showed that, after removing outliers, the impact of destructive leadership on employee outcomes decreased (see Tables 3 and 4). However, destructive leadership remained negatively related to employee behavioral outcomes (e.g., job satisfaction and work commitment) and positively related to individual attitudinal outcomes (e.g., turnover intention).

In addition, we used the trim-and-fill procedure to identify potential publication bias. The results in Table 3 showed that for the adjusted effect sizes of the associations between destructive leadership on the one hand and creativity, overall positive attitudinal outcomes, job satisfaction, work commitment, overall negative outcomes, emotional exhaustion, and turnover intention, on the other hand, were the same as the pooled effect size (see Table 3). However, the associations with job performance (with 3 added studies, $\rho = -0.101$), OCB (with 3 added studies, $\rho = -0.129$), organization identification (with 2 added studies, $\rho = -0.106$), CWB (with 8 added studies, $\rho = 0.406$), and silence (with 1 added study, $\rho = 0.207$) decreased slightly. To sum up, the sensitivity and trim-and-fill effect sizes were generally smaller than the corresponding original pooled effect sizes, which showed that some of our initial results were overestimated due to the presence of outliers and publication bias. The true effect of destructive leadership on some outcomes (e.g., job performance) might be lower than the original pooled effect sizes when selective publication practices and the presence of extreme correlations are controlled.

Short-term vs. long-term impact of destructive leadership In the included studies, the average time lag was 17.5 weeks ($SD = 23.75$) ranging from 1 to 144 weeks. Most studies used time lags of 4 weeks ($n = 14$, 13.5%), 24 weeks ($n = 11$, 10.6%), and 1 week ($n = 9$, 8.7%). We tested whether the impact of destructive leadership differed across these time lags. The results in Table 5 showed that time lag did not moderate the relationship between destructive leadership and employee outcomes. We further categorized the time lag into two categories, less than (<) 6 versus more than (>) 6 months, respectively. The results showed that the associations between destructive leadership and positive behavioral ($k = 3$, $\rho = -0.270$ vs. $k = 28$, $\rho = -0.191$, $t = 4.491$, $p = 0.101$) and attitudinal outcomes ($k = 8$, $\rho = -0.310$ vs. $k = 15$, $\rho = -0.192$, $t = 3.459$, $p = 0.063$) were stronger for the time lag less than 6 months than for the time lag more than 6 months, but the differences were statistically insignificant. Similarly, for the associations between destructive leadership and negative behavioral outcomes ($k = 12$, $\rho = 0.304$ vs. $k = 37$, $\rho = 0.350$, $t = 0.769$, $p = 0.681$) and negative attitudinal outcomes ($k = 4$, $\rho = 0.311$ vs. $k = 19$, $\rho = 0.296$, $t = 0.038$, $p = 0.846$), the effects did not differ as a function of the length of the time lag. Thus, Hypothesis 3 was not supported.

Cross-lagged Meta-Regression Analyses

To test our Hypothesis 4, which states that deviant employee behaviors will be positively related to later destructive leadership, we conducted cross-lagged meta regression analyses. For meta-regression, researchers recommend that each covariate be included in at least ten studies (Borenstein et al., 2011). Accordingly, we conducted meta regression analysis for negative behavioral outcomes ($k = 63$, $N = 15{,}156$) using the metaSEM package (Cheung, 2015). For conducting meta-analytic structural equation modeling, we followed previous studies that used a similar approach (Lesener et al., 2018), and first calculated the pooled correlation matrix. Table 6 provides the final pooled correlation matrix. All correlations were significant at $p < 0.001$ level.

Next, we tested a cross-lagged regression model. The results in Fig. 2 showed that destructive leadership related to destructive leadership over time ($\beta = 0.614$, $p < 0.001$), while individual negative behaviors were associated with later negative behavior ($\beta = 0.564$, $p < 0.001$). Interestingly, whereas destructive leadership did *not* relate to negative employee behavior over time ($\beta = 0.043$, $p = 0.391$), employees' negative behaviors *did* relate to destructive leadership across time ($\beta = 0.129$, $p = 0.015$).

