



Psychological and Hierarchical Closeness as Opposing Factors in Whistleblowing: A Meta-Analysis

Dimitrios Batolas^{1,2,3} · Sonja Perkovic¹ · Panagiotis Mitkidis^{1,4}

Accepted: 3 October 2022
© The Author(s) 2022

Abstract

Although employees are an important means of detecting and preventing misconducts through whistleblowing, many witnesses choose to remain silent. One reason to remain silent is the discomfort of reporting a colleague. Intuitively, employees should be less likely to report a close or trusted colleague, but a previous review suggests that the opposite may actually be true. However, later studies have shown mixed effects of social closeness on whistleblowing. To gain a better understanding of how social closeness affects whistleblowing, we meta-analyzed 22 experimental studies on intentions to blow the whistle. Overall, the studies show no effect of social closeness on whistleblowing intentions, $d = -0.21$, $p = .05$. However, when separating the studies by type of closeness, we find that psychological closeness has a negative effect, $d = -0.46$, $p < .001$, while hierarchical closeness has a positive effect, $d = .34$, $p < .001$ on whistleblowing intentions. This means that employees are most likely to report misconduct if the perpetrator is at the same hierarchical level in the organization and not a close or trusted friend. Since close psychological bonds are more likely to develop between employees at the same hierarchical level, the two types of closeness may counteract each other. This dilemma could be part of the explanation why so many witnesses choose to remain silent.

Keywords Whistleblowing · Closeness · Meta-analysis

Introduction

Unethical behavior has become a major concern for public and private organizations, with its trickling-down effects amounting to trillions of dollars in losses each year. The Association of Certified Fraud Examiners estimates the total annual fraud losses to be more than \$4.5 trillion globally (Association of Certified Fraud Examiners (ACFE), 2020). Over the decades, there have been a number of high-profile

scandals such as Enron, WorldCom, Volkswagen, and many other organizations, that have revealed the indispensable role whistleblowers play in exposing wrongdoings. Therefore, it is intuitive to assume that whistleblowers have become an effective tool in uncovering wrongdoings. Indeed, tips provided by employees are the single most effective method to prevent or detect unethical behavior (ACFE, 2020). Despite the fact that employees constitute an important mechanism that can help prevent misconducts through whistleblowing, many of those witnesses choose to remain silent and not to report wrongdoings. According to the 2018 Global Business Ethics Survey, nearly 30% of employees who observed a misconduct in the workplace did not report it (Ethics & Compliance Initiative, 2018).

Organizations are entities in which individuals engage in interpersonal relationships. Workplaces are places where people spend most of their daily lives, interact with others, do things together, and inevitably form friendships with coworkers and supervisors among others (Berman et al., 2002). One would assume that interpersonal closeness is negatively related to the willingness to report a wrongdoing because of the trust and loyalty developed

✉ Dimitrios Batolas
d.batolas@exeter.ac.uk

¹ Department of Management, Aarhus BSS, Aarhus University, Aarhus, Denmark

² Department of Science, Innovation, Technology, and Entrepreneurship, Business School, University of Exeter, University of Exeter, Exeter, UK

³ DIGIT Lab, Tintagel House, 92 Albert Embankment, London SE1 7TY, UK

⁴ Center for Advanced Hindsight, Duke University, Durham, USA

between colleagues (Greenberger et al., 1987). Indeed, individuals are less willing to report a friend (Hess et al., 2019; King, 1997; Waytz et al., 2013). Within organizations, individuals are members of formal (e.g., team, workgroup) and informal (e.g., demographics) groups (Ashforth & Johnson, 2001). Sharing a group membership can create psychological closeness between colleagues and as a result show ingroup favoritism toward the groups of which they are members (Tajfel & Turner, 1979). In addition, workplaces are hierarchical in structure and organized through social relations of power. On the contrary, power affects interpersonal relationships by increasing social distance (Lammers et al., 2012). Power dynamics, which are present in almost every human social relationship (Guinote, 2017) including those formed within work settings, may be an impediment to reporting. Previous research has shown that individuals are less willing to report a high-status wrongdoer than a low-status wrongdoer (Rehg et al., 2008).

Although there is a growing body of literature on whistleblowing, among the most understudied factors is the relationship between the whistleblower and the wrongdoer (Anvari et al., 2019; Bergemann & Aven, 2020; Hess et al., 2019). Given that whistleblowing involves an individual who observes someone else performing an unethical act, there are reasons to believe that the whistleblowing decision is likely to depend on how close or distant the former is to the latter. In a previous meta-analysis (Mesmer-Magnus & Viswesvaran, 2005), and to the authors' surprise, a strong positive correlation was found between closeness to the wrongdoer and whistleblowing intentions. Their findings suggested that the closer the would-be whistleblower is to the wrongdoer, the greater their intention to blow the whistle. They attributed this finding to either the interpersonal closeness or closeness with respect to organizational structure. This finding served as a springboard for our meta-analysis. To elucidate this intriguing finding about the relationship between closeness and whistleblowing intentions, we focused on two different dimensions of closeness that could have different effects: psychological closeness and hierarchical closeness. This distinction is important in whistleblowing research as it might drive reporting intentions in opposite directions.

The aforementioned arguments suggest a need to focus on the closeness between the whistleblower and the wrongdoer to better understand the whistleblowing decision. Therefore, our meta-analysis approaches the phenomenon from the perspective of the relationships resulting from either the psychological closeness, contingent on an intimate relationship or any form of similarity (Gino & Galinsky, 2012), or the hierarchical power distance which is formalized in a hierarchy. In this meta-analytic review, power distance is termed "hierarchical closeness" as

power results from the extent to which the whistleblower is hierarchically close to the wrongdoer within the organization (Taylor & Curtis, 2013). In addition, we use social closeness, or inversely put social distance, as a catch-all term to describe how close the whistleblower is to the wrongdoer, either in terms of psychological closeness or in terms of hierarchical closeness. To do so, we focus on experimental studies to allow for causal inferences about the role of social distance/closeness on whistleblowing intentions. Finally, compared to the previous meta-analysis by (Mesmer-Magnus & Viswesvaran, 2005), we identify 20 articles.

The remainder of this research is organized as follows. In the next section, we briefly develop the theoretical arguments regarding the social context of whistleblowing and present the hypotheses to be tested. Following this, we describe our meta-analytic procedures, including the literature retrieval, application of selection criteria, coding procedure, and effect size computation. Third, we present our findings. Finally, we discuss the main findings as well as provide suggestions for future research.

The Social Nature of Whistleblowing

The subject of whistleblowing has received much attention by scholars since the 1980s (Vandekerckhove & Lewis, 2012), making it one of the most debated issues of business ethics literature (Teo & Caspersz, 2011). Whistleblowing is typically defined as "the disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action (Near & Miceli, 1985, p. 4). Whistleblowing is a dynamic process that requires at least three social actors: (a) the observer of wrongdoing and would-be whistleblower, (b) the perceived wrongdoer who commits the wrongdoing, and (c) the recipient of the report on wrongdoing. Each of these actors takes actions in response to others (Near & Miceli, 1996). In the following, we focus more closely on the psychological closeness and the hierarchical power distance as the sources of social distance/closeness.

Psychological Closeness

Humans, as social primates, have evolved to live in social groups, spending most of their life socializing with other fellow humans. The strength of social relationships is characterized by interpersonal closeness (Marsden & Campbell, 1984) stemming from feelings of connection between individuals (Gino & Galinsky, 2012), either because they belong to the same social group or because they share even subtle forms of social categorization such

as in a minimal group paradigm (Tajfel et al., 1971). To capture the various levels of manifestation of an interpersonal relationship, we conceptually define it as psychological closeness that is “feelings of attachment and perceived connection toward another person or people” (Gino & Galinsky, 2012, p.16).

A central feature of human behavior is people’s tendency to view themselves and others in terms of group memberships, through the lens of ingroups (groups they belong) and outgroups (groups they do not belong) (Tajfel & Turner, 1979; Tajfel et al., 1971). A behavioral implication of this social categorization is ingroup favoritism. It is argued that people tend to favor ingroups over outgroups. Group affiliation was particularly important during our ancestral past as it provided immense survival and reproductive benefits and, thus, an evolutionary explanation of ingroup favoritism is plausible (McDonald et al., 2012). Behaviors affected by the ingroup/outgroup categorization have been discerned in many contexts such as preferential treatment (Levine et al., 2005), preferential allocation of resources (Fowler & Kam, 2007), and cooperation (Yamagishi & Mifune, 2009). In addition, people tend to justify (Gino & Galinsky, 2012) or judge less harshly (van der Toorn et al., 2015) negative actions of those they feel close to.

