



The effects of performance feedback on organizational citizenship behaviour: a systematic review and meta-analysis

Marco Tagliabue , Sigridur Sofia Sigurjonsdottir & Ingunn Sandaker

To cite this article: Marco Tagliabue , Sigridur Sofia Sigurjonsdottir & Ingunn Sandaker (2020) The effects of performance feedback on organizational citizenship behaviour: a systematic review and meta-analysis, European Journal of Work and Organizational Psychology, 29:6, 841-861, DOI: [10.1080/1359432X.2020.1796647](https://doi.org/10.1080/1359432X.2020.1796647)

To link to this article: <https://doi.org/10.1080/1359432X.2020.1796647>



© 2020 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



[View supplementary material](#)



Published online: 10 Aug 2020.



[Submit your article to this journal](#)



Article views: 2412



[View related articles](#)



[View Crossmark data](#)

The effects of performance feedback on organizational citizenship behaviour: a systematic review and meta-analysis

Marco Tagliabue , Sigridur Sofia Sigurjonsdottir and Ingunn Sandaker

Department of Behavioural Sciences, OsloMet – Oslo Metropolitan University, Oslo, Norway

ABSTRACT

Performance feedback is a managerial practice whose effects widely impact job satisfaction and commitment. Job satisfaction and commitment represent antecedents of organizational citizenship behaviour (OCB), denoting a willingness to cooperate. However, there has been little research on the direct relationship between performance feedback and OCB. Previous works addressed their mediating role, such as organization-based self-esteem, job satisfaction or other measures of discretionary effort. Our search of peer-reviewed studies containing measures of feedback and OCB found 15 studies, containing 21 critically appraised correlation measures. While descriptive findings of the systematic review showed a small correlation, studies that contained measures of feedback frequency were more likely to include higher reports of OCB than studies containing measures of feedback properties. After computing correlation scores to effect sizes, findings from the meta-analysis indicated a small average effect size of performance feedback on OCB ($r_{adj} = .27$, 95% CI = .21 – .33). The discussion addresses the differential effects of positive and negative feedback, frequency, and properties of feedback on reports of OCB levels (by employees and supervisors), as well as further applications for line management.

ARTICLE HISTORY

Received 15 July 2019
Accepted 1 July 2020

KEYWORDS

Feedback; job satisfaction; organizational citizenship behaviour; organizational culture; performance management; systematic review

Introduction

Previous research on the antecedents of organizational citizenship behaviour (OCB; Bateman & Organ, 1983; Smith et al., 1983) has heavily emphasized dispositional and attitudinal factors (Scott et al., 2018). The question of whether and which procedural factors may be effectively put in place to directly influence OCB remains yet to be addressed. Performance feedback delivery is traditionally considered an effective (Aguinis et al., 2011; Hom et al., 1982), economic (Komaki et al., 1977), and simple (Prue & Fairbank, 2008) managerial practice for providing information to individuals or groups about the quality and quantity of their behaviour (i.e., performance; Alvero et al., 2001; Prue et al., 1978).

Performance feedback delivery is an important part of line management responsibilities, which are historically informed by the “command and control” school characterized by a rigid and predictable structure (Fayol, 1949) and the scientific management of processes advanced by Taylor that addressed instruction and motivation (see Frederick & Taylor, 1911). Performance feedback remains a relative topic in the management literature and it is important for managers to know how to give effective feedback (Chappelow & McCauley, 2019). It represents an important mechanism for adapting behaviour towards attaining the performance goals of the individual and organization (Greve & Gaba, 2017).

Moreover, performance feedback was found to affect other organizational variables: intrinsic motivation (i.e., performing an activity for no other reward than personal gratification; see Deci, 1971) (Arnold, 1976), job satisfaction (Anseel & Lievens,

2007), fairness (Lambert et al., 2002), efficacy (Jung & Sosik, 2003), and organizational commitment (Tziner & Latham, 1989). These variables comprise some of the antecedents of OCB (Alotaibi, 2001; Bachrach et al., 2001; Carson & Carson, 1998; Ehigie & Otukoya, 2005; Tang & Ibrahim, 1998; for a complete overview, see also Podsakoff et al., 2000) and indicate that feedback can improve both performance and OCB. If that is the case, it should encourage managers and researchers to address to a greater extent this relatively straightforward management practice, which can be of vital importance to the organization. Nevertheless, the direct effects of performance feedback on OCB do not seem to have been addressed as extensively as their indirect effects characterized by the mediating role of job satisfaction (e.g., Williams & Anderson, 1991; Zeinabadi, 2010), organizational commitment (Hasani et al., 2013; Williams & Anderson, 1991), and other types of indicators of effectiveness and wellbeing. Some of these indicators include employee strain (e.g., stress, burnout and role overload performance; Bolino et al., 2015; Bolino & Turnley, 2005; Peng & Chiu, 2010), and organization-based self-esteem (Haider et al., 2019).

As organizational complexity increases, it may be beneficial to inquire about direct relationships between the managerial practice of performance feedback and its effects on OCB. The approach presented throughout this work offers a unique contribution to deepening our understanding of a class of behaviours that maintain and enhance task performance (Borman & Motowidlo, 1993; Dewett & Denisi, 2007; D. W. Organ, 1997). This is achieved by applying an operational definition of cooperation in the management of organizational behaviour that

shares with the concept of OCB the feature of creating positive shared consequences for employees, supervisors, and the organization. Organizations are herein regarded as complex systems (Simon, 1957) that need to meet the demands of their external environments in order to “survive” (Malott, 2016). Organizations *adapt* insofar as they are able to align their structures to the encompassing environmental demands (Axelrod & Cohen, 2000; Bar-Yam, 2002), and their processes to shared organizational goals that entitle members of the organization to share the same set of (positive) consequences. According to Simon (1957), this comprises a condition for cooperation to occur, for administrative organizations (but not only) are systems of cooperative behaviour, which may elicit OCB. For example, Scott et al. (2018) analyzed the relationship between cooperative social network ties and OCB, recommending the inclusion of social structures among the antecedents of OCB.

The present systematic review and meta-analysis seeks to measure the direct effects of positive and negative feedback on OCB while excluding the role of moderators in the model. In other words, the research question guiding the present work is: Does the delivery of feedback correlate positively with OCB levels in a model with no moderators? If so, what characteristics should feedback have in order to be most effective? In fact, establishing a direct relationship between feedback and OCB would be more effective in terms of effort, cost, and complexity than influencing any indirect relationship or effect between the two; in turn, it can increase control and better match the supervisors’ ability to cope with complexity (see Mintzberg, 1973). The choice of focusing on OCB instead of other measures of discretionary effort (i.e., performance beyond the minimum required; Daniels, 2014) rests on the opportunity of operationalization and measurability that needs not be interred from derived constructs. In addition to OCB, other components of discretionary effort include extra-role organizational behaviour (e.g., van Dyne & LePine, 1998), prosocial behaviour (e.g., Brief & Motowidlo, 1986), in-role behaviour (Katz & Kahn, 1966), and contextual performance (Borman & Motowidlo, 1993).

Second, this work aims at describing (systematic review) and quantifying (meta-analysis) the characteristics of feedback delivery (e.g., properties or frequency) when analyzed within a contingent relation with OCB. Similar to Dann (2019), the concept of feedback is herein regarded from a relational perspective: an evidence-based process with an informative and transformational function on the behaviour of the members of an organization. Thus, this work is able to improve the organizational functioning by providing a direct measure and a readily-implementable technology that accounts for (a) *how* and *how often* feedback is delivered, and (b) *how* and *from whom* OCB levels are reported (e.g., self-report or from the supervisor). It serves as a translator of evidence that can guide further applied research and inform the refinement of managerial practices (Daniels, 2019): specifically, implementing performance feedback in a way that can increase performance as well as OCB.

Figure 1 illustrates a simplified conceptual model that includes primary concepts (in bold) and moderators that are interrelated with (positive and negative) feedback and OCB. Throughout this work, the shorter form *feedback* is used consistently and interchangeably with performance feedback. Broadly defined, it intends the degree to which work activities lead to direct and clear information about the effectiveness of their performance (Robbins & Judge, 2017).

In the following two sections, the constructs of OCB and feedback are defined and operationalized focusing on their effects on the encompassing social and organizational environment. Next, the methods and results of the systematic review and meta-analysis inquiring the relationship between feedback and OCB are presented. Following the discussion of findings in the broader context of managing organizational behaviour, we conclude with further research avenues and applied implications to advance a more pragmatic and effective delivery of feedback on performance and OCB.

Organizational citizenship behaviour

The study of OCB is conceptually rooted in the organizational studies in the 1930s and the “human-relation tradition” on

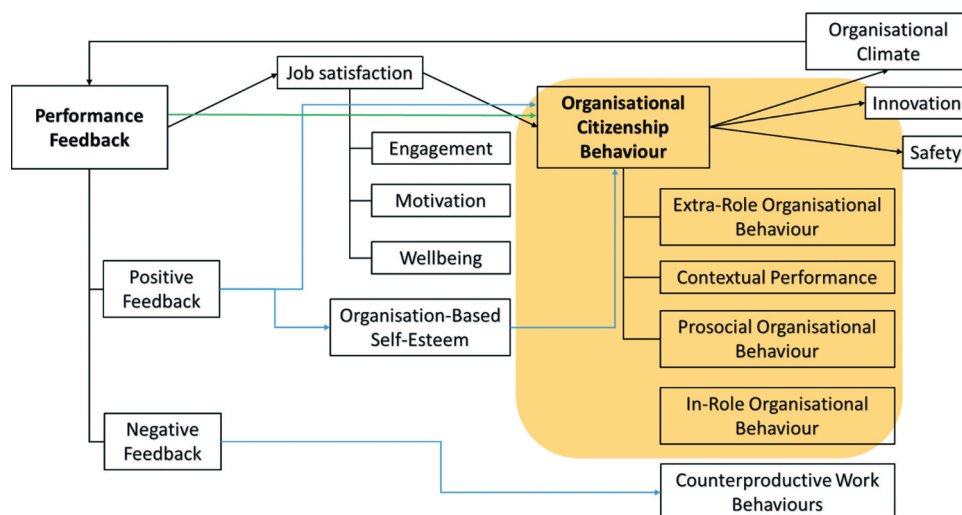


Figure 1. Model of main constructs and mediated terms affecting feedback and organizational citizenship behaviour.

cooperation and collaboration (Organ, 2015). OCB was first introduced by Smith et al. (1983) and used with increasing precision in the subsequent work of Organ (1988, 1994, 1997, 2013, 2015)). Similar to virtuous citizenship in community settings, organizational citizenship is characterized by altruism, conscientiousness, compliance, sportsmanship, courtesy, and civic duty (MacKenzie et al., 1993; Organ & Ryan, 1995). Organ (1988) defined organizational citizenship behaviour as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (p. 4). The term *discretionary* intends unenforceable behaviour that is free from being regulated (and, hence, non-punishable) by the prescription of a contract or job description. Although OCB and discretionary effort are not synonyms and the former includes to some extent the latter, they share functional similarities. Specifically, they represent constructs of cooperation of an organizational member, as they may be operationalized into behaviours belonging to the same functional class of demonstrated effort (cf. motivation) (Lloyd, 2008) towards achieving individual and common goals through cooperation (Håkonsson et al., 2016).

Broadly defined, the concept of discretionary effort is an inferred construct of positive shared consequences (i.e., cooperating). It includes any voluntary effort that reaches beyond the minimum level required in order to meet the formal requirements of the job and contributes towards achieving organizational goals (Yankelovich & Immerwahr, 1984). Although discretionary effort refers to performance that exceeds the goal, its effects and measure may only be inferred from proxies of organizational cooperation. It occurs when employees receive positive feedback for doing their best, regardless of performance thresholds (e.g., Miller et al., 2014). Discretionary effort can be effectively operationalized by measuring the level of OCB, which rests on the concept of *willingness to cooperate* (Barnard, 1938; see also Podsakoff et al., 2000). Thus, OCB enables the analysis of contingencies of performance and the measurement of organizational cooperation at a higher (and more adequate) level of complexity than analysing the simple relation between effort and outcome of individual performance. Given the competitive and complex environmental setting in which organizations operate and conceivably adapt, it may not suffice to trust employees to perform at the level of meeting organizational goals, which are classically referred to as role-defining constrain sets (Simon, 1964). In fact, exceeding them seems not only preferable, but may represent a competitive advantage (see Janssen & Van Yperen, 2004). Increased effort implies that employees reach beyond the tasks specified in their job descriptions; for example, while innovating or continuously improving towards achieving the organizational goals. Furthermore, innovation and creativity were found to determine performance, success, and long-term survival (Anderson et al., 2014). Similar to extra-role organizational behaviour (Organ et al., 2006) or extra-role performance (Bateman & Organ, 1983), these activities are discretionary in nature, formally not liable to rewards, and bear an advantage for the organization (Becker & Kernan, 2003).