We conducted a similar meta-analytic structural equation modeling analysis for the impact of destructive leadership on

Table 5 The moderation effect of time lag

Outcomes	*k*		estimate	*se*	z	*p*	Lower	Upper	Moderation	*p*
Positive behavioral	29	Intercept	− 0.183	0.041	− 4.501	< .0001	− 0.263	− 0.103	0.340	0.560
		Timelag	− 0.001	0.002	− 0.594	0.552	− 0.006	0.003		
Negative behavioral	42	Intercept	0.334	0.035	9.530	< .0001	0.265	0.403	0.947	0.330
		Timelag	− 0.002	0.002	− 0.973	0.331	− 0.005	0.002		
Positive attitudinal	20	Intercept	− 0.202	0.025	− 8.217	< .0001	− 0.251	− 0.154	0.477	0.490
		Timelag	− 0.001	0.001	− 0.690	0.490	− 0.002	0.001		
Negative attitudinal	18	Intercept	0.295	0.032	9.301	< .0001	0.232	0.357	0.000	0.985
		Timelag	0.000	0.002	− 0.019	0.985	− 0.004	0.004		

employee negative attitudinal outcomes. The pooled correlation matrix showed significant correlations among our focal variables (see Table 7).

In a second step, we tested the cross-lagged model, which showed that destructive leadership correlated with destructive leadership over time ($\beta = 0.688$, $p < 0.001$), and individual negative attitudes related to later negative behavior ($\beta = 0.687$, $p < 0.001$). However, destructive leadership did not relate to negative employee attitudes over time ($\beta = -0.115$, $p = 0.284$), and employees' negative attitudes did not relate to destructive leadership across time ($\beta = 0.081$, $p = 0.173$). Note that these results should be interpreted with caution due to the small number of samples involved ($k < 10$). Thereby results partially supported Hypothesis 4.

Supplementary Analysis

Since our study included different constructs and measurements of destructive leadership, we tested whether the differences in measures and constructs can explain the heterogeneity in our estimated effect sizes. We did not find any significant moderation effects of the measurement scale of destructive leadership or included destructive leadership types (see Supplementary Tables 1–2).

Discussion

The main aims of this meta-analysis were to investigate the long-term impact of destructive leadership on employee outcomes, investigate its potential reciprocal relationships, and test the role of the time lags used in studies addressing the associations between destructive leadership and employee

Table 6 Meta-analytic correlation matrix between destructive leadership and negative behavioral outcomes ($k = 63$)

Variable	1	2	3	4
1. Destructive leadership (T1)	1			
2. Negative behavioral outcomes (T1)	0.303 (15)***	1		
3. Destructive leadership (T2)	0.651(14)***	0.309(14)***	1	
4. Negative behavioral outcomes (T2)	0.298(63)***	0.617(14)***	0.332(15)***	1

T = time; The number in parentheses is the number of correlations from which the pooled correlation was calculated

*** $p < .001$

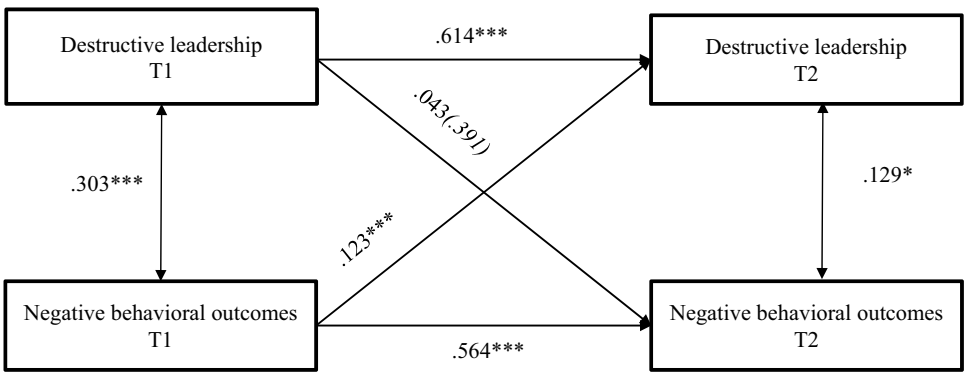

Fig. 2 The cross-lagged panel meta-analysis results of destructive leadership and employee negative behavioral outcomes