Organizations can be viewed as large social groups where individuals interact and form personal and informal relationships with their colleagues beyond the formal or professional ones. People at work continuously engage in social relationships that vary in depth and quality (e.g., friendships, close relationships, romantic relationships), with their coworkers, supervisors, and others (Campbell & Campbell, 2012). Given how much time individuals spend at work, workplace relationships are considered to be an important part of the organizational life and can influence employees’ attitudes and behaviors. The frequent interaction with colleagues helps in the development of trust and social relationships at work. Often, these peer relationships are governed by an unwritten code of loyalty called “wall of silence” that allows for solidarity and protection (Rothwell & Baldwin, 2007), and the disclosure of a colleague’s malfeasance can be viewed as an act of betrayal and a breach of trust (Greenberger et al., 1987; Trevino & Victor, 1992) that paves the way for adverse outcomes such as retaliation (Curtis et al., 2021; Mesmer-Magnus & Viswesvaran, 2005) and stigmatization (Pershing, 2003).

Since trust and loyalty are critical components of human relationships, would-be whistleblowers may refrain from reporting colleagues, especially the closest ones, as a response to the fear of being retaliated or stigmatized. In essence, our argument is that psychological closeness is negatively related to whistleblowing.

Power and Status¹

Another factor that influences the decision to blow the whistle is the power distance between the observer of wrongdoing and the wrongdoer. Power is the most fundamental element in the development of any society and an important form of social influence (Russell, 1938) and stems from asymmetries in social relations (Hershcovis et al., 2017). In an organizational context, the distribution of power is formalized in the hierarchical structure (Hofstede, 2001). Whether it stems from a position in an organization, an interpersonal relationship, or an individual characteristic (Ragins & Sundstrom, 1989), power tends to increase social distance affecting interpersonal relationships (Smith & Magee, 2015) including employees’ relationships with their supervisors (Clugston et al., 2000; Erdogan & Liden, 2002).

As power distance reflects an understanding of hierarchy and positional authority, we consider power distance as the relative hierarchical distance between two parties. Specifically, we use the definition provided by Taylor and Curtis (2013). The authors termed the hierarchical distance between the wrongdoer and the would-be whistleblower as “power distance” (p.23). Given that hierarchical distance is the degree of closeness within the organizational hierarchy, we, in turn, define it as hierarchical closeness.

Power relations between whistleblowers and wrongdoers are important when investigating the whistleblowing decision process. Prior research suggests that whistleblowing is less likely when it involves wrongdoers who are at higher levels of an organization because of the costs that come with blowing the whistle against these individuals (Dozier & Miceli, 1985; Miceli et al., 1991; Near & Miceli, 1987). For instance, the power of the wrongdoer is crucial in the retaliation process. Individuals who blow the whistle on high-ranking wrongdoers are more likely to be retaliated against (Cortina & Magley, 2003; J.-Y. Lee et al., 2004; Rehg et al., 2008).

The power and status of the wrongdoers also influence whether they are protected or not by the organization. Organizations are less likely to take action against powerful or high-level wrongdoers (Bergman et al., 2002; Near & Miceli, 1995). Their reluctance to sanction powerful employees can be due to their dependence on the wrongdoing or the wrongdoer (Near & Miceli, 1995; Rehg et al., 2008) as some wrongdoings are often committed by corporate executives on behalf of the organization. However, organizations may also be more willing to take action against high-status perpetrators because of the potential organizational damage coming from a high-profile incident (Bergman et al., 2002).

¹ Although power and status are two distinct properties of the social world (Magee & Galinsky, 2008), for the purposes of the meta-analysis the two terms will be conflated.

Social influence theories may explain whistleblowing when the perpetrator is a superior. Prior research has shown that obedience pressure coming from people in positions of authority has an adverse effect on individuals' judgments and decisions (Lord & DeZoort, 2001) and it is highly likely to explain whistleblowing decisions (Taylor & Curtis, 2013).

Taking the above into consideration, we suggest that the lesser the hierarchical closeness, the higher the intentions of the observer to blow the whistle.

Methods

Our meta-analysis incorporates experimental studies that investigate how the social closeness between the wrongdoer and observer of wrongdoing influences the latter's willingness to blow the whistle. To this end, the following steps were taken: (a) identification of articles through database searching, (b) definition and application of inclusion criteria to screen out non-eligible studies, (c) coding of study characteristics, (d) calculating effect sizes, (e) conducting meta-analysis, (f) conducting moderator analysis, and (g) estimating the publication bias.

Literature Search

In order to identify as many relevant studies as possible, five complementary search strategies were employed. First, we examined seven electronic databases: (1) Web of Science, (2) Scopus, (3) Business Source Premier, (4) ABI/INFORM Global, (5) Proquest, (6) PsychInfo, and (7) Google Scholar, using search terms related to (1) whistleblowing and (2) closeness. We applied a search strategy using the terms (*whistleblow* OR whistle-blow* OR "blow* the whistle" OR "peer report*"*) AND (*closeness OR cohes* OR relation* OR friend* OR likeab* OR distance*). Google Scholar results were retrieved using the Publish or Perish software (Harzing, 2007). Second, we reviewed the references cited in relevant reviews (Culiberg & Mihelič, 2017; L. Gao & Brink, 2017; G. Lee & Xiao, 2018) and meta-analysis (Mesmer-Magnus & Viswesvaran, 2005). Third, we emailed prominent scholars in the field of whistleblowing asking them if they were aware of any unpublished studies. Fourth, we emailed requests to professional organization listservs (e.g., Society for Judgment and Decision Making, European Association for Decision Making) seeking for any unpublished manuscripts. Finally, using a two-way "snowballing" technique, we manually searched all references cited in the retrieved studies (backward searching) as well as all articles citing the original studies using Google Scholar and Web of Science (forward

searching). These five search strategies yielded a final sample of 20 articles that resulted in 22 studies and 23 effect sizes. The publication window ranged from 1972 to May 2022. We chose 1972 as a starting point for the literature search because all literature on whistleblowing traces whistleblowing in an organizational context to 1972 (Vandekerckhove, 2006, p.8).

Our literature search resulted in 4322 articles, which was then narrowed to 2590 after deduplication. After reviewing each article's title, abstract, and keywords, 2538 articles were excluded and 56 underwent full-text review. A total of 20 articles (16 published, 4 unpublished) comprising a total of 4316 participants met the minimum quality criteria and were examined in detail. These articles are marked with an asterisk in the reference section. An overview of the study selection process is summarized in the PRISMA (Moher et al., 2009) flow chart in Fig. 1. Table 1 lists the studies that were included in this meta-analysis, their effect sizes, the conceptualization and operationalization of closeness in each study, study location, and a brief description of the whistleblowing context.