Notwithstanding, OCB is not the only concept developed to reach beyond the formal duties of organizational members.

Katz (1964) and colleagues (Katz & Kahn, 1966) distinguished between formal in-role behaviour and extra-role organizational behaviour, further informing the refinement of OCB through the identification of “appreciable” behaviours for organizational well-functioning (Turnispeed, 2003). As in the case of OCB, prosocial organizational behaviour contributes towards the maintenance and sustainability of the organization (Hazzi, 2018). They belong to the same behavioural class, together with extra-role organizational behaviour, which represents a broader descriptive category that intends non-required, but appreciated organizational behaviours that facilitate the organization’s functioning as a social system (Bateman & Organ, 1983). These include other types of discretionary contributions by members to the organizations, such as prosocial behaviour (e.g., Puffer, 1987), spontaneous behaviour (e.g., George & Brief, 1992), contextual performance (e.g., Borman & Motowidlo, 1993), and OCB (e.g., Organ, 2015) (MacKenzie et al., 1998). In the remainder of the present work, we refer to them indistinctly as OCB based on their common functional features of representing organizational cooperation. Furthermore, OCB comprises a collection of behaviours that are generally not directly or explicitly recognized by the organization’s formal reward system (Chwalibóg, 2012).

Conversely, counterproductive work behaviour (CWB) is a class of non-cooperative organizational behaviour insofar as it intends to harm the organization and its stakeholders (Spector & Fox, 2005), and it has received increasing attention from the scientific community (e.g., Bagyo, 2018; Chang & Smithkrai, 2010; Coyne et al., 2013). CWB intends non-forced behaviour that violates significant organizational norms, putting at stake the well-being of its members (Robinson & Bennett, 1995; see also Sackett et al., 2006), or voluntarily harming the organization (Rotundo & Sackett, 2002). Consistent with the model represented in Figure 1, CWB can be regarded as negative or dysfunctional forms of OCB (see Sims & Lorenzi, 1992), but needs not necessarily be considered its orthogonal measure of organizational competition (see Hafidz et al., 2012). In a meta-analysis, Dalal (2005) reported a modest negative relationship ($p = -.32$) between CWB and OCB. This finding may partially be accounted for by the tendency to be ingrained with the mirror image (see Meynell, 1998, p. 190): wherein every “positive” concept must have a corresponding “negative” one, the contingencies supporting CWB could be best understood at the individual level (see also O’Boyle et al., 2011), or taking into account culturo-geographic characteristics (Coyne et al., 2013). Conversely, according to the definition of OCB, the contingencies supporting the good of the organization emphasize the positive shared consequences at the group level.

Organ’s (1977) original interest lay in the relationship between job satisfaction and productivity (i.e., a “happy worker” is a *productive* worker), which is also referred to as the satisfaction-causes-performance hypothesis. Organ found that job satisfaction had a larger effect on behaviours that were not constrained nor governed by job functions, rewards or penalties. In addition to the organizational benefits of having employees who go above and beyond for their organization, previous research has shown a strong link between measures of OCB and several desirable outcomes, including quality of

employee performance, low turnover, low absenteeism, high productivity, high efficiency, reduced costs, and higher customer satisfaction (Podsakoff et al., 2009).

The concept and some diagnostic tools of OCB (e.g., MacKenzie et al., 1993; Lee & Allen, 2002) distinguish between OCB-Individual (OCB-I) and OCB-Organization (OCB-O). The former, OCB-I, is a measure of cooperation among employees or members of the organization. It identifies behaviour that benefits one or more individuals in the organization, by focusing on social behaviour as the unit of analysis. The latter, OCB-O benefits the organizational collective (Lee & Allen, 2002; Organ, 2015). OCB-O is a measure of cooperation between the employee and the organization to which they belong, drawing on organizational behaviour data. In a meta-analysis, Organ and Ryan (1995) concluded that job satisfaction was the most reliable predictor of OCB. However, a review from Podsakoff et al. (2000) found that task feedback had a significant correlation with OCB, which in turn informed the wider aspects of feedback and its relationship to OCB contained in the present work. Furthermore, Podsakoff et al. (2000) listed individual, task, and organizational characteristics and leadership behaviours as antecedents of OCB; notwithstanding, individual factors were the most studied.

Performance feedback

Organizational Behaviour Management (OBM) is the applied behaviour analytic approach concerned with performance management (e.g., Daniels, 2000), employee safety, and the understanding of organizations from a systems perspective (see Wine & Pritchard, 2018). In particular, performance management is concerned with the study of practices and responsibilities that can improve the performance and wellbeing of the employees in the organization (Wilder et al., 2009). Among these, feedback delivery represents one of the most extensively used and researched practices (Bucklin et al., 2000). *Feedback* refers to information about performance that not only enlightens on quality and quantity of past behaviour, but may also set the occasion to change future behaviour (Daniels & Bailey, 2014). For example, employees who receive frequent feedback are more likely to be engaged (Wigert & Harter, 2017) and experience a positive work experience (Wilk & Redmon, 1998).

Feedback is easy and inexpensive to deliver (e.g., Buckingham & Goodall, 2019; Bucklin et al., 2000; Wigert & Harter, 2017), and its effectiveness has been shown in several organizational contexts (Alvero et al., 2001; Balcazar et al., 1985), which include education (e.g., preschools (Bohlmann & Fenson, 2005)), laboratory simulations (Choi et al., 2018), the health sector (e.g., hospitals (Kelley & Gravina, 2018; Nielsen et al., 2009)), restaurants (e.g., DeRiso & Ludwig, 2012; Reetz et al., 2016), and retail (e.g., Eikenhout & Austin, 2005; Loewy & Bailey, 2007). Although being widely resorted to among practitioners, the definition and operationalization of feedback aimed at affecting performance have been informed by different traditions and scientific approaches (Mangiapanello & Hemmes, 2015). For example, some have argued that frequent feedback is associated with increased performance (e.g., Alvero et al., 2001; Balcazar et al., 1985). Wigert and Harter (2017) addressed this issue in a recent Gallup report and concluded

that feedback is ineffective whenever it is not delivered frequently enough (e.g., only on yearly performance appraisals). However, there are several cases in which feedback fails to improve performance. Alvero et al. (2001) found that only 47% of the interventions that consisted of feedback alone (i.e., not in combination with antecedents, goal setting, and/or behavioural consequences) had a positive effect, while 53% of them had a mixed effect. In another review study, the authors reported that feedback had a detrimental effect in about 33% of the interventions, featuring a no- or backfiring effect (Kluger & DeNisi, 1996). Based on these findings, it seems reasonable to claim that there may be other aspects of feedback delivery to include in the analysis of increasingly complex organizational phenomena in order to achieve resolute effects on performance.

In OBM, feedback can be classified as positive or negative. Positive feedback refers to feedback that is intended to *increase* the behaviour to which it is directed. Conversely, the intent of delivering negative feedback is to communicate to the receiver what they did wrong; thus, *decreasing* the target behaviour (Choi et al., 2018). This distinction is process-based and may sound counterintuitive from how positive and negative feedback can be intended as consequence-based, such as classically in the field of economics (e.g., Arthur, 1990). This comprises an empirical distinction and is relevant for the present work to the extent that it rests on previous research findings that concluded: in a workplace where employees receive more positive than negative feedback, and feedback is associated with positive outcomes (e.g., praise and celebrations), job satisfaction is usually higher and there is more discretionary effort among the employees (Daniels & Bailey, 2014). Despite claiming this effect on the broader construct of discretionary effort, these studies did not always include measures of discretionary effort as OCB (Curry et al., 2019), posing, thus, a limit to their extendibility to studies that measure implicitly OCB. In other words, it remains unclear whether the positive effects that feedback may have on performance can be extended to discretionary effort at large, or should be confined to the stricter concept of OCB.

In partial answer to this issue, Kluger and DeNisi (1996) developed a theory named *feedback intervention theory*. They suggested that the driver of organizational behaviour rests on the discrepancy between current behaviour, performance, and goals. Thus, the function of feedback is to change the locus of attention, and three levels were addressed: (a) self, (b) task, and (c) task details. Depending on the level being addressed, the design of feedback interventions fill the information discrepancy that serves different functions (Kluger & DeNisi, 1996, p. 1998). Building on this approach, Hattie and Timperley (2007) emphasized the different aspects of feedback that are important to learning and achieving. Other avenues of research focused on addressing the interaction effects of frequency and specificity of feedback, finding that when feedback was delivered frequently, global and specific feedback had similar effects. However, when feedback was delivered unfrequently, specific feedback had better effects compared to global feedback (Park et al., 2019). Additional implications featured the importance of perceived fairness of supervisor feedback for wellbeing at work (Sparr & Sonnentag, 2008) and the importance of source, timing, and valence when successfully implementing feedback interventions

(Lechermeier & Fassnacht, 2018). These studies pointed to how leader-member exchange can partially mediate the effectiveness of feedback, whose main effects are respectively context-specific and often inconsistent.

A more complex model that addresses the relationship between goal setting, feedback and OCB was advanced by Vigoda-Gadot and Angert (2007). They found that goal setting had a positive effect on OCB at t_1 , but there was no correlation between goal setting and OCB at t_2 . Notably, feedback had a positive correlation with performance and OCB at both t_1 and t_2 (Vigoda-Gadot & Angert, 2007), suggesting that feedback can be an antecedent of both OCB and formal performance. Although there may be several factors that exert influence on performance and other organizational behaviour, it is noteworthy how several feedback assessment tools identify and differentiate between properties and frequency of feedback. In line with the aims of this study, this distinction is taken into account, for it may imply differential predictive power with respect to OCB. Furthermore, it may extend the depth of findings from previous studies, which were primarily concerned with the effect of feedback on organizational performance (e.g., Kluger & DeNisi, 1996).

Methods

Before engaging in the work reported in this systematic review and meta-analysis, the first author wrote a review protocol¹ for complying with the guidelines for reporting of systematic reviews (Boruch et al., 2004; Higgins & Green, 2011). The protocol was not uploaded in an online repository (e.g., Cochrane, Campbell, PROSPERO) because this practice is not required nor expected for systematic reviews that fall outside the clinical or medical scope (see Daniels, 2019). Notwithstanding, the present work is not the first attempt to apply a rigorous methodology, yet traditionally pertaining to clinicians, into work and organizational applied settings informed the present study to a large extent. For example, previous efforts of applying a similar type of rigorous secondary research can be found in the fields of supply chain management (e.g., Durach et al., 2017), knowledge management (e.g., Tranfield et al., 2003), and leadership in the military (e.g., Fosse et al., 2019).

Search strategy

Database searches were conducted using EBSCO (Academic Search Premier, Business Source Elite; CINAHL, EconLit, ERIC, MEDLINE), PsychInfo and Web of Science. Furthermore, Google Scholar, ResearchGate.net and Academia.edu were manually interrogated for any additional and possibly unindexed studies. Search terms were checked on Mesh via Medline and consisted of truncated, combined words, and synonyms. They featured two main terms: (1) *feedback* and (2) *organizational citizenship behaviour*, containing wildcards and combined with Boolean/phrase operators. Furthermore, OCB-related terms were also included in the search to account for the effects of feedback on other measures of discretionary effort. These include (2a) *contextual performance*, (2b) *prosocial organizational behaviour*, and (2c) *extra-role organizational behaviour* and comprise search lines 4 to 6 in Appendix A, which reports the complete search strategy.

The search was performed in title, abstract, keyword, and topic. Limiters were applied and the search results were restricted to peer-reviewed journal articles and to English as the language of publication. No lower limit was applied to the field of search year and studies that were published until July 2019 were included (i.e., the upper limit at the time of completing the search).

Selection of studies

Duplicates were removed and the remaining article references were exported to EndNote X9.0; finally, full-text versions were added. The studies resulting from the search were appraised according to inclusion and exclusion criteria (reported below) using Rayyan QCRI (Ouzzani et al., 2016) and following a two-step strategy. In the first phase, the first two authors proceeded independently to screening titles, abstracts, and keywords. This process was blinded to achieve a higher degree of confidence and reliability of assessment. After the blind was removed, differences were discussed and resolved by consensus. The articles whose inclusion or exclusion were not agreed on by both authors progressed to the second phase of the appraisal.

Next, full-text versions were read and a decision was reached by consensus of the first two authors. Whenever agreement was still not reached, the third author advanced her independent evaluation and served as a judge for including or excluding the study. Authors and titles of the studies were not masked in this phase, for masking did not seem to bias the selection procedure (Colthart et al., 2008).