Table 7 Meta-analytic correlation matrix between destructive leadership and negative attitudinal outcomes ($k = 34$)

Variable	1	2	3	4
1. Destructive leadership (T1)	1			
2. Negative attitudinal outcomes (T1)	0.341 (8)***	1		
3. Destructive leadership (T2)	0.715 (8)***	0.315 (7)***	1	
4. Negative attitudinal outcomes (T2)	0.306 (34)***	0.730 (7)***	0.396 (9)***	1

T = time; The number in parentheses is the number of correlations from which the pooled correlation was calculated (*k*)

*** $p < .001$

outcomes. Overall, our results showed that destructive leadership was negatively related to functional employee attitudinal (e.g., job satisfaction, work engagement, organizational identification, and commitment) and behavioral outcomes (e.g., task performance, OCB, voice behavior, and creativity). Conversely, destructive leadership was positively related to dysfunctional employee outcomes (e.g., turnover, emotional exhaustion, burnout, CWB, and deviance). This finding is consistent with the previous meta-analysis by Zhang and Liao (2015).

Interestingly, including the panel studies and adjusting for auto-regression effects in our meta-analysis, we found that destructive leadership (Time 1) did *not* relate to later employees' dysfunctional behavioral outcomes, while individual negative deviant behavior was significantly related to later perceived leader destructive behavior. This is in line with prior results reported by Lian et al. (2014) that employee deviant behaviors can predict later abusive supervision, but not vice versa. Similarly, the followership theory also emphasizes that followers play an important role in the leadership process (Uhl-Bien et al., 2014). Note that when deviant employee behaviors occur earlier than destructive leadership, it is possible that what is often described as destructive leadership may not always be destructive. Instead, it could simply be the leader making necessary changes that disrupt the organizational culture and work patterns, and employees might just *describe* the people making change agent as a destructive, abusive, or toxic leader. Future studies can investigate this possibility. In addition, the moderation analysis showed that time lag did not significantly moderate the relationship between destructive leadership and employee outcomes, which is consistent with a previous meta-analysis by Zhang and Liao (2015).

Theoretical Contributions

This study has made several theoretical advancements in destructive leadership research. First, our research contributes to the destructive leadership literature by examining the long-term impact of destructive leadership on employee behavioral and attitudinal outcomes through a meta-analytic perspective. Notably, we suggest that employees perceive their supervisors as engaging in destructive leadership behaviors, and that this elicits their undesirable behavior and attitude responses over time. This key finding echoes the theoretical arguments by Schyns and Schilling (2013), holding that there is a long-term impact of destructive leadership on employees. Furthermore, our findings are in line with recent meta-analyses (e.g., Mackey et al., 2017), showing that perceptions of destructive leadership are associated with a wide variety of employee attitudinal (e.g., work commitment) and behavioral outcomes (e.g., OCB). Last, previous meta-analyses mainly included cross-sectional designs (e.g., Banks et al., 2016; Mackey et al., 2017; Zhang & Liao, 2015), and are thus likely to be biased by common method variance (Podsakoff et al., 2003). The data included in this meta-analysis may be less affected by this issue because we only included longitudinal and time-lagged (i.e., multi-wave or panel) designs. It should be mentioned that recent evidence indicates that the probability of significant bias of estimates due to common method variance is very limited (Bozionelos & Simmering, 2022).