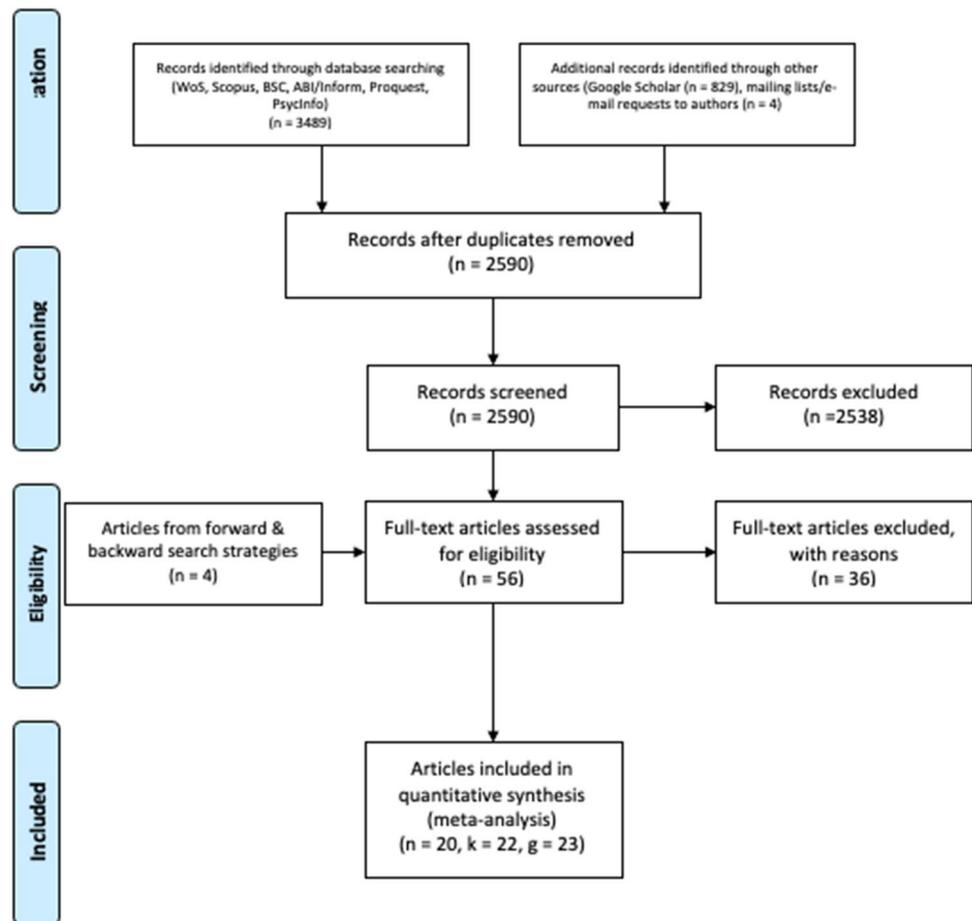
Study Selection Criteria

All three authors followed three inclusion criteria to determine the relevance of retrieved studies for research purposes. First, to ensure causality, we only included experimental studies, in which participants were randomly assigned to a "close" condition and compared to a "distant" condition. Non-experimental studies (e.g., correlational or qualitative) were excluded. Second, the studies must have provided sufficient statistical information to compute effect sizes of interest. Third, the studies must have been written in English. Given that our research question concerns the relationship between whistleblower and wrongdoer, we excluded studies on whistleblower-organization relationship.

Coding Procedure

The first two authors coded the means, standard deviations, and sample sizes of both experimental conditions for each observation to calculate Cohen's *d*. For each study, the coders also coded the following information: (a) form of closeness (psychological closeness or hierarchical closeness), (b) type of research participants (students or professionals), (c) publication status (published or unpublished) (d) cultural country scores. The agreement between coders was very good as indicated by the high intraclass correlation coefficient (ICC > 0.81) for the continuous variables and the high Cohen's kappa ($\kappa = 1$) for the categorical variables. Any discrepancies were resolved by reaching a consensus through discussion.

Fig. 1 PRISMA flow chart outlining search strategy implementation (n = number of articles, k = number of studies, g = number of relevant effect sizes)



Statistical Analyses

Effect Size Calculation

All statistical analyses were performed using the open-source statistical software (R Core Team, 2020). If authors did not provide Cohen's d , reported data (means and standard deviations, F -values, or beta coefficients) extracted from the selected papers was transformed to Cohen's d with the R package "compute.es" (Del Re, 2013). Experimental group sample sizes were calculated from reported sample sizes. If group sample sizes were not reported, we divided the total sample into equal groups, even if this resulted in fractional sample sizes. When a single study provided multiple measures of the dependent variable, we implemented the Borenstein et al., (2009, Eq. (24.4)) method to calculate the aggregate dependent effect sizes prior to meta-analysis, so that each study contributes only a single effect size to the meta-analysis. This aggregation method is recommended as it was found to be the least biased and most precise (Hoyt & Del Re, 2018).

Weighting of Effect Sizes

For the meta-analysis of the selected studies, we used a random-effects model, which we deemed to be more appropriate than the alternative, a fixed-effect model. The fixed-effect model assumes that all studies included in the meta-analysis share a common true effect size and differences between observed effect sizes are due to sampling error, an unrealistic assumption. A random-effects model accounts for the heterogeneity of effect sizes and hence, results allow for more generalizable conclusions (Field, 2001; Hedges & Vevea, 1998; Hunter & Schmidt, 2000). Research has shown that the Hedges–Veeva method (Hedges & Vevea, 1998) works better for standardized mean differences (Marín-Martínez & Sánchez-Meca, 2010). Therefore, we employed the Hedges–Veeva method in which the study-level effect sizes are weighted by inverse variances. Meta-analysis was conducted using the "metafor" R-package (Viechtbauer, 2010).

Table 1 Effect size, conceptualization, and operationalization of closeness, country, and context of all included studies

Author (year)	Effect size	Conceptualization of closeness	Operationalization of closeness	Country	Whistleblowing context
Ahmad (2011)	0.23	hierarchical	status (level of power) (high vs. low)	Malaysia	Participants (internal auditors) read four scenarios in which they become aware of a wrongdoing at a company
Anvari (2018) (Study 1.1)	-0.50	psychological	relational closeness (friend vs. not friend)	Australia	Participants (university students) read a scenario in which they imagine themselves participating in a study where the experimenter asks them to fudge the data
Boo et al. (2016)	-0.14	psychological	working relationship (close vs. not close)	Singapore	Participants (Big 4 auditors) read a scenario in which an audit manager discovers that the audit engagement partner allows a misstatement that materially overstates the revenue and profits of the client
Brink et al. (2018)	0.37	hierarchical	rank within the firm (superior vs. peer)	US	Participants (account managers) read a scenario in which the would-be whistleblower discovers a fraudulent financial reporting case that (which) occurred to meet the firm's financial target
Curphy et al. (1998)	-0.63	psychological	emotional closeness (high vs. low)	US	Participants (US Air Force Academy cadets) read twelve scenarios in which they witness another cadet violating the ethics code
Daritano and Oabel (2021)	-1.34	psychological	emotional closeness (high vs. low)	Philippines	Participants (Philippine Military Academy cadets) read twelve scenarios in which they witness another cadet violating the ethics code
J. Gao et al. (2015)	0.37	hierarchical	power status (high vs. low)	US	Participants (account managers) read two scenarios in which an employee becomes aware of a fraudulent act (fictitious supplier case, qualification fee case)
Kaplan et al. (2009)	0.11	psychological	group membership based on gender (ingroup vs. outgroup)	US	Participants (evening MBA students) discover a fraudulent financial reporting case that involves overstated assets
Khan and Howe (2020) (Study 1)	-1.17	psychological	entitativity (family member vs. fellow student)	US	Participants (undergraduate students) read a scenario in which they become aware that a person who works with visually impaired older adults steals money from them
Khan and Howe (2020) (Study 2)	-0.12	psychological	entitativity (close colleague vs. not close colleague)	US	Participants (Amazon MTurkers) read a scenario in which they become aware that a colleague has been falsely exaggerating the effectiveness of a new medical device that detects pediatric cancer
King (1994) (Study 2)	-0.22	psychological	relational closeness (close vs. not close friends)	US	Participants (registered nurses) read scenarios in which they observe a case of professional incompetence (wrong medication, omission of handwashing)

Table 1 (continued)

Author (year)	Effect size	Conceptualization of closeness	Operationalization of closeness	Country	Whistleblowing context
King (1994) (Study 3)	-0.19	psychological	relational closeness (close vs. not close friends)	US	Participants (registered nurses) read scenarios in which they observe a case of professional incompetence (wrong medication, omission of handwashing)
McIntosh et al. (2019)	0.39	hierarchical	power structure (hierarchical vs. lateral)	US	Participants (graduate students) read a scenario in which a graduate student becomes aware of a research misconduct that involves data falsification
Miller and Thomas (2005)	-0.06	psychological	relational closeness (close vs. not close)	Canada	Participants (undergraduate management students) read three scenarios in which an employee observed an unethical act at a company
Miller and Thomas (2005)	0.16	hierarchical	relative position (superior vs. peer)	Canada	Participants (undergraduate management students) read three scenarios in which an employee observed an unethical act at a company
Robertson et al. (2011)	-0.29	psychological	likeability (more vs. less likeable)	US	Participants (professional auditors, members of the AICPA (American Institute of Certified Public Accountants) become aware of that their audit manager is considering an employment offer from a client, which constitutes a violation of the AICPA Code of Professional Conduct, as it could impair independence
Scheetz (2016) (Exp. 1)	-0.43	psychological	interpersonal affect (likeable vs. not likeable)	US	Participants (graduate business students) read a scenario in which a company's senior accountant discovers that another senior accountant of the company is involved in a check cashing scheme
Supriyadi and Prasetyaningsih (2021)	-0.48	psychological	working relationship (close vs. not close)	Indonesia	Participants (graduate accounting students) read a scenario in which an audit manager discovers that the audit engagement partner allows a misstatement that materially overstates the revenue and profits of the client
Taylor and Curtis (2013)	0.42	hierarchical	relative position (superior vs. peer)	US	Participants (audit seniors) read a scenario in which they imagine themselves observing the wrongdoer throwing away review notes from an audit partner, which constitutes a violation of professional standards
Vinancia et al. (2019)	0.70	hierarchical	authority status (level of power) (high vs. low)	Indonesia	Participants (accounting students) acted as the government's internal auditors in an experiment
Wang & Oh (2011)	-0.67	psychological	interpersonal closeness (close vs. distant)	China	Participants (MBA students) read a scenario about a failing software project