Inclusion and exclusion criteria

The inclusion criteria of studies that reached this stage of the systematic review was based on the following PICO(S) framework analysis (Scharadt et al., 2007). *Population*: adult workers, members of a profit or non-profit organization. *Intervention (or exposure; see Daniels, 2019)*: delivery of feedback. *Control*: no-feedback delivery.² *Outcome*: measures of OCB or conceptually corresponding measures (i.e., extra-role organizational behaviour, prosocial organizational behaviour, and contextual performance; see also Appendix A). *Study design*: peer-reviewed studies reporting quantitative data on levels of feedback and OCB (c.f. qualitative studies only).

The exclusion criteria based on which studies were excluded included one or more of the following characteristics: (a) samples of full-time students,³ (b) missing reports of implementation of work-related feedback (e.g., studies reporting customer feedback or employee feedback-seeking behaviour), (c) missing measures of OCB. Figure 2 represents a PRISMA (Liberati et al., 2009) flow diagram, summarizing the number of identified and excluded records at each stage.

Search results

The database search yielded 339 eligible studies, and 3 additional studies were included after checking for additional online sources. After duplicates were removed, 248 studies were independently screened by the first two authors. Cohen's κ (Cohen, 1960) is a measure for determining interrater reliability. It is a more robust indicator of interrater agreement than calculating

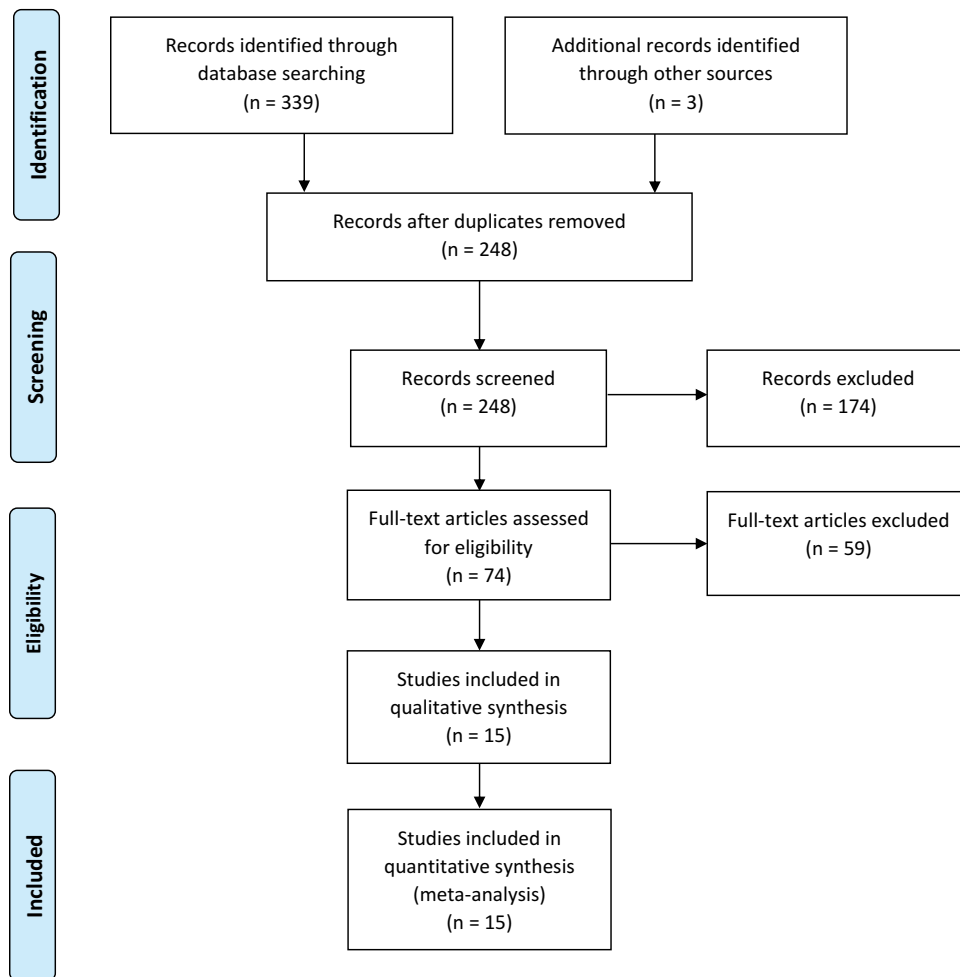


Figure 2. PRISMA flow diagram.

the simple percentage agreement, for it takes into account agreement by chance (McHugh, 2012). Cohen's κ was .82 for the 74 studies assessed for eligibility, which according to the categorical interpretation of Landis and Koch (1977), features an almost perfect interrater agreement. Consensus was not reached on 3 articles, which were assessed by the third author. As a result, 59 studies were excluded at this stage; thus, 15 studies were included both in the systematic review and meta-analysis.

The first two authors proceeded independently to extract the data from the included studies. Differences were resolved by discussion, until consensus was reached. For each included study, the following categories of data extraction were used: (a) *general information*: author(s) and year; (b) *participants*: sample size, profession, country, and gender composition; (c) *intervention*: type of feedback (classification and description) and measurement tool (name, number of items, modalities of feedback provision, and properties); (d) *outcomes*: correlation scores, effect sizes, and measurement tool (name, number of items, OCB-I and OCB-O details, and properties).

In order to ensure the compatibility of results and their subsequent interpretation, all measurement tools adopted in the included studies were scrutinized according to a two-step procedure. First, we identified what measurement tool was used (e.g., questionnaire); next, the items of the tools were compared to one another to assess the similarity between

questionnaires in the studies. The main findings are included in the descriptive interpretation of results, for a quantitative evaluation of each measurement tool's OCB assessment items lies beyond the scope of this work.

Assessment of risk of bias of the included studies

The risk of bias of the included studies was appraised by adopting the mixed methods appraisal tool (MMAT; Hong et al., 2018). The MMAT is an efficient and reliable tool (Pace et al., 2010; see also O'Cathain, 2010) for appraising the quality of empirical studies included in a systematic review: these include qualitative studies, quantitative studies or mixed methods research studies. The MMAT consists of two initial screening questions and five categories of study design, each of which features five specific methodological quality criteria. The appraisal is performed by choosing one among three possible options on a responsive Excel® spreadsheet: *Yes*, *No*, and *Can't tell*. Although it is possible to compute an overall quality score based on the number of criteria met divided by four, it may not necessarily be informative compared to the descriptive summary of criteria (Pluye et al., 2011). Thus, we do not report a scoring metric and report on the descriptive summary: in fact, the latter is considered more informative for the purposes of this review, which contained exclusively quantitative

descriptive studies. The first two authors proceeded independently and assessed the quality of the included studies (inter-rater agreement = .80). Disagreements were solved by discussion, until consensus was reached. The results of the assessment of the risk of bias of are summarized in Figure 3, which includes only the columns of the MMAT that are relevant to the type of studies included. A summary of descriptive findings of the MMAT include an overall low publication bias of the studies included, with the exception of (4.2) samples representativeness of the target population, which was unknown in several studies; and (4.4) risk of nonresponse, which was appraised as a source of bias whenever a threshold operationalized at 75% of reported response rates. The validity and robustness of these findings are discussed after the presentation of the results of the meta-analysis.

Meta-analysis calculations and assessment of publication bias

As different measures and constructs were used, the reported correlation measures were computed to effect sizes (i.e., r_{adj} scores) using the "effect size conversion spreadsheet" created by Lakens (2013). Computed values, confidence intervals and Hedges' g_s scores were extracted and are reported in Table 1. Studies that reported more than one correlation measure between feedback and OCB are listed on separate lines and are marked with subsequent capitalized letters. Moreover, they were checked *a posteriori* using Stata version 15, which provided the output graphs represented in Figure 4 (forest plot) and Figure 5 (funnel plot).

We accounted for the expected heterogeneity of the included studies by using a random-effects meta-analysis, which considers the variation due to heterogeneity and is based on the additional File 3 (*comprehensive meta-analysis*

calculations random effects) contained in Neyeloff et al. (2012). According to this model, the effect sizes in a population may vary; thus, sample, measurement instrument or study design can also influence the observed effect (Borenstein et al., 2009; see also Fosse et al., 2019).

We used the Rosenthal (1978), Orwin (1983), and Rosenberg (2005) methods for the calculation of the fail-safe N. The Rosenthal (1978) method (also called a *file drawer analysis*) calculates the number of studies averaging null results that would have to be added to the given set of observed outcomes for reducing the combined significance level (p-value) to $p = .05$ (i.e., an insignificant effect size). The Orwin (1983) method calculates the number of studies averaging null results that would have to be added to the given set of observed outcomes for reducing the (unweighted) average effect size to a target equal to the observed average effect size divided by 2. The Rosenberg (2005) method calculates the number of studies averaging null results that would have to be added to the given set of observed outcomes for reducing the significance level of the (weighted) average effect size (based on a fixed-effects model) to a $p = .05$. We used the command *fsn* in the R package *metafor* for the fail-safe N calculations (Viechtbauer, 2010).

For the meta-analysis statistical estimations, we assessed publication bias using Stata version 15 with the following user-developed meta-analysis packages activated: *metan* (Harris et al., 2006), *metafunnel* (Sterne, 2003), *metatrim* (Steichen, 2000), and *metabias* (Harbord et al., 2000). In meta-analysis, we performed the Duval and Tweedie (2000) nonparametric "trim and fill" method of accounting for publication bias, which estimates the number and outcomes of missing studies and adjusts the meta-analysis to incorporate the theoretical missing studies. No theoretically missing studies were added to our meta-analysis, which indicated that the impact of publication bias was small. Furthermore, we

Author(s), year	SCREENING QUESTIONS		4. QUANTITATIVE DESCRIPTIVE STUDIES				
	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	4.1. Is the sampling strategy relevant to address the research question?	4.2. Is the sample representative of the target population?	4.3. Are the measurements appropriate?	4.4. Is the risk of nonresponse bias low?	4.5. Is the statistical analysis appropriate to answer the research question?
Akgunduz et al., 2017	Yes	Yes	Yes	Yes	Yes	No	Yes
Belschak & Den Hartog, 2009	Yes	Yes	Yes	No	Yes	Can't tell	Yes
Guo & Ling, 2019	Yes	Yes	Yes	Can't tell	Yes	No	Yes
Haider et al., 2017	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Haider et al., 2019	Yes	Yes	Yes	Yes	Yes	No	Yes
Ilies et al., 2013	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Lemoine et al., 2015	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes
Lonsdale, 2016	Yes	Yes	Yes	Can't tell	Yes	No	Yes
Mattson et al., 2015	Yes	Yes	Yes	Can't tell	Yes	Yes	Yes
Merriman, 2017	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Peng & Chiu, 2010	Yes	Yes	Yes	No	Yes	No	Yes
Randhawa & Kaur, 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rasheed et al., 2013	Yes	Yes	Yes	No	Yes	No	Yes
Sawalha et al., 2017	Yes	Yes	Yes	No	Yes	No	Yes
Sommer & Kulkarni, 2012	Yes	Yes	Yes	No	Yes	No	Yes

Figure 3. Mixed methods appraisal tool (MMAT), version 2018.

Table 1. Overview of the studies included in the systematic review and meta-analysis.