Second, we utilized cross-lagged analysis to shed light on the possible reciprocity of destructive leadership by examining the long-standing research question of whether bad leaders relate to later bad employees, bad employees trigger bad leader behaviors, or whether a reciprocal relationship applies. Drawing on 104 independent time-lagged studies involving 30,314 participants in total, we demonstrated that employees' earlier bad behavior could relate to destructive leadership, but not the reverse. Using longitudinal data, this finding goes against the literature on destructive leadership that uses time-lagged designs or experimental studies (e.g., Park et al., 2018; Shao et al., 2018; Yu & Duffy, 2021). Specifically, whereas in those studies the leader is considered as the cause of subordinates' counterproductive behaviors, our results suggest that supervisors' destructive behaviors are a reaction to earlier subordinate negative deviant behaviors. A potential explanation is that our study included panel data and investigated the cross-lagged effects, whereas most previous studies failed to utilize repeated measures. Our result is consistent with the victim precipitation literature (i.e., provocative victims), which states that people tend to be targeted for victimization when they are perceived to be hard to work with (Olweus, 1978; Tepper et al., 2011). In this sense, supervisors will perceive an individual's bad behaviors (e.g., CWB) as frustrating, aggravating, and annoying, which aligns well with a provocative victim profile (Tepper et al., 2011). Several empirical studies have supported our findings that employee (negative) deviant behaviors are more likely related to destructive leadership (e.g., Lian et al., 2014; Tepper et al., 2011). More importantly, we provided empirical evidence for the reversed impact of abusive supervision, in which destructive leadership may be triggered by employees' negative deviant behavior that could be prevented or by counter-workplace behavior (Zhang & Liu, 2018). This provided a deeper understanding of the reciprocity of destructive leadership on employee outcomes.

Finally, our study investigated the role of time by examining how the time interval between measurements of destructive leadership and subordinate outcomes influences their associations. Admittedly, there was no statistically significant difference between the long (more than 6 months) and short (less than 6 months) study intervals for the correlations between destructive leadership and

outcomes. This indicates that the influence of destructive leadership could be short-lived as well as long-lasting, that is, destructive leadership tends to have enduring adverse effects on employee outcomes. On the one hand, our findings reveal that the potential long-term consequences of destructive leadership cannot be disregarded compared to the proximally temporal impact. Therefore, researchers should pay more attention to the potential *accumulation* of destructive leadership impact on employees over time. On the other hand, our findings highlight the significance of the long-term effects of destructive leadership, such as particular instances of destructive behaviors, which evoke high risks of employee passive or hostile responses to their supervisor's wrongdoing.

Future Research

Our study provides important directions for future research on destructive leadership. First and foremost, while we investigated the impact of destructive leadership, our cross-lagged analysis showed that employees' bad behaviors were more likely to trigger a leader's destructive leadership than vice versa. Note that this does not mean that followers should be blamed for having destructive leaders. Admittedly, these results cannot be interpreted causally because the significant statistical results might be caused by endogeneity bias (i.e., due to omitted variables, common-method variance, and selection bias; Antonakis et al., 2010; Sajons, 2020). Therefore, an important direction for future research is to test causality. For instance, experimental studies (especially random control trial experiments) are necessary to explore how destructive leadership influences employee outcomes. Because the randomized control experimental study has been viewed as the golden standard for examining causality (Podsakoff & Podsakoff, 2019). Besides, the instrumental variable regression (IVR) method can also be used in survey designs that draw causal inferences (Maydeu-Olivares et al., 2020). Second, more robust survey designs are needed (e.g., intensive longitudinal design). Although time-lagged measurements or separation measures were applied in destructive leadership research, panel designs are still limited. We recommend that future studies should more often use panel designs to investigate the potential vicious circle effect (i.e., bad employee behavior triggers bad leader behavior, which in turn triggers bad employee behavior). Thus, a future meta-analysis of panel designs can verify whether bad leader behaviors have a more substantial effect or whether bad employees are more likely to trigger bad leader behaviors. This will also guide practical interventions aimed at improving employee outcomes in organizations.