Table 1 (continued)

Author (year)	Effect size	Conceptualization of closeness	Operationalization of closeness	Country	Whistleblowing context
Wang et al. (2017)	-0.61	psychological	interpersonal closeness (high vs. low)	China	Participants (software engineers) have knowledge about a failing project for which the project team leader asks the team members to remain silent about the project's status and hide from senior management
Wijayanti and Yandra (2020)	-0.53	psychological	emotional connection (high vs. low)	Indonesia	Participants (accounting and banking undergraduate students) read three scenarios in which they become aware of a cheating case (fake invoices, mysterious bank account, misclassification)

Culture as a Moderator

Considering that cross-cultural differences in moral values can be a source of difference in ethical judgment and decision-making (Graham et al., 2011; Haidt et al., 1993), we further chose to examine national culture as an additional moderator of the relationship between closeness and whistleblowing. People from collectivist cultures might be less willing to blow the whistle because loyalty, a core value that binds people together, is deemed important in collectivist societies (Dungan et al., 2015). Indeed, cross-cultural differences in perceptions of whistleblowing exist, with people from collectivist cultures viewing whistleblowing less favorably than people from individualist cultures (e.g., Chiu, 2003; Tavakoli et al., 2003). For the purpose of this meta-analysis, we extracted cultural country scores from the Hofstede Insights Country Comparison database (Hofstede Insights, 2022). When a study did not provide information about the country, we asked the authors for additional information, or if this was not possible, we used the first author's institutional affiliation to determine the country (Kling et al., 1999).

Due to the number of moderator analyses (2), a Bonferroni correction was applied to correct the p -values. After the Bonferroni correction, a p -value of <0.025 was considered statistically significant.

Publication Bias

A common concern for any meta-analysis is the publication bias, often referred to as the "file drawer problem" (Rosenthal, 1979). Publication bias is present when the probability that a study is submitted to journals or accepted for publication is contingent to the magnitude, direction, or significance of the study's results. For example, studies with statistically significant findings are more likely to be submitted or published than studies with non-significant results and thus, these studies would provide a biased view of the actual effect size. Publication bias was evaluated using the contour-enhanced funnel plot (Peters et al., 2008) and the Egger's test (Egger et al., 1997). Publication bias was further assessed by conducting the p -curve analysis (Simonsohn et al., 2015, 2014a, b). If publication bias was found, the trim-and-fill method (Duval & Tweedie, 2000) was applied, providing effect sizes adjusted for publication bias.

Results

Our meta-analysis followed a hierarchical breakdown analysis (Hunter & Schmidt, 2004). First, a global model of all studies used in this meta-analysis was analyzed, followed by a hierarchical moderator analysis with closeness

Table 2 Main results of the effect of closeness on reporting behavior

	<i>g</i>	<i>N</i>	<i>d</i>	95% CI	<i>p</i>	<i>I</i> ²
All studies	23	4316	-0.21	[-0.42; 0.00]	.05	91.2%
Psychological closeness	16	3028	-0.46	[-0.64; -0.27]	<.001	86.0%
Hierarchical closeness	7	1378	0.34	[0.23; 0.46]	<.001	0.00%

g number of effect sizes, *N* sample size, *d* Cohen's *d*, 95% CI 95% confidence interval, *p* *p*-value, *I*² heterogeneity

as a moderator. The results are presented in Table 2. The results of the global model revealed a significant, overall effect size, $d = -0.21$. This finding suggests that the closer to the wrongdoer one is, the less likely one is to blow the whistle. In addition, there was a substantial heterogeneity between studies, $I^2 = 91.2\%$. Breaking down by the moderator variable slightly reduced the heterogeneity for the studies on psychological closeness, $I^2 = 86.0\%$, and completely for those on hierarchical closeness, $I^2 = 0\%$. At a moderator level, effect sizes were significantly different between the two subgroups of studies. The hierarchical breakdown analysis revealed a significant effect for psychological closeness, such that feeling closer to the wrongdoer makes one less willing to report him/her ($d = -0.46$), and a significant effect for hierarchical closeness, such that being hierarchically closer to the wrongdoer increases reporting intentions ($d = 0.34$). A forest plot for each subgroup is displayed in Fig. 2. The results of a meta-regression analysis revealed no moderating effect of culture ($p = 0.39$), indicating that the cultural background (individualist vs. collectivist) does not influence the relationship between closeness and whistleblowing decision.

Publication bias was assessed using a contour enhanced funnel plot, the Egger's test, and a *p*-curve analysis. A visual assessment of the contour funnel plot revealed no asymmetry indicating that there is no publication bias (Fig. 3). The Egger's test confirmed the absence of publication bias ($p = 0.80$). As a final robustness check we conducted a *p*-curve analysis. The *p*-curve results based on the significant right-skewness test ($z = -9.365$, $p < 0.001$) and the non-significant flatness test ($z = 6.367$, $p > 0.999$) suggested that the included studies reflected a true effect rather than publication bias or selective reporting (e.g., *p*-hacking) (Fig. 4). Taken the results of all tests together, there was no evidence of publication bias and therefore no further adjustment of effect size was needed.

Discussion

The closeness of the wrongdoer to the whistleblower might be an exhibition of the personal power of the former over the latter (Miceli et al., 2008). The view of (Mesmer-Magnus & Viswesvaran, 2005, p.291) who stated that

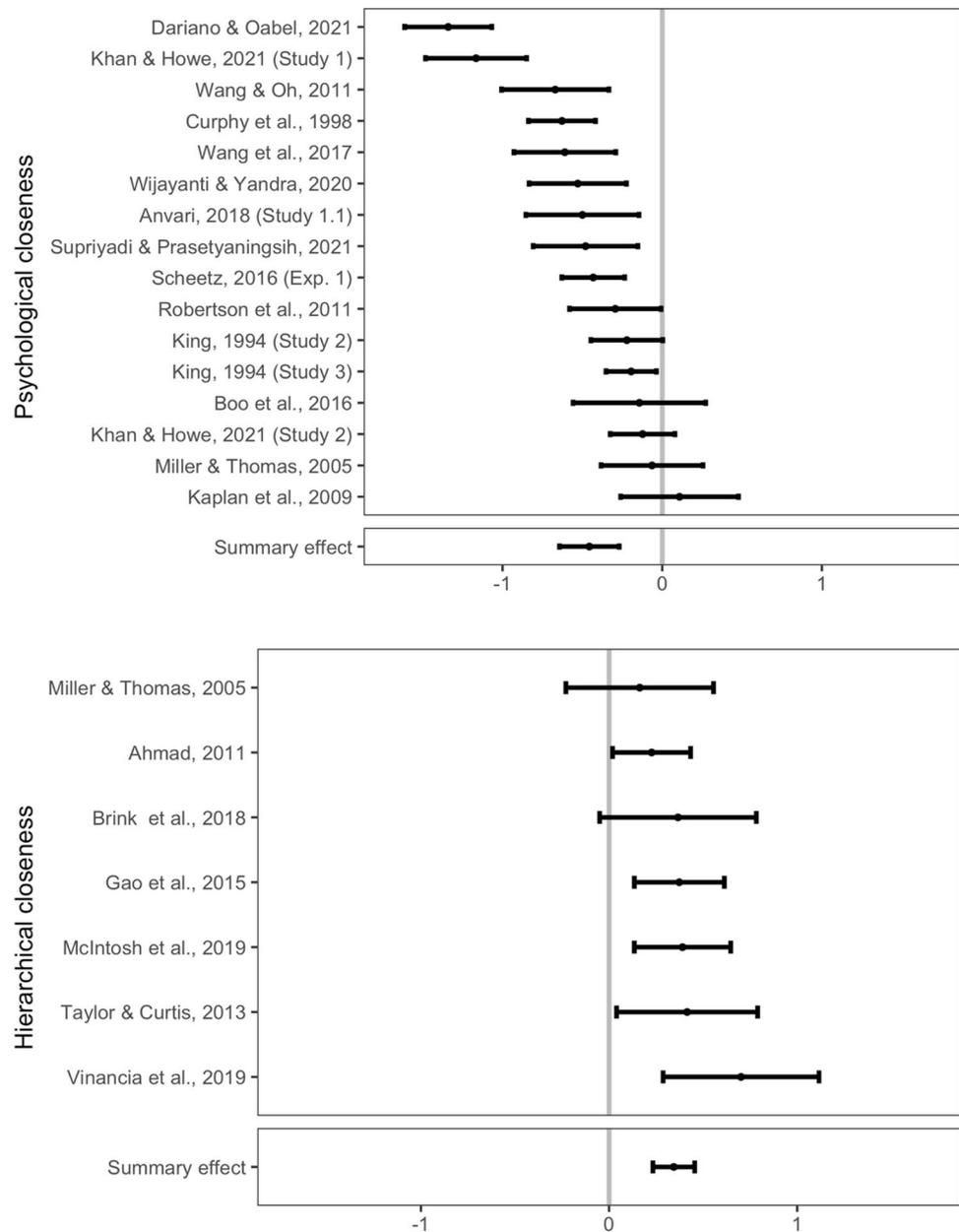
“the closer the observer was to the wrongdoer, whether interpersonally or with respect to organizational structure, the more likely it was that he or she intended to blow the whistle”, served as a springboard for our meta-analysis. In order to understand the direction and magnitude of the effect of closeness on whistleblowing, it is important to further explore it, as the way it is operationalized can potentially drive reporting intentions in opposite directions. People are less likely to report a wrongdoer when he or she is a close other compared with a distant other. On the other hand, the relative hierarchical position between the whistleblower and the wrongdoer may affect reporting, such that people are more likely to blow the whistle when the perpetrator is a peer than when the perpetrator is a superior. In this meta-analytic review, we focused on the notion of social distance/closeness that stems either from psychological closeness or hierarchical closeness.