Author(s) (Year)	N	Profession	Country	Men (%)	Correlation of feedback and OCB	OCB measurement tool			Feedback measurement tool				
						Hedges' g_s	ES r_{adj} (95% CI)	OCB tool author(s)	Self- or Supervisor report	Feedback tool author(s)	Measured or manipulated measure	Frequency of performance feedback	Property
Akgunduz et al. (2016)	410	Hotel employees	Turkey	54	$r(408) = .34$ $p < .005$	.34	.72	Wei, Qu, and Ma (2012)	Self-report	Zhou and George (2001)	Self-report measure	Frequency of performance feedback	Property
Belschak and Den Hartog (2009) – A ^{a,b}	107	Mixed	Netherlands	64	$r(105) = -.20$ $p \geq .05$	.18 (.10,.26)	-.41	S. B. MacKenzie et al. (1991)	Self-report	No tool	Experimental manipulation	Frequency of performance feedback	Positive vs negative feedback
Belschak and Den Hartog (2009) – B ^{a,b}	107	Mixed	Netherlands	64	$r(105) = .16$ $p \geq .05$	.13 (.06,.19)	.32	S. B. MacKenzie et al. (1991)	Self-report	No tool	Experimental manipulation	Frequency of performance feedback	Public vs private feedback
Belschak and Den Hartog (2009) – C ^{a,b}	86	Researchers	Netherlands	69	$r(84) = -.16$ $p < .01$	.12 (.05,.19)	-.32	S. B. MacKenzie et al. (1991)	Self-report	No tool	Experimental manipulation	Frequency of performance feedback	Positive vs negative feedback
Belschak and Den Hartog (2009) – D ^{a,b,c}	86	Researchers	Netherlands	69	$r(84) = .08$ $p \geq .05$	-	.16	S. B. MacKenzie et al. (1991)	Self-report	No tool	Experimental manipulation	Frequency of performance feedback	Public vs private feedback
Guo and Ling (2019)	237	Mixed	China	51	$r(235) = .34$ $p < .01$	.34	.72	Lin and Peng (2010) – contextual performance	Supervisor	Steelman et al. (2004)	Self-report	Feedback Environment Scale	Scale measures frequency and properties
Haider et al. (2019) – A	264	Bank employees	India	73	$r(262) = .22$ $p < .001$	.21	.45	Pearce and Gregersen (1991)	Supervisor	Teas and Horrell (1981); Jaworski and Kohli (1991)	Self-report	Frequency of positive feedback	Frequency of positive feedback
Haider et al. (2019) – B ^e	264	Bank employees	India		$r(262) = -.04$ $p < .05$	-	-.08	Pearce and Gregersen (1991)	Supervisor	Teas and Horrell (1981); Jaworski and Kohli (1991)	Self-report	Frequency of positive feedback	Frequency of positive feedback
Haider et al. (2017)	212	Hospital employees	Spain	43	$r(210) = .68$ $p = N/A$	.68	1.84	Pearce and Gregersen (1991)	Supervisor	Pousette and Jacobsson (1999)	Self-report	Frequency of positive and negative feedback	Frequency of positive and negative feedback
Ilies et al. (2013) – A	68	Non-academic university staff	USA	13	$r(66) = .24$ $p < .05$	.21	.48	Lee and Allen (2002)	Supervisor	No tool	Experimental manipulation	Frequency of positive and negative feedback	Normative feedback on high CWB
Ilies et al. (2013) – B ^e	78	Non-academic university staff	USA	13	$r(76) = .06$ $p \geq .05$	-	.12	Lee and Allen (2002)	Supervisor	No tool	Experimental manipulation	Frequency of positive and negative feedback	Normative feedback on low CWB
Lemoine et al. (2015) – A	213	University housing employees	USA	46	$r(211) = .13$ $p \geq .05$	.11	.26	Williams and Anderson (1991)	Supervisor	Kluger and DeNisi (1996)	Self-report	Frequency of positive and negative feedback	Positive vs negative feedback
Lemoine et al. (2015) – B ^{b,g}	213	University housing employees	USA	46	$r(211) = .09$ $p \geq .05$	.06	.18	Williams and Anderson (1991)	Supervisor	Kluger and DeNisi (1996)	Self-report	Frequency of positive and negative feedback	Positive vs negative feedback
Lonsdale (2016) ^b	660	University employees	USA	37	$r(658) = .29$ $p < .001$	.29	.60	Lee and Allen (2002)	Self-report	Steelman et al. (2004)	Self-report	Feedback Environment Scale	Scale measures frequency and properties

(Continued)

Table 1. (Continued).

Author(s) (Year)	N	Profession	Country	Men (%)	Correlation of feedback and OCB	ES <i>r_{adj}</i> (95% CI)	Hedges' <i>g_s</i>	OCB measurement tool		Feedback measurement tool		
								OCB author(s)	Self- or Supervisor report	Feedback tool author(s)	Measured or manipulated	Frequency	Property
Mattson et al. (2015) ^c	221	Hospital employees	Sweden	54	<i>r</i> (219) = .30 <i>p</i> ≥ .05	.29	.62	MacKenzie et al. (1991); Neal et al. (2000)	Self-report	Based on Hackman and Oldham (1975)	Frequency of information about performance	Property
Merriman, 2017 – A	93	Mixed	USA	55	<i>r</i> (91) = .55 <i>p</i> < .001	.54	1.29	Deckop et al. (2004)	Supervisor	Cirka (2000) – extra role	Frequency of performance competence supportive feedback	Feedback Environment Scale measures frequency and properties
Peng and Chiu (2010)	259	Mixed	Taiwan	64	<i>r</i> (257) = .25 <i>p</i> < .01	.24	.51	Farh et al. (1997)	Supervisor	Steelman et al. (2004)	Frequency of assessment and information about performance	Usefulness of feedback
Randhawa and Kaur (2015) ^d	509	Food-processing industry workers	India	82	<i>r</i> (507) = .43 <i>p</i> < .05	.43	.95	Lee and Allen (2002)	Self-report	Patterson et al., 2004	Frequency of information about performance	
Rasheed et al. (2013)	275	Bank employees	Saudi Arabia	82	<i>r</i> (273) = .29 <i>p</i> < .01	.28	.60	Motowidlo and Van Scotter (1994)	Self-report	Russell and Goode (1988)	Frequency of information about performance	
Sawalha et al., 2017) ^f	157	Higher education faculty and instructors	Saudi Arabia, Kuwait, Bahrain, Oman, UAE & Qatar	69	<i>r</i> (155) = .25 <i>p</i> < .001	.24	.51	Podsakoff et al. (1990)	Self-report	Hackman and Oldham (1975)	Frequency of information about performance	
Sommer and Kulkarni (2012) constructive feedback	128	Mixed	India	53	<i>r</i> (126) = .28 <i>p</i> < .01	.27	.58	Williams & Shiaw (1999)	Self-report	Constructive feedback	Frequency of information about performance	Appropriate use of

^aBelschak and Den Hartog (2009) did not report correlations, which were calculated from the regression coefficient using the formula from Peterson and Brown (2005); correlation scores for study 1 were calculated on the authors' second sample, for the first sample included full-time students only. ^bBelschak and Den Hartog (2009) and Lonsdale (2016) only reported OCBi and OCB0, thus, for easier comparison, the average is reported; ^cMattson et al. (2015) measured civic virtue; ^dRandhawa and Kaur (2015) only measured OCBi; ^e(-) Effect sizes could not be calculated due to low correlations and N; ^fSawalha et al. (2017) reported 5 sub-dimensions of OCB (i.e., altruism, civic virtue, courtesy, conscientiousness, and sportsmanship) and were reported averaged; ^gLemoine et al. (2015) – A includes an average score of feedback received from managers and Lemoine et al. – B feedback received from peers. ES = Effect Size, CI = Confidence Interval, UAE = United Arab Emirates.

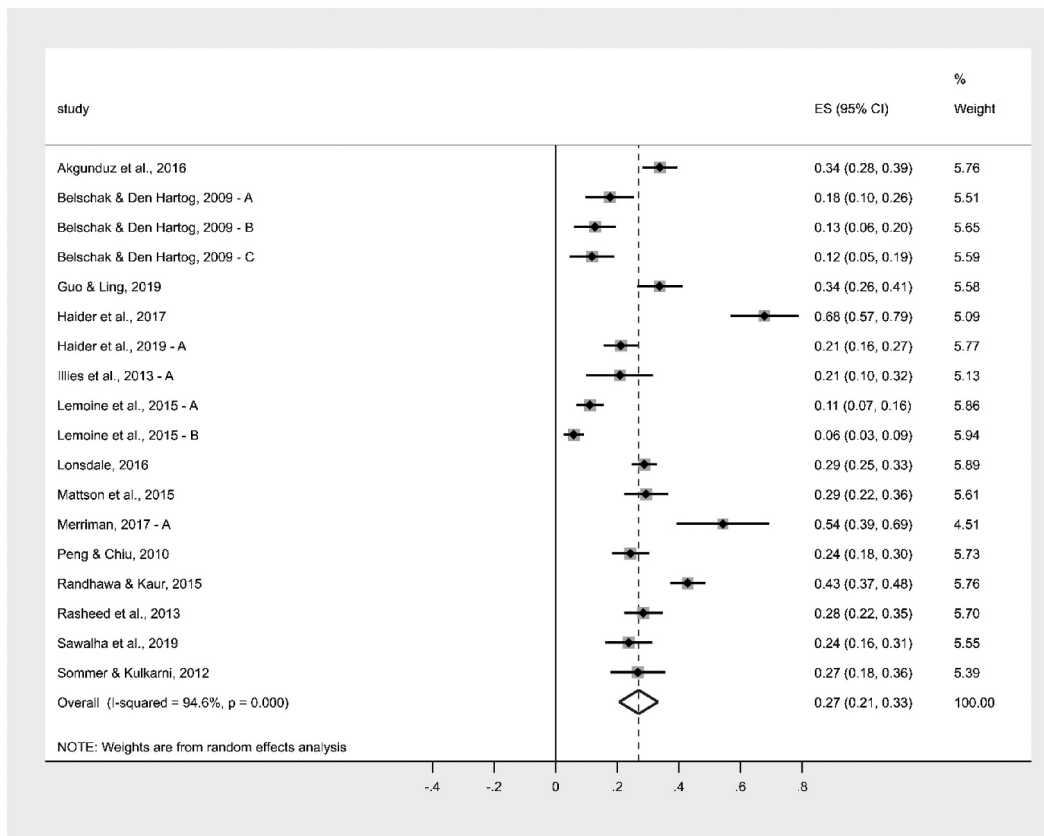


Figure 4. Forest plot with summary measure (centreline of diamond) and associated confidence intervals (lateral tips of diamond) and solid vertical line of no effect.

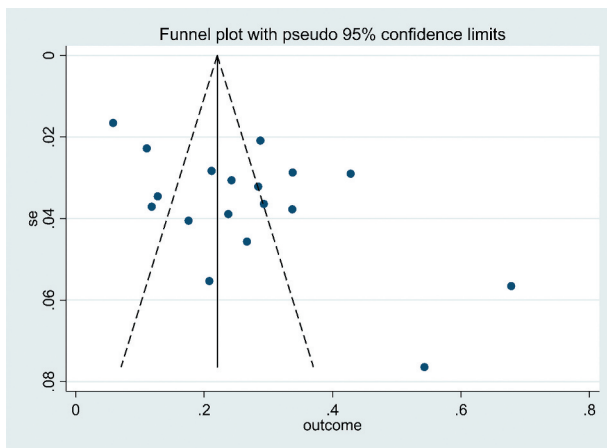


Figure 5. Funnel plot of publication bias.

conducted the Egger regression test for estimating any asymmetry of the funnel plot in a meta-analysis (Egger et al., 1997). This test performs a linear regression of the intervention effect estimates on their standard errors, weighting by the inverse of the variance of the intervention effect estimate.

Results

Systematic review findings

The results of the systematic review are based on 15 included studies. Of these, 5 include several interventions (Belschak &

Den Hartog, 2009; Haider et al., 2017; Ilies et al., 2013; Lemoine et al., 2015; Merriman, 2017), totalling 21 reported correlation measures between feedback and OCB. Table 1 contains the data extracted from each of the included studies and the continuation of this section summarizes their findings according to the same categories and structure outlines above.

General information

Because of the relative novelty of the concept of OCB, the oldest included study was published in 2009, after which there was a steep increase of publications on feedback and OCB. Ten of 15 studies were published since 2014, 3 in 2019 alone, suggesting a similar pattern and increasing interest throughout 2020 and onwards.

Participants. Similar to reporting the results of the risk of bias, high variation was found among the reported sample sizes, which ranged from 68 participants (Ilies et al., 2013) to 660 participants (Lonsdale, 2016) (median $N = 213$). Concerning participants' professions, the highest frequencies were registered and equally spread among mixed professions ($n = 5$), university personnel ($n = 5$), and employees of banks, hospitals, hotels, and the food industry ($n = 5$). Males were overrepresented in the samples and only 4 studies had a higher percentage of female participants (Haider et al., 2017; Ilies et al., 2013; Lemoine et al., 2015; Lonsdale, 2016). This result may be partly dependent on cultural factors, such as samples with highest ratio of men were drawn from India (where men are traditionally more active than women in the workforce, consisting of 82%, 73%, and 53% of the samples herein reported).

Furthermore, there was a broad geographical representation, ranging from the United States of America ($n = 4$), which featured the country with the highest frequency, to India ($n = 3$), and other Asian and European countries in descending frequency order. When grouping the studies by geographical proximity, there was no apparent difference in average correlations between continents. Moreover, it is noteworthy that 4 of 6 interventions conducted in USA explored different feedback properties, 1 study analyzed feedback frequency (Merriman, 2017), and 1 study resorted to both frequency and properties.