Practical Implications

Our research emphasized the long-term associations between destructive leadership and employee outcomes. We have shown that destructive leadership is indeed deleterious and long-lasting, therefore two managerial strategies can be applied to eliminate the negative impact of destructive leadership. First, managers must strive to reduce or eliminate their own destructive leadership behaviors, because destructive leadership is more likely to elicit employee dysfunctional attitudes and behaviors. Managers must thus be prepared to contribute to prohibiting a destructive leadership behavior climate. Because destructive leadership is difficult to observe, developing such a climate requires deliberate practices that eliminate potential negative behaviors initiated by leaders. In addition, despite being statistically insignificant, there is a trend that the associations between destructive leadership and employee outcomes were stronger for the longer time lags (6 months and over) than for the shorter time lags. Thus, from a practical point of view, it is important for organizations to put effort in preventing especially the long-term impact of destructive leadership. Finally, employees should avoid specific norm-deviant behaviors that might trigger leaders' destructive behavior. Although significant correlations were identified, we found that employees' bad behavior was associated with later destructive leadership (but not vice versa). Thus, employees may need to recognize that their negative behavior (e.g., unethical behavior) may trigger destructive behavior in their leaders. While previous studies mainly focused on how leaders or organizations can eliminate the detrimental impact of destructive leadership, we take another perspective by arguing that employees also need to avoid certain norm-deviant behaviors to avoid or break possible vicious cycles in the interaction between supervisors and subordinates.

Limitations

This meta-analysis has several limitations. First, we only included published studies of destructive leadership. Significant results may be published more often than insignificant results. Although the trim-and-fill procedure showed that publication bias was not severe, our results may still be biased as we only included published articles. Relatedly, we only included studies with lagged or multi-wave designs. Studies employing cross-sectional designs were not included. Thus, we cannot investigate whether the correlations reported in lagged versus cross-sectional

designs are different. Importantly, although our meta-analytic structural equation modeling results indicated that employees' bad behavior related to later destructive leadership, the number of full panel studies was limited; most of these studies employed a multi-wave field design where not all variables were measured at all waves. As a result, some of our results are based on small sample sizes (i.e., $k < 10$; Borenstein et al., 2011), meaning that we should be cautious about interpreting these results. Moreover, in spite of being significant, these results cannot be interpreted causally due to endogeneity bias. Hence, more solid designs are needed to robustly establish the causal relations between destructive leadership and employee outcomes.

In addition, in our meta-analysis, we synthesized data from studies that employed various measures of destructive leadership and outcomes, and we acknowledge that these measures may not always be consistent across studies. As a result, the interpretation of the effect sizes should be made with caution, as the heterogeneity in measurement scales and constructs may influence the magnitude of the effect sizes. Moreover, the variability in measurement scales and constructs may result in a wider range of effect sizes, which may make it more challenging to draw clear conclusions about the relationship between destructive leadership and outcomes. However, it is important to note that the use of diverse measures and constructs is a common challenge in the meta-analysis, particularly when synthesizing data from different constructs and measurements. And our approach is in line with previous meta-analyses (e.g., Mackey et al., 2021; Schyns & Schilling, 2013). Nonetheless, we attempted to address this issue by using a random-effects model, which accounts for the variability among the studies. Furthermore, we conducted sensitivity analyses to identify potential sources of heterogeneity, including differences in measures and constructs, and found that the overall findings were robust to these potential sources of variability. While the heterogeneity in measurement scales and constructs may pose a challenge for interpreting the effect sizes in our meta-analysis, we believe that our study provides valuable insights into the relationship between destructive leadership and outcomes. Nonetheless, we encourage future research to adopt a more standardized approach to the measurement of destructive leadership and outcomes to enhance the comparability of findings across studies. Finally, as previous researchers noticed, it is not easy to measure actual leader behavior without subjective judgments; the majority of the studies included in our study focused on employees' *perceptions* of destructive leader behavior.

Conclusions

Destructive leadership is costly for organizations and employees. The results of the present meta-analysis challenge the assumption that destructive leadership causes dysfunctional employee outcomes. Instead, our findings indicate that employees' dysfunctional behavioral outcomes relate to later destructive leadership. Overall, our findings provide evidence that destructive leadership is related to long-term employee dysfunctional outcomes, and subordinate behavior can also trigger destructive leadership. Future experimental studies are needed to provide greater clarity on the degree to which causal interpretations of these findings are warranted.

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Data availability All data used in this paper is publicly available in the online supplementary files.

Declarations

Conflicts of interest The authors have no conflicts of interest to declare.

Research involving Human Participants and/or Animals No human participants/animals were involved.

Informed consent No, because this is a review paper.

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