Using a random-effects model, we examined 20 articles and 22 studies that provided 23 effect sizes. We followed a hierarchical breakdown strategy, in which we first analyzed all studies before breaking them down to a moderator level. Specifically, our main meta-analysis revealed a significant overall effect, $d = 0.21$, and a high level of heterogeneity, 91.2%. Further decomposition of closeness into psychological and hierarchical closeness subgroups reduced the heterogeneity for both subgroups. As expected, our results revealed the two dimensions of closeness to be related to whistleblowing with their effects working in opposite directions. In particular, when people feel psychologically close to the perpetrator (e.g., friends), the less likely they are to blow the whistle. Conversely, the closer they are to the perpetrator with respect to the organizational hierarchy (e.g., peer), the more likely to report him/her. Additionally, to account for any culture differences, we used Hofstede's cultural dimension of individualism and collectivism. Culture, however, did not moderate the effect of closeness on whistleblowing.

Implications

The findings from this study have implications for both practice and theory. With respect to practice, it is crucial for organizations and managements to foster an organizational climate that eases the decision to report observed wrongdoing committed by individuals at a higher level in

Fig. 2 Forest plot for the effects of each subgroup. Error bars represent the 95% confidence intervals



the organizational hierarchy. This may be achieved by establishing safeguards that protect whistleblowers against retaliation. One way to protect those employees who decide to disclose a wrongdoing is by developing an anti-retaliation policy that punishes those who retaliate against whistleblowers. Moreover, once concerns are raised, organizations should make sure that the whistleblower's identity is kept confidential. Anonymous reporting channels could help towards this direction. Regarding violations committed by close others such as friends, it is difficult for organizations to formally intervene besides encouraging reporting and protecting the whistleblower. Additionally, given that wrongdoings committed by superiors are less likely to be questioned

and therefore to be reported, organizations' ethics training programs should increase individuals' awareness of violations. It is important for employees to understand that reporting superior wrongdoing is equally or more important as reporting peer wrongdoing given that fraud is strongly correlated with the level of authority of the wrongdoer (ACFE, 2020).

Limitations

In this meta-analysis we conducted a comprehensive literature search, spanning from 1972 to 2022, following a

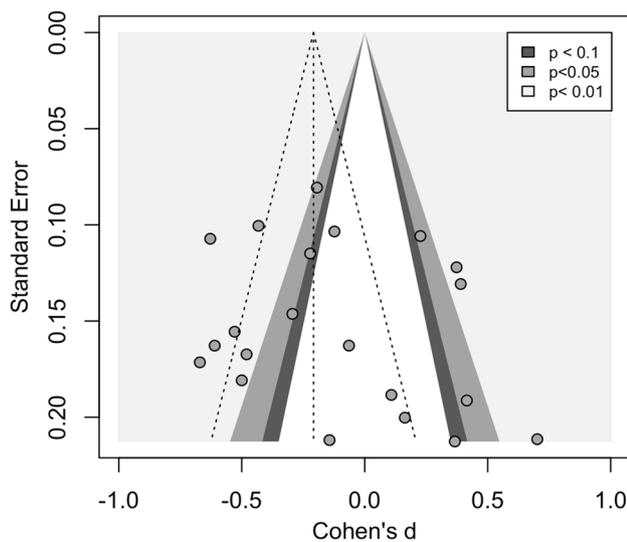


Fig. 3 Funnel plot for visual inspection of publication bias showing standard error as a function of effect size

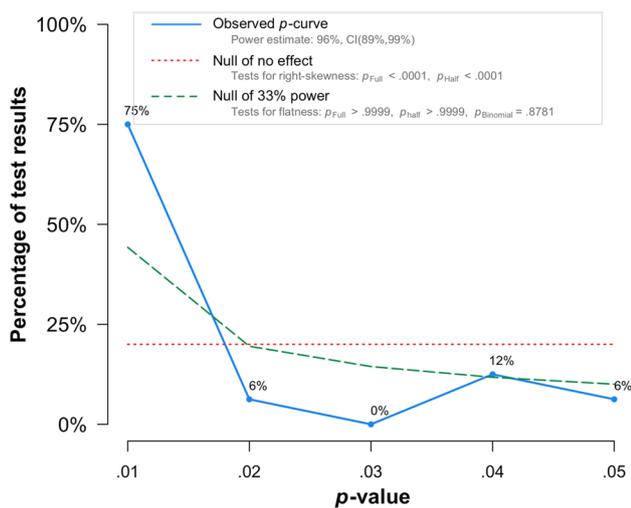


Fig. 4 *P*-curve analysis result. Note: The observed *p*-curve presents the distribution of significant *p* values. The *p*-curve includes 16 statistically significant studies ($p < .05$), of which 13 have $p < .025$

detailed search strategy. Moreover, the inclusion of unpublished research aimed to reduce the problem of publication bias, whereas the inclusion of experimental studies allowed for a causal inference concerning the relationship between closeness and whistleblowing. By focusing our interest on experimental research and not on research that uses surveys such as the Merit Systems Protection Board survey in the USA, we eliminated any possibility of non-independence of the samples. However, the last two represent both a strength and limitation for a meta-analysis. The decision to include unpublished studies can be problematic, as they have not

been peer-reviewed and therefore may be of lower quality than published research. The exclusion of non-experimental studies may have not identified some relevant studies that could generate a larger body of evidence. One limitation of this study is the small sample size. Therefore, we hope that our findings will encourage future research to further investigate the role of closeness between the observer of the wrongdoing and the wrongdoer. Finally, our study may be subjected to language bias as we only included articles published in English. However, English language bias is accepted in meta-analysis (Eisend, 2019).

Future Research

Subsequent research could examine the role of other forms of closeness such as spatial closeness or psychological closeness on the basis of group memberships and associated social identities (for the latter see (Anvari et al., 2019). In this review, only one study (Kaplan et al., 2009) attempted to investigate whistleblowing by focusing on gender as a group. Given that individuals can be members of many formal groups within the organization (e.g., workgroup, departments) (Ashforth & Johnson, 2001), future work should explore how work-related group memberships influence the decision to report a colleague. This is particularly interesting, as organizational group boundaries may create intergroup biases (Granitz & Ward, 2001), which may influence reporting decision. Future research should also examine hierarchical relationships in which the whistleblower is equally or more powerful than the wrongdoer (e.g., superior-to-superior and superior-to-subordinate), something that has not been investigated so far. We suggest that future research investigates the complexity of relationships within organizations by focusing on how the interplay of various personal and hierarchical relationships influences the decision to blow the whistle. For example, situations where the two types of closeness may counteract each other could be an interesting topic for future research. Following what we mentioned above about the unexplored relationship in which the would-be whistleblower is more powerful than the wrongdoer, a topic of interest could be a close relationship (e.g., friendship) between a supervisor and a subordinate.