Intervention

Quantitative data on feedback were collected and reported using different measurement tools. Almost all studies included self-report measures of feedback by means of questionnaires, except Belschak and Den Hartog (2009) and Ilies et al. (2013), which reported direct manipulations of feedback delivery. The thoroughness of these tools varied, some studies measured feedback with as few as 1 item (Lemoine et al., 2015); others comprised more extensive questionnaires, such as the widely adopted feedback environment scale (FES), which was developed to measure the availability of informal, supportive, and useful feedback (Steelman et al., 2004) and includes both frequency and properties of feedback ($n = 3$; Guo & Ling, 2019; Lonsdale, 2016; Peng & Chiu, 2010).

Outcomes

Overall, the questionnaire items were found to be consistent with the operational definition of OCB and compatible with one another insofar as its reliable measurement was concerned. Specifically, all adopted questionnaires reported measures to identify the extent to which employees engaged (or intended to engage) in OCB, by using either the same or similar questions (e.g., "I would help orient new colleagues even though it is not required"). Furthermore, higher questionnaire scores indicated more frequent OCB behaviours. Some questionnaires reported measures of OCB intentions (e.g., Sommer & Kulkarni, 2012); others reported actual OCB behaviours (e.g., Haider et al., 2017). Furthermore, the number of studies that included self-report measures of OCB ($n = 11$) was almost identical to the number of studies that featured measures of OCB reported by supervisors ($n = 10$). There was a negligible difference of correlations between feedback and OCB in the studies where supervisors reported OCB levels (average $r = .26$ (.04–.68)) and self-report OCB levels (average $r = .26$ (.08–.43)). One study measured only OCB-I (without including OCB-O; Randhawa & Kaur, 2015), and 1 study used questions for measuring civic virtue (Mattson et al., 2015). Although some of the included studies featured accounts of both OCB-I and OCB-O, the results herein presented report total measures of OCB. If total scores were not available, the separate sub-category measures were averaged. The purpose of this operation was to maintain measures of OCB as discretionary effort, rather than discriminating whether the cooperative OCB is specifically directed towards other members of the organization or the organization altogether. Thus, 8 studies reported measures on the relationship between frequency of feedback and OCB (average $r = .34$ (–.04–.68)). Moreover, different properties of feedback were analyzed in 10 of 21 reported correlation measures

(average $r = .10$ (–.20–.29)). Finally, the 3 studies that used the FES to measure both frequency and properties of feedback featured a moderate correlation between feedback and OCB (average $r = .29$ (.25–.34)).

Based on the properties of feedback reported in the included studies, 5 different properties were identified and are accounted for next: (a) positive and negative feedback ($n = 4$), (b) normative feedback ($n = 2$), (c) public or private feedback ($n = 2$), (d) perceived usefulness of feedback ($n = 1$), and (e) appropriate delivery of constructive feedback ($n = 1$). The distinction between positive and negative properties of feedback has already been addressed earlier in this work, but it may suffice underline how it may refer to added information to increase behaviour that is more helpful than distracting to the organization (e.g., Lemoine et al., 2015). Nonetheless, more detail seems to be warranted for presenting the difference between positive and negative feedback in the 4 reported correlation measures divided in 2 studies that examined their relationship with OCB. First, Lemoine et al. (2015) performed a direct manipulation of positive and negative feedback but recorded small correlations with OCB for peer feedback ($r(211) = .13$, $p \geq .05$) and supervisor feedback ($r(211) = .09$, $p \geq .05$). Second, Belschak and Den Hartog (2009) showed a small to moderate negative correlation between negative feedback and OCB ($r(105) = -.20$, $p \geq .05$ and $r(84) = -.16$, $p < .01$). Moreover, 2 studies contained measures of the frequency of positive and negative feedback. The first contained 2 measures and reported small correlations between the frequency of positive feedback alone and OCB ($r(262) = .22$, $p < .001$ and $r(262) = -.04$, $p < .05$; Haider et al., 2019); the second reported a large correlation (namely, the largest of all included studies) between the frequency of both positive and negative feedback and OCB ($r(210) = .68$, p N/A; Haider et al., 2017).

Ilies et al. (2013) intended normative feedback as the delivery of positive feedback to employees who performed above the normative threshold (i.e., engaging in less CWB), and negative feedback to those who performed below the normative threshold. Belschak and Den Hartog (2009) compared the effects of delivering feedback in public or private on positive and negative affect. Consistent with their hypothesis, they found a cross effect based on the presence or absence of a social episode that was stronger when negative feedback was available ($r(105) = -.20$, $p \geq .05$ in study 1). Results from perceived usefulness of feedback (Rasheed et al., 2013) were based on comparisons with other employees ($r(273) = .29$, $p < .01$), a sample of which included "My last feedback gave me a good idea of how well I'm doing my job" (p. 132). Consistent with previous research findings, Sommer and Kulkarni (2012) reported on the appropriate delivery of constructive feedback ($r(126) = .28$, $p < .01$). They aimed at leveraging management training at remedying performance weaknesses while preserving positive relationships between employees and the organization.

Meta-analysis findings

The results of the meta-analysis calculations are presented in terms of effect sizes and confidence intervals for each of the

included studies ($n = 15$): they are reported in Figure 4. Similar to Table 1, studies that contained more than one correlation measure between feedback and OCB are listed on separate lines and are marked with subsequent capitalized letters. Of the 21 reported correlation measures, it was possible to compute 18 of them to effect sizes. In fact, the correlations of 3 measurements were too small to be converted to r_{adj} scores (Belschak & Den Hartog, 2009; Haider et al., 2019; Ilies et al., 2013), which were removed from the meta-analysis.

Although more conservative revisions have been suggested (e.g., Schäfer & Schwarz, 2019), according to Cohen (1988, 1992), the summary of the included studies features an average small effect size ($r_{adj} = .27$, 95% CI = $-.33$). Notably, the result effects from all included studies lie on the right-hand side of the line of the line of no effect, showing a small, positive, yet consistent correlation between feedback and OCB.

There was high heterogeneity with respect to the 15 included studies ($I^2 = 94.6\%$, $p < 0.001$), which warrants caution when drawing conclusive claims of effects. According to the Rosenthal approach, the fail-safe N was 6813 (observed significance level: $<.0001$; target significance level: $.05$). The Orwin approach returned a fail-safe N of 18 (average effect size: $.27$; target effect size: $.14$). Lastly, according to the Rosenberg approach, the safe-fail N was 4340 (average effect size: $.22$; observed significance level: $<.0001$; target significance level: $.05$). The estimated bias coefficient of the Egger regression test was 6.83 (se (standard error) = 2.55), $p = .016$, indicating an asymmetry of data and, thus, an implication for publication bias. Thus, the test for detecting any presence of small-study effects was significant.

Similar to how they were presented in the results section of the systematic review, the properties of feedback whose reported correlation measures were computed to effect sizes include featured: (a) positive and negative feedback (average $r_{adj} = .15$ (.05–.25)), (b) normative feedback ($r_{adj} = .20^3$), (c) public or private feedback ($r_{adj} = .12^4$),⁵ (d) perceived usefulness of feedback ($r_{adj} = .28$), and (e) how constructive feedback is delivered ($r_{adj} = .27$). Although more detailed reports of effect sizes and properties for each study are contained in Table 1, it is noteworthy that the median effect size for measurement tools of feedback properties (median $r_{adj} = .16$) was lower than for measurement tools of frequency of feedback or both (i.e., measured by the FES; median $r_{adj} = .30$). These results suggest that an increased level of complexity may be required when interpreting their effects on OCB.

Discussion

Taken together, the results of the present systematic review and meta-analysis highlighted a small but positive direct relationship between performance feedback and OCB. That is, it seems not only possible but desirable to manipulate how (properties) and how much or often (frequency) feedback is delivered to affect reported levels of OCB without necessarily resorting to the mediating role exerted by job satisfaction (e.g., Zeinabadi, 2010), organization-based self-esteem (cf. Haider et al., 2019), or other antecedent constructs (e.g., Bolino et al., 2015; Peng & Chiu, 2010). In fact, although both correlation measures and computed effect sizes were small to moderate,

we found that the relationship between frequency of feedback and OCB was more meaningful than the relationship between feedback properties and OCB. Similar to feedback on performance, these findings suggest that both properties and frequency of feedback delivery in concert are a determinant yet complex managerial practice insofar as their effectiveness on OCB is concerned.

Although there was high variability in the measures between questionnaires assessing the frequency of both positive and negative feedback and their correlation with OCB, our findings suggest that not only is it important *how* feedback is delivered, but this can also affect OCB and possibly performance to a greater extent than delivering positive feedback alone. For example, the difference of correlation measures between feedback and OCB reported by Ilies et al. (2013) ($r(76) = .06$, $p \geq .05$) and Peng and Chiu (2010) ($r(257) = .25$, $p < .01$) indicate that an explanation based on measurement precision alone may not be satisfactory.

Moreover, it is noteworthy that the studies that reported the frequency of positive and negative feedback contained respectively the highest (Haider et al., 2017) and the lowest (Haider et al., 2019) correlations between feedback and OCB. However, despite authors and measurement tool were the same, these studies were performed in two different countries. Although not directly attributable to the effects of feedback alone, it seems plausible that the country in which the studies were performed may have affected expectations and interpretations of OCB, insofar as cultural factors interplayed as a moderator (e.g., accounting for the any difference in the correlations between countries while controlling for other variables, such as measurement tool or sector). Namely, a culture refers to a complex adaptive system that is selected by the members of a group, despite old ones are eventually replaced with new ones (Sandaker, 2009). Thus, behaviours that comply with formal requirements or exceed expectations may differ normatively, insofar as the organizational culture (e.g., Schein, 2004) and the practices comprising them (e.g., Simon, 1957) serve as feedback for altering successive occurrences. For example, norms and rules regulating cooperation between co-workers may reinforce OCB to a greater extent in collectivist organizational cultures than in cultures characterized by more individualism. Thus, the role of organizational cultures comprises one additional variable to consider when interpreting any interrelation effect of feedback on OCB. Insofar as the means of the members of one level of the organization correspond to the ends of the members at the lower level (Simon, 1957), the delivery of feedback ought to be adjusted to the unit of analysis or intervention (i.e., individual behaviour, interpersonal relationships, group dynamics, and collectivized processes (Yammarino & Dansereau, 2009)). Independently from which level is targeted, feedback is *correct* if it aligns with the overarching organizational goals (i.e., it can be adapted to meet the required level of complexity; Simon, 1957). Conversely, incorrect feedback may affect organizational goals and structure with added inconsistency and inconsonance (Wallroth, 1968).

Furthermore, we found that the availability of positive feedback featured a higher correlation with reported scores of OCB when compared with the availability of negative feedback. Nevertheless, the number of studies that operated a differentiation between the

two and reported on each of their respective levels were limited. At the start of this work, we formulated the hypothesis of a positive relationship between the delivery of positive feedback and attained levels of OCB. Notwithstanding, it became clear that we needed to broaden the scope of this work to include undifferentiated feedback (i.e., positive, negative and unspecified), for the search results were too few based on the initial search criteria. In fact, only three studies distinguished positive from negative feedback (Belschak & Den Hartog, 2009; Ilies et al., 2013; Lemoine et al., 2015), which would not have warranted any meaningful comparison in a meta-analysis. Although the descriptive presentation of findings from the systematic review have focused on both positive and negative feedback, the results suggest that it may be premature to restrict their differential effects on OCB given the research currently available.

It is generally maintained from previous research findings that: (a) the delivery of feedback increases employee performance, including discretionary effort (Daniels, 2000) and job satisfaction (Wilk & Redmon, 1998), and (b) higher levels of OCB are generally associated with increased satisfaction among employees and organizational performance (Podsakoff et al., 2000; Ocampo et al., 2018). Thus, performance feedback and OCB seem to be interrelated: performance feedback affects discretionary effort and job satisfaction, both of which, in turn, affect OCB. Throughout the present work, feedback delivery was regarded not only as a managerial practice that serves as an antecedent for discretionary effort among the members of an organization, but rather as a variable whose frequency and properties correlate with their reported levels of OCB. For example, Ilies et al. (2013), reported that the group that received negative feedback (i.e., feedback on too high levels of CWB) demonstrated more OCB than the group that received positive feedback (i.e., feedback on appropriately low levels of CWB), which emphasizes the effects of negative feedback on OCB. Notwithstanding, the levels of reported OCB in the group that received positive feedback also increased following the delivery of positive feedback, suggesting that the availability of undifferentiated feedback might suffice.

Furthermore, although the difference between positive feedback delivered by peers or supervisor in Lemoine et al. (2015) did not seem to be statistically significant, it may lead to raising the hypothesis of whether the availability of more positive feedback from a peer may prompt higher levels of OCB attained by the employee compared to availability of positive feedback from the supervisor. This effect does not need to be necessarily limited to OCB-I levels only, but it may extend to the whole organization by increasing OCB-O levels, too, insofar as it represents a form of cooperating; thus, sharing positive consequences.