Future studies may also look for additional moderators of the relationship between closeness and whistleblowing. Although ingroup favoritism is quite robust as a phenomenon, it is not unconditional. Prior research has shown that individuals evaluate unlikable ingroup members more negatively than unlikable outgroup members, a phenomenon called the black sheep effect (Marques et al., 1988). As such, the decision to blow the whistle could be a manifestation of ingroup favoritism or the black sheep effect. The emergence of one or the other depends on several factors such as the characteristics of the misconduct, the characteristics

of the wrongdoer, and the characteristics of the person who evaluates the misconduct (Otten & Gordijn, 2014). Thus, the identification of moderating variables favoring one or the other phenomenon may represent a new direction for future research.

Another potential area for future research could be identifying possible mediators to gain an understanding of the “why” factor behind our findings. The breach of loyalty may act as a possible mediator explaining why individuals do not blow the whistle, as retaliation is a significant factor in predicting the whistleblowing decision (Mesmer-Magnus & Viswesvaran, 2005). Additionally, the act of reporting is capable of eliciting stigma when loyalty norms are violated. Derogatory labels such as “snitch” or “rat” can convey a stigmatizing view of the whistleblowers being disloyal. Aside from the stigma of being disloyal, individuals are tainted by the stigma by association due to their association with “bad apples” (Pontikes et al., 2010). As such, stigma by association may compel individuals to refrain from blowing the whistle in order to protect their own reputation (Hussinger & Pellens, 2019). Understanding the mechanisms behind our findings may help organizations develop policies to encourage reporting wrongdoing.

Conclusion

This meta-analysis aims at assessing how the closeness to the wrongdoer influences the decision to report unethical behavior by disentangling the effects of “psychological closeness” versus “hierarchical closeness” on whistleblowing, two dimensions of closeness that their effects work in opposite directions. The results of our research show that the operationalization affects the link between closeness and whistleblowing behavior. In particular, a personal connection to the deviant person decreases the willingness to engage in whistleblowing behavior. On the contrary, results indicate that there is a tendency for closeness, as reflected in the organizational hierarchy, to increase whistleblowing behavior.

Acknowledgements The authors thank Jacob Lund Orquin for his valuable comments and helpful suggestions that improved the manuscript.

Data Availability The data and code that support the findings of this study are available on the Open Science Framework (OSF) at: https://osf.io/f7aj4/?view_only=11eb7c401e2b4fcc9d0e15f8e1b4de42.

Declarations

Ethics Approval This article does not contain any studies with human participants or animals performed by the authors.

Conflict of Interest The authors declare no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

References marked with an asterisk (*) indicate studies included in the meta-analysis

- *Ahmad, S. A. (2011). *Internal auditors and internal whistleblowing intentions: A study of organisational, individual, situational and demographic factors* [Doctoral dissertation, Edith Cowan University]. Research Online Institutional Repository. <https://ro.ecu.edu.au/theses/152>
- Anvari, F., Wenzel, M., Woodyatt, L., & Haslam, S. A. (2019). The social psychology of whistleblowing: An integrated model. *Organizational Psychology Review*, 9(1), 41–67. <https://doi.org/10.1177/2041386619849085>
- *Anvari, F. (2018). *An integrated and empirically tested social psychological model of whistleblowing* [Doctoral dissertation, Flinders University]. Flinders University Theses Collection. <https://theses.flinders.edu.au/view/e7dd4d99-9292-4593-940b-3094a9241289/1>
- Ashforth, B. E., & Johnson, S. A. (2001). Which hat to wear? The relative salience of multiple identities in organizational contexts. In M. A. Hogg & D. J. Terry (Eds.), *Social identity processes in organizational contexts* (pp. 31–48). Psychology Press.
- Association of Certified Fraud Examiners (ACFE). (2020). *Report to the nations: 2020 global study on occupational fraud and abuse*. <https://acfe-public.s3-us-west-2.amazonaws.com/2020-Report-to-the-Nations.pdf>
- Bergemann, P., & Aven, B. (2020). Whistle while you work? The relational determinants of reporting wrongdoing. In *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3528256>
- Bergman, M. E., Langhout, R. D., Palmieri, P. A., Cortina, L. M., & Fitzgerald, L. F. (2002). The (un)reasonableness of reporting: Antecedents and consequences of reporting sexual harassment. *Journal of Applied Psychology*, 87(2), 230–242. <https://doi.org/10.1037/0021-9010.87.2.230>
- Berman, E. M., West, J. P., & Richter, M. N., Jr. (2002). Workplace relations: Friendship patterns and consequences (according to managers). *Public Administration Review*, 62(2), 217–230. <https://doi.org/10.1111/0033-3352.00172>
- *Boo, E., Ng, T. B.-P., & Shankar, P. G. (2016). Effects of incentive scheme and working relationship on whistle-blowing in an audit setting. *Auditing: A Journal of Practice & Theory*, 35(4), 23–38. <https://doi.org/10.2308/ajpt-51485>
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). Introduction to meta-analysis. Wiley & Sons, Ltd. <https://doi.org/10.1002/9780470743386>
- Brink, A. G., Eller, C. K., & Green, K. Y. (2018). The effects of corporate social responsibility and wrongdoer rank on whistleblowing.