Cooperation within a system entails that its members orient their behaviour with respect to a common shared goal. Aligning employees' goals with the goals of the organization is not only considered crucial to managing organizational performance (Wigert & Harter, 2017), but ought to be embedded in the processes that characterize how the members interact with one another and towards the organization. For example, Wigert and Harter (2017) reported that employees who could link their goals to the overall goals of the organization were 3.5 times more likely to be engaged in their work. Furthermore, aligning

individual and organizational goals and performance does not only have repercussions on employee engagement (e.g., Mone et al., 2011; Petrou et al., 2020), but also on employees' well-being (Santos et al., 2012; see also Bakker, 2015). Delivering feedback and aligning goals so that employees are able to experience the contingencies of coming in contact with the (positive) consequences of their work represent two managerial practices whose importance have been underestimated thus far. Not only is feedback essential for goal-setting theory (Locke & Latham, 2006), previous reviews have also showed that feedback has a stronger impact on performance when combined with goal-setting (e.g., Alvero et al., 2001).

Lastly, there are some considerations to make on the results of the tools for detecting biases and errors. As noted, the heterogeneity between studies was high: this could be to the cumulative effect of several factors, including validity (e.g., differences in populations, study designs, and measurement tools) and publication bias (e.g., possible unpublished small studies with small effect sizes, different effects between small and large samples). When assessing the risk of bias, the MMAT does not identify studied values that could characterize low-, medium- or high quality studies: the categories are arbitrary, but useful, for performing other types of inquiry, such as sensitivity analysis. Because the results of our assessment of risk of bias returned were more critically spread on 2 columns (i.e., (4.2) samples representativeness of the target population and (4.4) risk of nonresponse), rather than rows comprising each study, a sensitivity analysis was not performed. Although there are no cut off values specified by either the original authors of the MMAT (Hong et al., 2018) nor in the course of this study, the robustness of these findings of this appraisal may be questioned, but their validity holds even though a metric was not used, for it was not informative enough.

Based on several statistical tests for publication bias that were calculated, we acknowledge the presence of publication bias and a "small study effect". "Small study effect" means that the effect in small studies is systematically different from large studies. However, it needs to be noted that fail-safe N tests are not recommended for use in Cochrane reviews, nor do they allow authors to "concentrate on the size of the estimated intervention effect and the associated confidence intervals, rather than on whether the P value reaches a particular, arbitrary threshold" (Higgins & Green, 2011). Furthermore, the Egger regression also has weaknesses: in the funnel plot presented in Figure 5, there are two studies with high efficacy but low precision (i.e., high se), which may indicate that we "lacked" a study with low efficacy and low precision, and that that the analysis is somewhat influenced by these small studies.

Limitations and future research

In addition to its merits, this study presents several limitations that characterize both the systematic review and the meta-analysis herein contained. First, the extent to which the results of this work may be confidently interpreted rests on the limited number of studies available in the literature to support the research hypotheses, which have affected the development of this study since its earliest phases. Thus, caution is required when drawing any conclusive claims based on the results of

this work and more data is necessary to support the robustness of our findings. For example, if there were more studies on feedback and OCB available, we could have possibly corrected for some of the statistical tests scores, such as heterogeneity, risk of bias, and publication bias. Furthermore, the robustness of the results was sensible to any methodological flaw contained in the included studies. To partially control for this and reduce any shortcoming represented by flawed inputs that may have possibly resulted in faulty outputs, the reviewers' assessment of studies was blinded, and so were appraising quality and publication bias. Overall, we resorted to a fully transparent approach when reporting our findings.

Another limitation was represented by resorting to self-report measures of both feedback and OCB in the majority of the included studies. In a meta-analysis, Organ and Ryan (1995) found that self-reports of OCB were less reliable than OCB levels reported by others (e.g., co-workers, supervisors) and that higher correlations with self-reports accounted for most of the variance in scoring. Notwithstanding, it should be noted that the study that featured the highest correlation among those included in the present work was not based on self-reports, but rather on OCB measures reported by the supervisors. Specifically, Haider et al. (2017) measured the delivery of feedback based on two questions, in which the respondents were asked to rate how often they received negative and positive feedback (ranging from *never* to *very frequently*). However, they only reported correlations of positive and negative feedback combined. Based on this and other cases of collecting self-report feedback data come from a predetermined array of questions, it seems worthwhile supposing whether interventions aimed at manipulating the delivery of feedback are able to affect OCB and performance over time (i.e., whether self-report feedback is sensitive enough to sustaining OCB)? In fact, previous studies investigated this relationship through cross-sectional design (e.g., Messersmith et al., 2011) and longitudinal design (e.g., Haider et al., 2019). Not one of the studies included featured an RCT or an interrupted time series, which represent the gold standard respectively in the health and social science fields. Thus, resorting to experimental designs would help assess and control the discriminative effects of feedback and OCB in organizational settings.

Another issue that affects any review of the literature (systematic or else) is given by the *grey literature*, which refers to unpublished research due to statistical non-significance (see Paez, 2017) and poses a threat to validity. Other elements that could possibly affect the summary effect size of feedback on OCB reported in this work could include the findings from unindexed studies that may have not be accessible via database search and studies written in other languages than English.

We maintain that further research should pursue two empirical questions that represent the tenets of the present work. First, more empirical efforts are needed to test whether the effects of feedback delivery on performance and job satisfaction extend to OCB, inasmuch as more frequent feedback leads to higher levels of OCB. Furthermore, the measures of OCB should differentiate between self- and supervisor-reports; for example, by developing a scale that can take into account

and compare scores while checking for validity and featuring reliability.

Second, further research should address the different properties and characteristics of feedback, and how they may functionally affect OCB levels, reaching beyond reported correlation measures. Forthcoming experimental efforts should be directed at testing whether the variables that improve performance exert an additional effect on OCB: for example, manipulating the delivery of feedback in applied organizational settings. This would allow to monitor performance and OCB over time, and to estimate attainable levels of performance and OCB based frequency and properties of feedback. Concerning the latter, forthcoming studies should perform and report on differential delivery of positive and negative feedback that may reach beyond their effects on OCB and include other constructs of discretionary effort or organizational culture. Another way to address this issue in forthcoming studies concerned with studying the effects of feedback on performance could feature the inclusion of measures of OCB. For example, Haider et al. (2019) engaged in an exploratory work of the temporal aspects of feedback and maintained that the delivery of positive feedback increased the level of OCB. Moreover, the operationalization and delivery of negative feedback seems to have received less attention in the literature than positive feedback. Negative feedback should be explored based on its unique features, rather than being treated as a categorical variable in opposition to positive feedback (e.g., Lonsdale, 2016; Peng & Chiu, 2010).

Practical implications

We maintain that the findings of this work have several practical implications for managers and supervisors: in this section, we raise five of them. First, feedback delivery is a managerial practice that can and should be used to affect the extent of cooperation within the organization. Cooperation was defined as entailing to positive shared consequences and was operationalized through the concept of OCB, which, indirectly, is affected by performance and job satisfaction of employees. Thus, the delivery of feedback can be adjusted to meet all levels of organizational complexity, regardless of its frequency and properties. Specifically, supervisors have recourse to feedback for (a) aligning employees' performance to individual and organizational goals (Greve & Gaba, 2017), and (b) influencing directly the levels of perceived and reported OCB among employees, without the need of any mediation of organizational-based self-esteem (cf. Haider et al., 2019).

Second, although we focused on the delivery or availability of feedback, it is important to consider whether and how feedback is perceived and received. A necessary condition for this to occur is that employees *attend* to the feedback delivered by the manager. For example, if employees attend to their supervisor or peers' feedback, they may reinforce the delivery of feedback as a managerial practice in the future; thus, cooperate towards achieving common goals. Conversely, if the delivery of feedback is unattended by the employee or peer, it is likely that managers will engage less in this practice in the future (e.g., allocating their time and efforts elsewhere in the organization). Hattie and Timperley (2007) maintained that "[o]ne of the problems with feedback at the task level is that it often does

not generalize to other tasks" (p. 91) and that too much feedback may hinder performance levels. Thus, the managerial practice of feedback delivery can be regarded as comprised of two elements that supervisors should be able to discern if they are to master it: feedback as a managerial *tool* and its delivery as a managerial *skill*.

Third, whereas previous research on OCB has focused, among others, on the predictive value of personality, attitudes, or other attitudinal and dispositional predictors (e.g., Abu Elanain, 2007; Konovsky & Organ, 1996; Organ & Ryan, 1995), we focused on analysing some of the characteristics of feedback on OCB. We found that correlation measures between feedback delivery and reported levels of OCB changed as the characteristics of feedback changed. Specifically, these changes affected the frequency of feedback and, to a lesser extent, the properties of feedback. Other characteristics include source, timing, and valence of feedback, which were shown to affect the (successful) delivery of feedback by Lechermeier and Fassnacht (2018). Moreover, Alvero et al. (2001) and Balcazar et al. (1985) summarized the role of source, medium, content, and combinations of feedback with other management techniques. The authors found that feedback was most effective when combined with rewards or goalsetting. Thus, treating feedback as an antecedent for cooperation to occur may represent a solution to the intrinsic-extrinsic reward dilemma and avoid the arbitrary division between self-regulated and feedback-driven learning in organizational settings. In summary, feedback is most effective on performance if it is immediate, specific, focused on improvement (positive feedback), individualized, graphed, and easy to understand (Daniels & Bailey, 2014).

Fourth, employee characteristics (e.g., organizational commitment and job satisfaction) and dispositional factors (e.g., agreeableness and conscientiousness) are frequently cited predictors, of OCB (Hazzi, 2018). However, these antecedents seem too broad in scope and not readily applicable to inform managerial practices targeting OCB. We maintain that it is both more pragmatic and effective to target the delivery of feedback that can affect OCB directly than targeting any of its moderators (e.g., job satisfaction (Williams & Anderson, 1991)). The study of performance feedback is one of the most fertile areas of research within managing organizational behaviour, among other reasons, because it emphasizes the management of contingent (i.e., *if, then*), readily observable, and measurable relations. For example, performance rewards for attaining individual goals are typically reinforcing, but a pay out of company shares based on organizational performance (e.g., achieving corporate financial results) is rarely a reinforcer, for it is relation with performance is not contingent, and future occurrences may not be affected by it (see Daniels & Daniels, 2004). As the complexity of tasks grows, there may be an inverse relation between effort and monetary rewards (Kluger & DeNisi, 1996; see also Bonner & Sprinkle, 2002), which suggests that delivering feedback combined with rewards contingent on target organizational behaviours may represent a more effective tool for managing performance.

Finally, we acknowledge that there is a managerial challenge (rather, a dilemma) between motivating employees to do their best (i.e., with regards to organizational commitment and

performance) while valuing their wellbeing (i.e., assuring and improving job satisfaction). Although, both these dimensions have been listed as antecedents of OCB (e.g., Alotaibi, 2001), delivering feedback at the right level of complexity (see Simon, 1957) can affect organizational cooperation and goal attainment in a similar way. Conceivably, feedback is one of the most common, economical, and effective practices of line management, whose effects have been demonstrated extensively on performance (e.g., Balzer et al., 1989). Conversely, increases in task complexity and responsibility may lead to experiencing less sense of control, higher role ambiguity, and reduced wellbeing (Schmidt et al., 2014). Although the construct of discretionary effort seems to encompass several of these variables, we maintain that OCB is a more adequate and economic descriptor of implying rather than inferring the arrangement of contingencies of cooperation within the organization. Hence, it should be implemented to a larger extent and become a standard indicator in organizational reporting and appraisal.

Conclusion

Taken together, this systematic review and meta-analysis expands the current understanding of how delivering (frequent and positive) feedback may comprise an effective tool for increasing the levels of OCB, and, thus, promoting conditions for cooperation within the organizational system. Similar to the broader construct of discretionary effort, positive shared consequences are available to employees who perform above the threshold although there is no formal incentive for doing so, nor penalty for not doing so. We provided a framework for analysing the concept of OCB in concert with some of its classically attributed antecedents and operationalizing it as a class of behaviours that are referred to as *discretionary*. Moreover, the managerial practice of performance feedback delivery was defined, analyzed, and discussed insofar as it is able to affect OCB levels. We included in our account other measures of organizational behaviour that can affect the extent to which employees may align their performance to achieve the goals of the organization. As a consequence, organizations adapt insofar as they are able to adjust their structure to the increasingly complex environmental demands and their processes to employees' willingness to cooperate, which may set the occasion for OCB to occur. Lastly, we discussed the implications of frequency, properties, and measurement tools of feedback in industrial and organizational settings. However, similar examples of OCB may be observed in other settings, such as among athletes or musicians. While training and rehearsal are necessary, their performance is as likely to be affected by the availability of feedback as it depends on cooperating within their respective "organizations", whether the goal is winning the championship or producing a moving symphony.