- Accounting and the Public Interest*, 18(1), 104–128. <https://doi.org/10.2308/apin-52240>
- Campbell, W. K., & Campbell, S. M. (2012). Theoretical approaches to workplace relationships: Suggestions from research on interpersonal relationships. In L. T. de T. Eby & T. D. Allen (Eds.), *personal relationships. The effect on employee attitudes, behavior, and well-being* (pp. 15–39). Routledge. <https://doi.org/10.4324/9780203123034>
- Chiu, R. K. (2003). Ethical intention: Role judgment and whistleblowing the moderating examining of locus of control. *Journal of Business Ethics*, 43(1), 65–74. <https://doi.org/10.1023/A:1022911215204>
- Clugston, M., Howell, J. P., & Dorfman, P. W. (2000). Does cultural socialization predict multiple bases and foci of commitment? *Journal of Management*, 26(1), 5–30. <https://doi.org/10.1177/014920630002600106>
- Cortina, L. M., & Magley, V. J. (2003). Raising voice, risking retaliation: Events following interpersonal mistreatment in the workplace. *Journal of Occupational Health Psychology*, 8(4), 247–265. <https://doi.org/10.1037/1076-8998.8.4.247>
- Culiberg, B., & Mihelič, K. K. (2017). The evolution of whistleblowing studies: A critical review and research agenda. *Journal of Business Ethics*, 146, 787–803. <https://doi.org/10.1007/s10551-016-3237-0>
- *Curphy, G. J., Gibson, F. W., Macomber, G., Calhoun, C. J., Wilbanks, L. A., & Burger, M. J. (1998). Situational factors affecting peer reporting intentions at the U.S. Air Force Academy: A scenario-based investigation. *Military Psychology*, 10(1), 27–43. https://doi.org/10.1207/s15327876mp1001_3
- Curtis, M. B., Robertson, J. C., Cockrell, R. C., & Fayard, L. D. (2021). Peer ostracism as a sanction against wrongdoers and whistleblowers. *Journal of Business Ethics*, 174(2), 333–354. <https://doi.org/10.1007/s10551-020-04596-0>
- Dariano, M. V. B., & Oabel, A. P. (2021). Determinants of peer reporting intentions of the cadets of the Philippine military academy. *International Journal of Advanced Research in Education and Society*, 3(2), 155–167.
- Dozier, J. B., & Miceli, M. P. (1985). Potential predictors of whistleblowing: A prosocial behavior perspective. *Academy of Management Review*, 10(4), 823–836. <https://doi.org/10.5465/amr.1985.4279105>
- Dungan, J., Waytz, A., & Young, L. (2015). The psychology of whistleblowing. *Current Opinion in Psychology*, 6, 129–133. <https://doi.org/10.1016/j.copsyc.2015.07.005>
- Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, 56(2), 455–463. <https://doi.org/10.1111/j.0006-341X.2000.00455.x>
- Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, 315, 629–634. <https://doi.org/10.1136/bmj.315.7109.629>
- Eisend, M. (2019). Morality effects and consumer responses to counterfeit and pirated products: A meta-analysis. *Journal of Business Ethics*, 154(2), 301–323. <https://doi.org/10.1007/s10551-016-3406-1>
- Erdogan, B., & Liden, R. C. (2002). Social exchanges in the workplace: A review of recent development and future research directions in leader-member exchange theory. In L. L. Neider & C. A. Schriesheim (Eds.), *Leadership* (pp. 65–114). Information Age Publishing.
- Ethics and Compliance Initiative. (2018). *Global business ethics survey: The state of ethics and compliance in the workplace*. <https://www.boeing.com/GBES2018-Final.pdf>
- Field, A. P. (2001). Meta-analysis of correlation coefficients: A Monte Carlo comparison of fixed- and random-effects methods. *Psychological Methods*, 6(2), 161–180. <https://doi.org/10.1037/1082-989X.6.2.161>
- Fowler, J. H., & Kam, C. D. (2007). Beyond the self: Social identity, altruism, and political participation. *The Journal of Politics*, 69(3), 813–827. <https://doi.org/10.1111/j.1468-2508.2007.00577.x>
- Gao, L., & Brink, A. G. (2017). Whistleblowing studies in accounting research: A review of experimental studies on the determinants of whistleblowing. *Journal of Accounting Literature*, 38, 1–13. <https://doi.org/10.1016/j.acclit.2017.05.001>
- Gao, J., Greenberg, R., & Wong-On-Wing, B. (2015). Whistleblowing intentions of lower-level employees: The effect of reporting channel, bystanders, and wrongdoer power status. *Journal of Business Ethics*, 126(1), 85–99. <https://doi.org/10.1007/s10551-013-2008-4>
- Gino, F., & Galinsky, A. D. (2012). Vicarious dishonesty: When psychological closeness creates distance from one's moral compass. *Organizational Behavior and Human Decision Processes*, 119(1), 15–26. <https://doi.org/10.1016/j.obhdp.2012.03.011>
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, 101(2), 366–385. <https://doi.org/10.1037/a0021847>
- Granitz, N. A., & Ward, J. C. (2001). Actual and perceived sharing of ethical reasoning and moral intent among in-group and out-group members. *Journal of Business Ethics*, 33(4), 299–322. <https://doi.org/10.1023/A:1011881211040>
- Greenberger, D. B., Miceli, M. P., & Cohen, D. J. (1987). Oppositionists and group norms: The reciprocal influence of whistleblowers and co-workers. *Journal of Business Ethics*, 6(7), 527–542. <https://doi.org/10.1007/BF00383744>
- Guinote, A. (2017). How power affects people: Activating, wanting, and goal seeking. *Annual Review of Psychology*, 68, 353–381. <https://doi.org/10.1146/annurev-psych-010416-044153>
- Haidt, J., Koller, S. H., & Dias, M. G. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, 65(4), 613–628. <https://doi.org/10.1037/0022-3514.65.4.613>
- Harzing, A.-W. (2007). *Publish or Perish*. <https://harzing.com/resources/publish-or-perish>
- Hedges, L. V., & Vevea, J. L. (1998). Fixed- and random-effects models in meta-analysis. *Psychological Methods*, 3(4), 486–504. <https://doi.org/10.1037/1082-989X.3.4.486>
- Hershcovis, M. S., Neville, L., Reich, T. C., Christie, A. M., Cortina, L. M., & Shan, J. V. (2017). Witnessing wrongdoing: The effects of observer power on incivility intervention in the workplace. *Organizational Behavior and Human Decision Processes*, 142, 45–57. <https://doi.org/10.1016/j.obhdp.2017.07.006>
- Hess, M. F., Treviño, L. K., Chen, A., & Cross, R. (2019). Beyond silence or compliance: The complexities of reporting a friend for misconduct. *Business Ethics: A European Review*, 28(4), 546–562. <https://doi.org/10.1111/beer.12238>
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organisations across nations*. SAGE Publications, Inc.
- Hoyt, W. T., & Del Re, A. C. (2018). Effect size calculation in meta-analyses of psychotherapy outcome research. *Psychotherapy Research*, 28(3), 379–388. <https://doi.org/10.1080/10503307.2017.1405171>
- Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (Second). SAGE.
- Hunter, J. E., & Schmidt, F. L. (2000). Fixed effects vs random effects meta-analysis models: Implications for cumulative research knowledge. *International Journal of Selection and Assessment*, 8(4), 275–292. <https://doi.org/10.1111/1468-2389.00156>

- Hussinger, K., & Pellens, M. (2019). Guilt by association: How scientific misconduct harms prior collaborators. *Research Policy*, 48(2), 516–530. <https://doi.org/10.1016/j.respol.2018.01.012>
- Hofstede Insights. (2022). *Country comparison - Hofstede insights*. <https://www.hofstede-insights.com/country-comparison/>
- Kaplan, S., Pany, K., Samuels, J., & Zhang, J. (2009). An examination of the association between gender and reporting intentions for fraudulent financial reporting. *Journal of Business Ethics*, 87(1), 15–30. <https://doi.org/10.1007/s10551-008-9866-1>
- Khan, S. R., & Howe, L. C. (2020). Concern for the transgressor's consequences: An explanation for why wrongdoing remains unreported. *Journal of Business Ethics*, 1–20. <https://doi.org/10.1007/s10551-020-04568-4>
- King, G. (1997). The effects of interpersonal closeness and issue seriousness on blowing the whistle. *Journal of Business Communication*, 34(4), 419–436. <https://doi.org/10.1177/002194369703400406>
- *King, G. (1994). *An interpersonal analysis of whistleblowing* (Publication No. 9507641) [Doctoral dissertation, Indiana University]. ProQuest Dissertations Publishing
- Kling, K. C., Hyde, J. S., Showers, C. J., & Buswell, B. N. (1999). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin*, 125(4). <https://doi.org/10.1037/0033-2909.125.4.470>
- Lammers, J., Galinsky, A. D., Gordijn, E. H., & Otten, S. (2012). Power increases social distance. *Social Psychological and Personality Science*, 3(3), 282–290. <https://doi.org/10.1177/1948550611418679>
- Lee, G., & Xiao, X. (2018). Whistleblowing on accounting-related misconduct: A synthesis of the literature. *Journal of Accounting Literature*, 41, 22–46. <https://doi.org/10.1016/j.acclit.2018.03.003>
- Lee, J.-Y., Heilmann, S. G., & Near, J. P. (2004). Blowing the whistle on sexual harassment: Test of a model of predictors and outcomes. *Human Relations*, 57(3), 297–322. <https://doi.org/10.1177/0018726704043273>
- Levine, M., Prosser, A., Evans, D., & Reicher, S. (2005). Identity and emergency intervention: How social group membership and inclusiveness of group boundaries shape helping behavior. *Personality and Social Psychology Bulletin*, 31(4), 443–453. <https://doi.org/10.1177/0146167204271651>
- Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *Academy of Management Annals*, 2(1), 351–398. <https://doi.org/10.5465/19416520802211628>
- Marín-Martínez, F., & Sánchez-Meca, J. (2010). Weighting by inverse variance or by sample size in random-effects meta-analysis. *Educational and Psychological Measurement*, 70(1), 56–73. <https://doi.org/10.1177/0013164409344534>
- Marques, J. M., Yzerbyt, V. Y., & Leyens, J. (1988). The “black sheep effect”: Extremity of judgments towards ingroup members as a function of group identification. *European Journal of Social Psychology*, 18(1), 1–16. <https://doi.org/10.1002/ejsp.2420180102>
- Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Social Forces*, 63(2), 482–501. <https://doi.org/10.1093/sf/63.2.482>
- McDonald, M. M., Navarrete, C. D., & Van Vugt, M. (2012). Evolution and the psychology of intergroup conflict: The male warrior hypothesis. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 367, 670–679. <https://doi.org/10.1098/rstb.2011.0301>
- McIntosh, T., Higgs, C., Turner, M., Partlow, P., Steele, L., MacDougall, A. E., Connelly, S., & Mumford, M. D. (2019). To whistle-blow or not to whistle-blow: Affective and cognitive differences in reporting peers and advisors. *Science and Engineering Ethics*, 25, 171–210. <https://doi.org/10.1007/s11948-017-9974-3>
- Mesmer-Magnus, J. R., & Viswesvaran, C. (2005). Whistleblowing in organizations: An examination of correlates of whistleblowing intentions, actions, and retaliation. *Journal of Business Ethics*, 62, 277–297. <https://doi.org/10.1007/s10551-005-0849-1>
- Miceli, M. P., Near, J. P., & Schwenk, C. R. (1991). Who blows the whistle and why? *ILR Review*, 45(1), 113–130. <https://doi.org/10.1177/001979399104500108>
- Miceli, M. P., Near, J. P., & Dworkin, T. M. (2008). Whistle-blowing in organizations. *Taylor & Francis*. <https://doi.org/10.4324/9780203809495>
- Miller, D. L., & Thomas, S. (2005). The impact of relative position and relational closeness on the reporting of unethical acts. *Journal of Business Ethics*, 61(4), 315–328. <https://doi.org/10.1007/s10551-005-8771-0>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7), e1000097. <https://doi.org/10.1371/journal.pmed.1000097>
- Near, J. P., & Miceli, M. P. (1985). Organizational dissidence: The case of whistle-blowing. *Journal of Business Ethics*, 4(1), 1–16. <https://doi.org/10.1007/BF00382668>
- Near, J. P., & Miceli, M. P. (1987). Whistle-blowers in organizations: Dissidents or reformers? *Research in Organizational Behavior*, 9, 321–368.
- Near, J. P., & Miceli, M. P. (1995). Effective whistle-blowing. *Academy of Management Journal*, 20(3), 679–708. <https://doi.org/10.5465/amr.1995.9508080334>
- Near, J. P., & Miceli, M. P. (1996). Whistle-blowing: Myth and reality. *Journal of Management*, 22(3), 507–526. [https://doi.org/10.1016/S0149-2063\(96\)90034-3](https://doi.org/10.1016/S0149-2063(96)90034-3)
- Otten, S., & Gordijn, E. H. (2014). Was it one of us? How people cope with misconduct by fellow ingroup members. *Social and Personality Psychology Compass*, 8(4), 165–177. <https://doi.org/10.1111/spc3.12098>
- Pershing, J. L. (2003). To snitch or not to snitch? Applying the concept of neutralization techniques to the enforcement of occupational misconduct. *Sociological Perspectives*, 46(2), 149–178. <https://doi.org/10.1525/sop.2003.46.2.149>
- Peters, J. L., Sutton, A. J., Jones, D. R., Abrams, K. R., & Rushton, L. (2008). Contour-enhanced meta-analysis funnel plots help distinguish publication bias from other causes of asymmetry. *Journal of Clinical Epidemiology*, 61(10), 991–996. <https://doi.org/10.1016/j.jclinepi.2007.11.010>
- Pontikes, E., Negro, G., & Rao, H. (2010). Stained red: A study of stigma by association to blacklisted artists during the “red scare” in Hollywood, 1945 to 1960. *American Sociological Review*, 75(3), 456–478. <https://doi.org/10.1177/0003122410368929>
- R Core Team. (2020). A language and environment for statistical computing. R Foundation for Statistical Computing. <https://www.r-project.org>
- Ragins, B. R., & Sundstrom, E. (1989). Gender and power in organizations: A longitudinal perspective. *Psychological Bulletin*, 105(1), 51–88. <https://doi.org/10.1037//0033-2909.105.1.51>
- Del Re, A. (2013). compute.es: Compute effect sizes. In *R Package*.
- References marked with an asterisk (*) indicate studies included in the meta-analysis
- Rehg, M. T., Miceli, M. P., Near, J. P., & Van Scotter, J. R. (2008). Antecedents and outcomes of retaliation against whistleblowers: Gender differences and power relationships. *Organization Science*, 19(2), 221–240. <https://doi.org/10.1287/orsc.1070.0310>
- Robertson, J. C., Stefaniak, C. M., & Curtis, M. B. (2011). Does wrongdoer reputation matter? Impact of auditor-wrongdoer performance and likeability reputations on fellow auditors' intention to take action and choice of reporting outlet. *Behavioral*