Notes

1. Available as supplementary material.
2. The control/comparison element of the PICO(S) analysis is derived from the research hypothesis, and it does not constitute a real experimental condition, as stated in the introduction section.

3. Samples of full-time students were excluded because of their marginal involvement in the organization, in terms of time, engagement and motivation, while retaining similar OCB measures of OCB and feedback as full-time employees.
4. Effect size could not be calculated for the other intervention.
5. References marked with an asterisk indicate studies included in the meta-analysis.

Acknowledgments

The authors are grateful to: Are Hugo Pripp for his help with the meta-analysis; Gunnar Ree and Nicholas J. Bergin for their help with the revision of the manuscript; Lilja Johannessen, Hilde Tinderholt Myrhaug, and Malene Wøhik Gundersen, for their guidance with the systematic review; Magnus Johansson, Gestur Gunnarsson, and Vaka Vésteinsdóttir for their comments and suggestions; Kevin Daniels and the anonymous reviewers for their constructive feedback.

Contributions of authors

The research design was developed by all three authors. MT and SSS reviewed papers for inclusion or exclusion. MT and SSS wrote the paper and IS critically reviewed all drafts and final copy. All authors read and approved the final manuscript.

Disclosure statement

The authors declare that there is no conflict of interest.

Ethical approval

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

Funding

This work has been financially supported by OsloMet – Oslo Metropolitan University.

Informed consent

This is a systematic review and meta-analysis, and no informed consent statements were obtained. No primary data were collected from participants.

ORCID

Marco Tagliabue  <http://orcid.org/0000-0002-2438-6943>

References

- Abu Elanain, H. M. (2007). Relationship between personality and organizational citizenship behavior: Does personality influence employee citizenship. *International Journal of Business Research Papers*, 3(4), 31–43. https://www.researchgate.net/publication/265106363_Relationship_between_Personality_and_Organizational_Citizenship_Behavior_Does_Personality_Influence_Employee_Citizenship
- Aguinis, H., Gottfredson, R., & Joo, H. (2011). Delivering effective performance feedback: The strengths-based approach. *Business Horizons*, 55(2), 105–111. <https://doi.org/10.1016/j.bushor.2011.10.004>
- *Akgunduz, Y., Dalgic, A., & Kale, A. (2016). The effects of stress and managers' behaviour on the job satisfaction and organisational citizenship behaviour of hotel employees. *Tourism*, 64(1), 41–62. <https://hrcak.srce.hr/file/228223>
- Alotaibi, A. G. (2001). Antecedents of organizational citizenship behavior: A study of public personnel in Kuwait. *Public Personnel Management*, 30(3), 362–377. <https://doi.org/10.1177/009102600103000306>
- Alvero, A. M., Bucklin, B. R., & Austin, J. (2001). An objective review of the effectiveness and essential characteristics of performance feedback in organizational settings (1985–1998). *Journal of Organizational Behavior Management*, 21(1), 3–29. https://doi.org/10.1300/J075v21n01_02
- Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333. <https://doi.org/10.1177/0149206314527128>
- Anseel, F., & Lievens, F. (2007). The long-term impact of the feedback environment on job satisfaction: A field study in a Belgian context. *Applied Psychology*, 56(2), 254–266. <https://doi.org/10.1111/j.1464-0597.2006.00253.x>
- Arnold, H. J. (1976). Effects of performance feedback and extrinsic reward upon high intrinsic motivation. *Organizational Behavior and Human Performance*, 17(2), 275–288. [https://doi.org/10.1016/0030-5073\(76\)90067-2](https://doi.org/10.1016/0030-5073(76)90067-2)
- Arthur, W. (1990). Positive feedbacks in the economy. *Scientific American*, 262(2), 92–99. <https://doi.org/10.1038/scientificamerican0290-92>
- Axelrod, R. M., & Cohen, M. D. (2000). *Harnessing complexity: Organizational implications of a scientific frontier*. Free Press.
- Bachrach, D. G., Bendoly, E., & Podsakoff, P. M. (2001). Attributions of the “causes” of group performance as an alternative explanation of the relationship between organizational citizenship behavior and organizational performance. *Journal of Applied Psychology*, 86(6), 1285–1293. <https://doi.org/10.1037/0021-9010.86.6.1285>
- Bagyo, Y. (2018). The effect of counterproductive work behavior (CWB) and organizational citizenship behavior (OCB) on employee performance with employee engagement as intervening variable. *Journal of Business and Management*, 20(2), 14–20. <https://doi.org/10.9790/487X-2002048389>
- Bakker, A. B. (2015). Towards a multilevel approach of employee well-being. *European Journal of Work and Organizational Psychology*, 24(6), 839–843. <https://doi.org/10.1080/1359432X.2015.1071423>
- Balcazar, F., Hopkins, B. L., & Suarez, Y. (1985). A critical, objective review of performance feedback. *Journal of Organizational Behavior Management*, 7(3–4), 65–89. https://doi.org/10.1300/J075v07n03_05
- Balzer, W. K., Doherty, M. E., & O'Connor, J. R. (1989). Effects of cognitive feedback on performance. *Psychological Bulletin*, 106(3), 410–433. <https://doi.org/10.1037/0033-2909.106.3.410>
- Barnard, C. I. (1938). *The functions of the executive*. Harvard University Press.
- Bar-Yam, Y. (2002). *Complexity rising: From human beings to human civilization, a complexity profile*. In *Encyclopedia of Life Support Systems*. United Kingdom: United Nations. Retrieved from <https://necsi.edu/complexity-rising-from-human-beings-to-human-civilization-a-complexity-profile>
- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee 'citizenship'. *The Academy of Management Journal*, 26(4), 587–595. <https://doi.org/10.2307/255908>
- Becker, T. E., & Kernan, M. C. (2003). Matching commitment to supervisors and organizations to in-role and extra-role performance. *Human Performance*, 16(4), 327–348. https://doi.org/10.1207/S15327043HUP1604_1
- *Belschak, F. D., & Den Hartog, D. N. (2009). Consequences of positive and negative feedback: The impact on emotions and extra-role behaviours. *Applied Psychology*, 58(2), 274–303. <https://doi.org/10.1111/j.1464-0597.2008.00336.x>
- Bohlmann, N. L., & Fenson, L. (2005). The effects of feedback on perseverative errors in preschool aged children. *Journal of Cognition & Development*, 6(1), 119–131. https://doi.org/10.1207/s15327647jcd0601_7
- Bolino, M. C., Hsiung, H. H., Harvey, J., & LePine, J. A. (2015). “Well, I’m tired of tryin’!” Organizational citizenship behavior and citizenship fatigue. *Journal of Applied Psychology*, 100(1), 56–74. <https://doi.org/10.1037/a0037583>
- Bolino, M. C., & Turnley, W. H. (2005). The personal costs of citizenship behavior: The relationship between individual initiative and role overload, job stress, and work-family conflict. *Journal of Applied Psychology*, 90(4), 740–748. <https://doi.org/10.1037/0021-9010.90.4.740>

- Bonner, S. E., & Sprinkle, G. B. (2002). The effects of monetary incentives on effort and task performance: Theories, evidence, and a framework for research. *Accounting, Organizations and Society*, 27(4), 303–345. [https://doi.org/10.1016/S0361-3682\(01\)00052-6](https://doi.org/10.1016/S0361-3682(01)00052-6)
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, M. (2009). *Introduction to meta-analysis*. Wiley.
- Borman, W. C., & Motowidlo, S. M. (1993). Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W. C. Borman (Eds.), *Personnel selection in organizations* (pp. 71–98). Jossey-Bass.
- Boruch, R., Soydan, H., & de Moya, D. (2004). The Campbell collaboration. *Brief Treatment and Crisis Intervention*, 4(3), 277–287. <https://doi.org/10.1093/brief-treatment/mhh024>
- Brief, A. P., & Motowidlo, S. J. (1986). Prosocial organizational behaviors. *Academy of Management Review*, 11(4), 710–725. <https://doi.org/10.2307/258391>
- Buckingham, M., & Goodall, A. (2019). *The feedback fallacy* [online]. Harvard Business Review. Harvard Business Publishing. <https://hbr.org/2019/03/the-feedback-fallacy>
- Bucklin, B. R., Alvero, A. M., Dickinson, A. M., Austin, J., & Jackson, A. K. (2000). Industrial-organizational psychology and organizational behavior management. *Journal of Organizational Behavior Management*, 20(2), 27–75. https://doi.org/10.1300/J075v20n02_03
- Carson, K. D., & Carson, P. P. (1998). Career commitment, competencies, and citizenship. *Journal of Career Assessment*, 6(2), 195–208. <https://doi.org/10.1177/106907279800600206>
- Chang, K., & Smithikrai, C. (2010). Counterproductive behaviour at work: An investigation into reduction strategies. *The International Journal of Human Resource Management*, 21(8), 1272–1288. <https://doi.org/10.1080/09585192.2010.483852>
- Chappelow, C., & McCauley, C. (2019, May 13). *What good feedback really looks like*. Harvard Business Review. Harvard Business Publishing. <https://hbr.org/2019/05/what-good-feedback-really-looks-like>
- Choi, E., Johnson, D. A., Moon, K., & Oah, S. (2018). Effects of positive and negative feedback sequence on work performance and emotional responses. *Journal of Organizational Behavior Management*, 38(2–3), 97–115. <https://doi.org/10.1080/01608061.2017.1423151>
- Chwalibóg, E. (2012). Rola menedżera w kształtowaniu zachowań obywatelskich w organizacji [The manager's role in shaping organizational citizenship behaviours]. *Research Papers of the Wrocław University of Economics*, 273, 19–27. <http://search.ebscohost.com/login.aspx?direct=true&db=bsh&AN=89893094&site=ehost-live>
- Cirka, C. C. (2000). *Compliance and constructive contributions in organizations: Effects of managerial control styles on proactive employee behaviors* [Unpublished doctoral dissertation]. Temple University, Philadelphia, PA
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20(1), 37–46. <https://doi.org/10.1177/001316446002000104>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Routledge.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Colthart, I., Bagnall, G., Evans, A., Allbutt, H., Haig, A., Illing, J., & McKinstry, B. (2008). The effectiveness of self-assessment on the identification of learner needs, learner activity, and impact on clinical practice: BEME Guide no. 10. *Medical Teacher*, 30(2), 124–145. <https://doi.org/10.1080/01421590701881699>
- Coyne, I., Gentile, D., Born, M. P., Ersoy, N. C., & Vakola, M. (2013). The relationship between productive and counterproductive work behaviour across four European countries. *European Journal of Work and Organizational Psychology*, 22(4), 377–389. <https://doi.org/10.1080/1359432x.2012.673280>
- Curry, S. M., Gravina, N. E., Sleiman, A. A., & Richard, E. (2019). The effects of engaging in rapport-building behaviors on productivity and discretionary effort. *Journal of Organizational Behavior Management*, 39(3–4), 213–226. <https://doi.org/10.1080/01608061.2019.1667940>
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, 90(6), 1241–1255. <https://doi.org/10.1037/0021-9010.90.6.1241>
- Daniels, A. C. (2000). *Bringing out the best in people. How to apply the astonishing power of positive reinforcement*. McGraw Hill.
- Daniels, A. C. (2014). *Performance management: Changing behavior that drives organizational effectiveness* (5 ed.). Performance Management Publications.
- Daniels, A. C., & Bailey, J. S. (2014). *Performance management: Changing behavior that drives organizational effectiveness* (5th ed. ed.). Performance Management Publications.
- Daniels, A. C., & Daniels, J. E. (2004). *Performance management: Changing behavior that drives organizational performance* (4 ed.). Performance Management Publications.
- Daniels, K. (2019). Guidance on conducting and reviewing systematic reviews (and meta-analyses) in work and organizational psychology. *European Journal of Work and Organizational Psychology*, 28(1), 1–10. <https://doi.org/10.1080/1359432X.2018.1547708>
- Dann, R. (2019). Feedback as a relational concept in the classroom. *The Curriculum Journal*, 30(4), 352–374. <https://doi.org/10.1080/09585176.2019.1636839>
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18(1), 105–115. <https://doi.org/10.1037/h0030644>
- Deckop, J. R., Merriman, K. K., & Blau, G. (2004). Impact of variable risk preferences on the effectiveness of control by pay. *Journal of Occupational and Organizational Psychology*, 77(1), 63–80. <https://doi.org/10.1348/096317904322915919>
- DeRiso, A., & Ludwig, T. D. (2012). An investigation of response generalization across cleaning and restocking behaviors in the context of performance feedback. *Journal of Organizational Behavior Management*, 32(2), 140–151. <https://doi.org/10.1080/01608061.2012.676500>
- Dewett, T., & Denisi, A. S. (2007). What motivates organizational citizenship behaviours? Exploring the role of regulatory focus theory. *European Journal of Work and Organizational Psychology*, 16(3), 241–260. <https://doi.org/10.1080/13594320701273606>
- Durach, C. F., Kembro, J., & Wieland, A. (2017). A new paradigm for systematic literature reviews in supply chain management. *Journal of Supply Chain Management*, 53(4), 67–85. <https://doi.org/10.1111/jscm.12145>
- Duval, S., & Tweedie, R. (2000). A nonparametric “trim and fill” method of accounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, 95(449), 89–98. <https://www.jstor.org/stable/i325962>
- Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, 315(7109), 629–634. <https://doi.org/10.1136/bmj.315.7109.629>
- Ehigie, B. O., & Otukoya, O. W. (2005). Antecedents of organizational citizenship behaviour in a government-owned enterprise in Nigeria. *European Journal of Work and Organizational Psychology*, 14(4), 289–399. <https://doi.org/10.1080/13594320544000019>
- Eikenhout, N., & Austin, J. (2005). Using goals, feedback, reinforcement, and a performance matrix to improve customer service in a large department store. *Journal of Organizational Behavior Management*, 24(3), 27–62. https://doi.org/10.1300/J075v24n03_02
- Farh, J.-L., Earley, P. C., & Lin, S.-C. (1997). Impetus for action: A cultural analysis of justice and organizational citizenship behaviour in chinese society. *Administrative Science Quarterly*, 42(3), 421–444. <https://doi.org/10.2307/2393733>
- Fayol, H. (1949). *General and industrial management*. Pitman.
- Fosse, T. H., Skogstad, A., Einarsen, S. V., & Martinussen, M. (2019). Active and passive forms of destructive leadership in a military context: A systematic review and meta-analysis. *European Journal of Work and Organizational Psychology*, 28(5), 708–722. <https://doi.org/10.1080/1359432X.2019.1634550>
- Frederick, W., & Taylor, F. W. (1911). *Principles of scientific management*. Harper & Row.
- George, J. M., & Brief, A. P. (1992). Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. *Psychological Bulletin*, 112(2), 310–329. <https://doi.org/10.1037/0033-2909.112.2.310>
- Greve, H. R., & Gaba, V. (2017). Performance feedback in organizations and groups: Common themes. In L. Argote & J. M. Levine (Eds.), *The Oxford*