- Research in Accounting*, 23(2), 207–234. <https://doi.org/10.2308/bria-50022>
- Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, 86(3), 638–641. <https://doi.org/10.1037/0033-2909.86.3.638>
- Rothwell, G. R., & Baldwin, J. N. (2007). Ethical climate theory, whistle-blowing, and the code of silence in police agencies in the state of Georgia. *Journal of Business Ethics*, 70(4), 341–361. <https://doi.org/10.1007/s10551-006-9114-5>
- *Scheetz, A. M. (2016). *The effect of psychological contract violations on employee intentions to report fraud* [Doctoral dissertation, Case Western Reserve University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=case1459529297
- Simonsohn, U., Nelson, L. D., & Simmons, J. P. (2014a). P-curve: A key to the file-drawer. *Journal of Experimental Psychology: General*, 143(2), 534–547. <https://doi.org/10.1037/a0033242>
- Simonsohn, U., Nelson, L. D., & Simmons, J. P. (2014b). p-Curve and effect size: Correcting for publication bias using only significant results. *Perspectives on Psychological Science*, 9(6), 666–681. <https://doi.org/10.1177/1745691614553988>
- Simonsohn, U., Simmons, J. P., & Nelson, L. D. (2015). Better P-curves: Making P-curve analysis more robust to errors, fraud, and ambitious P-hacking, a reply to Ulrich and Miller (2015). *Journal of Experimental Psychology: General*, 144(6), 1146–1152. <https://doi.org/10.1037/xge0000104>
- Smith, P. K., & Magee, J. C. (2015). The interpersonal nature of power and status. *Current Opinion in Behavioral Sciences*, 3, 152–156. <https://doi.org/10.1016/j.cobeha.2015.04.007>
- *Supriyadi, S., & Prasetyaningsih, N. U. (2021). The role of moral reasoning on the effects of incentive schemes and working relationships on whistleblowing: An audit experimental study. *Gadjah Mada International Journal of Business*, 23(3), 215–236. <https://doi.org/10.22146/gamaijb.64394>
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks/Cole.
- Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, 1(2), 149–178. <https://doi.org/10.1002/ejsp.2420010202>
- Tavakoli, A. A., Keenan, J. P., & Crnjak-Karanovic, B. (2003). Culture and whistleblowing: An empirical study of Croatian and United States managers utilizing Hofstede's cultural dimensions. *Journal of Business Ethics*, 43(1–2), 49–64. <https://doi.org/10.1023/A:1022959131133>
- Taylor, E. Z., & Curtis, M. B. (2013). Whistleblowing in audit firms: Organizational response and power distance. *Behavioral Research in Accounting*, 25(2), 21–43. <https://doi.org/10.2308/bria-50415>
- Teo, H., & Caspersz, D. (2011). Dissenting discourse: Exploring alternatives to the whistleblowing/silence dichotomy. *Journal of Business Ethics*, 104(2), 237–249. <https://doi.org/10.1007/s10551-011-0906-x>
- Trevino, L. K., & Victor, B. (1992). Peer reporting of unethical behavior: A social context perspective. *Academy of Management Journal*, 35(1), 38–64. <https://doi.org/10.5465/256472>
- van der Toorn, J., Ellemers, N., & Doosje, B. (2015). The threat of moral transgression: The impact of group membership and moral opportunity. *European Journal of Social Psychology*, 45(5), 609–622. <https://doi.org/10.1002/ejsp.2119>
- Vandekerckhove, W., & Lewis, D. (2012). The content of whistleblowing procedures: A critical review of recent official guidelines. *Journal of Business Ethics*, 108(2), 253–264. <https://doi.org/10.1007/s10551-011-1089-1>
- Vandekerckhove, W. (2006). *Whistleblowing and organizational social responsibility: A global assessment*. Ashgate Publishing Limited.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, 36(3), 1–48. <https://doi.org/10.18637/jss.v036.i03>
- Vinancia, C. V., Utami, I., & Mohamed, N. (2019). Personal cost of reporting and status of wrongdoer: Experimental study of whistleblowing intention. *Asia-Pacific Management Accounting Journal (APMAJ)*, 14(3), 81–103.
- Wang, J., Keil, M., Oh, L., & Shen, Y. (2017). Impacts of organizational commitment, interpersonal closeness, and Confucian ethics on willingness to report bad news in software projects. *Journal of Systems and Software*, 125, 220–233. <https://doi.org/10.1016/j.jss.2016.12.004>
- *Wang, J., & Oh, L. bin. (2011). The impact of relationships and Confucian ethics on Chinese employees' whistle-blowing willingness in software projects. *PACIS 2011 - 15th Pacific Asia Conference on Information Systems: Quality Research in Pacific*. <https://aisel.aisnet.org/pacis2011/208>
- Waytz, A., Dungan, J., & Young, L. (2013). The whistleblower's dilemma and the fairness–loyalty tradeoff. *Journal of Experimental Social Psychology*, 49(6), 1027–1033. <https://doi.org/10.1016/j.jesp.2013.07.002>
- *Wijayanti, D. M., & Yandra, F. P. (2020). The role of incentives, emotional connection, and organizational justice in establishing an effective whistleblowing system: An experimental study. *Jurnal Dinamika Akuntansi Dan Bisnis*, 7(1), 51–68. <https://doi.org/10.24815/jdab.v7i1.14178>
- Yamagishi, T., & Mifune, N. (2009). Social exchange and solidarity: In-group love or out-group hate? *Evolution and Human Behavior*, 30(4), 229–237. <https://doi.org/10.1016/j.evolhumbehav.2009.02.004>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.