- handbook of group and organizational learning* (pp. 1–52). Oxford University Press.
- *Guo, Y., & Ling, B. (2019). Effects of leader motivating language on employee task and contextual performance: The mediating role of feedback quality. *Psychological Reports*, 1–18. <https://doi.org/10.1177/0033294119862989>
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), 159–170. <https://doi.org/10.1037/h0076546>
- Hafidz, S. W. M., Hoesni, S. M., & Fatimah, O. (2012). The relationship between organizational citizenship behavior and counterproductive work behavior. *Asian Social Science*, 8(9), 32–37. <https://doi.org/10.5539/ass.v8n9p32>
- *Haider, S., de Pablos Heredero, C., & Montes Botella, J. L. (2017). Mediating role of organisational citizenship behaviour in the relationship between feedback and innovation implementation. *Journal of Organisational Studies and Innovation*, 4(4), 19. https://www.researchgate.net/publication/323855396_Mediating_Role_of_Organisational_Citizenship_Behaviour_in_the_Relationship_between_Feedback_and_Innovation_Implementation
- *Haider, S., de Pablos Heredero, C., & Ahmed, M. (2019). A three-wave time-lagged study of mediation between positive feedback and organizational citizenship behavior: The role of organization-based self-esteem. *Psychology Research and Behavior Management*, 12, 241–253. <https://doi.org/10.2147/prbm.S192515>
- Håkansson, D. D., Obel, B., Eskildsen, J. K., & Burton, R. M. (2016). On cooperative behavior in distributed teams: The influence of organizational design, media richness, social interaction, and interaction adaptation. *Frontiers in Psychology*, 7, 692. <https://doi.org/10.3389/fpsyg.2016.00692>
- Harbord, R. M., Harris, R. J., Sterne, J., & Steichen, T. (2000). *METABIAS: Stata module to test for small-study effects in meta-analysis*. Statistical Software Components, S404901. Boston College Department of Economics. Retrieved from <https://ideas.repec.org/c/boc/bocode/s404901.html>
- Harris, R., Bradburn, M., Deeks, J., Harbord, R., Altman, D., Steichen, T., & Sterne, J. (2006). *METAN: Stata module for fixed and random effects meta-analysis*. Statistical Software Components, S456798. Boston College Department of Economics. Retrieved from <https://ideas.repec.org/c/boc/bocode/s456798.html>
- Hasani, K., Boroujerdi, S. S., & Sheikhesmaeli, S. (2013). The effect of organizational citizenship behavior on organizational commitment. *Global Business Perspectives*, 1(4), 452–470. <https://doi.org/10.1007/s40196-013-0026-3>
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. <https://doi.org/10.3102/003465430298487>
- Hazzi, O. A. (2018). Organizational citizenship behavior: A holistic review. In A. Farazmand (Ed.), *Global encyclopedia of public administration, public policy, and governance* (pp. 55–85). Springer International.
- Higgins, J. P. T., & Green, S. (Eds.). (2011). *Cochrane handbook for systematic reviews of interventions*. John Wiley & Sons.
- Hom, P. W., DeNisi, A. S., Kinicki, A. J., & Bannister, B. D. (1982). Effectiveness of performance feedback from behaviorally anchored rating scales. *Journal of Applied Psychology*, 67(5), 568–576. <https://doi.org/10.1037/0021-9010.67.5.568>
- Hong, Q. N., Pluye, P., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M. P., Griffiths, F., Nicolau, B., O’Cathain, A., Rousseau, M. C., & Vedel, I. (2018). *Mixed methods appraisal tool (MMAT)*. Registration of Copyright (#1148552), Canadian Intellectual Property Office. Industry Canada.
- *Ilies, R., Peng, A. C., Savani, K., & Dimotakis, N. (2013). Guilty and helpful: An emotion-based reparatory model of voluntary work behavior. *Journal of Applied Psychology*, 98(6), 1051–1059. <https://doi.org/10.1037/a0034162>
- Janssen, O., & Van Yperen, N. W. (2004). eEmployees’ goal orientations, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal*, 47(3), 368–384. <https://doi.org/10.2307/20159587>
- Jaworski, B. J., & Kohli, A. K. (1991). Supervisory Feedback: Alternative Types and Their Impact on Salespeople’s Performance and Satisfaction. *Journal of Marketing Research*, 28(2), 190–201. <https://doi.org/10.2307/3172807>
- Jung, D. I., & Sosik, J. J. (2003). Group potency and collective efficacy. *Group & Organization Management*, 28(3), 366–391. <https://doi.org/10.1177/1059601102250821>
- Katz, D. (1964). Motivational basis of organizational behavior. *Behavioral Science*, 9(2), 131–146. <https://doi.org/10.1002/bs.3830090206>
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. Wiley.
- Kelley, D. P., & Gravina, N. (2018). Every minute counts: Using process improvement and performance feedback to improve patient flow in an emergency department. *Journal of Organizational Behavior Management*, 38(2–3), 234–243. <https://doi.org/10.1080/01608061.2017.1423150>
- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254–284. <https://doi.org/10.1037/0033-2909.119.2.254>
- Komaki, J., Waddell, W. M., & Pearce, M. G. (1977). The applied behavior analysis approach and individual employees: Improving performance in two small businesses. *Organizational Behavior & Human Performance*, 19(2), 337–352. [https://doi.org/10.1016/0030-5073\(77\)90068-X](https://doi.org/10.1016/0030-5073(77)90068-X)
- Konovsky, M. A., & Organ, D. W. (1996). Dispositional and contextual determinants of organizational citizenship behavior. *Journal of Organizational Behavior*, 17(3), 253–266. [https://doi.org/10.1002/\(SICI\)1099-1379\(199605\)17:3<253::AID-JOB747>3.0.CO;2-Q](https://doi.org/10.1002/(SICI)1099-1379(199605)17:3<253::AID-JOB747>3.0.CO;2-Q)
- Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: A practical primer for t-tests and ANOVAs. *Frontiers in Psychology*, 4, 863. <https://doi.org/10.3389/fpsyg.2013.00863>
- Lambert, E., Hogan, N. L., & Barton, S. M. (2002). Building commitment among correctional staff. *Corrections Compendium*, 27(3), 1–5, 24–27, 28. <http://www.ncjrs.gov/App/publications/abstract.aspx?ID=194884>
- Landis, J., & Koch, G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159–174. <https://doi.org/10.2307/2529310>
- Lechermeier, J., & Fassnacht, M. (2018). How do performance feedback characteristics influence recipients’ reactions? A state-of-the-art review on feedback source, timing, and valence effects. *Management Review Quarterly*, 68(2), 145–193. <https://doi.org/10.1007/s11301-018-0136-8>
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87(1), 131–142. <https://doi.org/10.1037/0021-9010.87.1.131>
- *Lemoine, G. J., Parsons, C. K., & Kansara, S. (2015). Above and beyond, again and again: Self-regulation in the aftermath of organizational citizenship behaviors. *Journal of Applied Psychology*, 100(1), 40–55. <https://doi.org/10.1037/a0036902>
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *PLoS Medicine*, 6(7), 1–28. <https://doi.org/10.1371/journal.pmed.100010>
- Lin, C. C., & Peng, T. K. (2010). From Organizational Citizenship Behaviour to Team Performance: The Mediation of Group Cohesion and Collective Efficacy. *Management and Organization Review*, 6, 55–75. doi: 10.1111/j.1740-8784.2009.00172.x
- Lloyd, R. (2008). Discretionary effort and the performance domain. *The Australian and New Zealand Journal of Organisational Psychology*, 1, 22–34. <https://doi.org/10.1375/ajop.1.1.22>
- Locke, E. A., & Latham, G. P. (2006). New directions in goal-setting theory. *Current Directions in Psychological Science*, 15(5), 265–268. <https://doi.org/10.1111/j.1467-8721.2006.00449.x>
- Loewy, S., & Bailey, J. (2007). The effects of graphic feedback, goal setting, and manager praise on customer service behaviors. *Journal of Organizational Behavior Management*, 27(3), 15–26. https://doi.org/10.1300/J075v27n03_02
- *Lonsdale, D. J. (2016). The effects of leader-member exchange and the feedback environment on organizational citizenship and withdrawal.

- The Psychologist-Manager Journal*, 19(1), 41–59. <https://doi.org/10.1037/mgr0000037>
- MacKenzie, S. B., Podsakoff, P. M., & Ahearne, M. (1998). Some possible antecedents and consequences of in-role and extra-role salesperson performance. *Journal of Marketing*, 62(3), 87–98. <https://doi.org/10.2307/1251745>
- MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1991). Organizational citizenship behavior and objective productivity as determinants of managerial evaluations of salespersons' performance. *Organizational Behavior and Human Decision Processes*, 50(1), 123–150. [https://doi.org/10.1016/0749-5978\(91\)90037-T](https://doi.org/10.1016/0749-5978(91)90037-T)
- MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1993). The impact of organizational citizenship behavior on evaluations of salesperson performance. *Journal of Marketing*, 57(1), 70. <https://doi.org/10.2307/1252058>
- Malott, M. E. (2016). Selection of business practices in the midst of evolving complexity. *Journal of Organizational Behavior Management*, 36(2–3), 103–122. <https://doi.org/10.1080/01608061.2016.1200511>
- Mangiapanello, K., & Hemmes, N. (2015). An analysis of feedback from a behavior analytic perspective. *The Behaviour Analyst*, 38(1), 51–75. <https://doi.org/10.1007/s40614-014-0026-x>
- *Mattson, M., Hellgren, J., & Goransson, S. (2015). Leader communication approaches and patient safety: An integrated model. *Journal of Safety Research*, 53, 53–62. <https://doi.org/10.1016/j.jsr.2015.03.008>
- McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica (Zagreb)*, 22(3), 276–282. <https://doi.org/10.11613/BM.2012.031>
- *Merriman, K. K. (2017). Extrinsic work values and feedback: Contrary effects for performance and well-being. *Human Relations*, 70(3), 339–361. <https://doi.org/10.1177/0018726716655391>
- Messersmith, J. G., Patel, P. C., Lepak, D. P., & Gould-Williams, J. S. (2011). Unlocking the black box: Exploring the link between high-performance work systems and performance. *Journal of Applied Psychology*, 96(6), 1105–1118. <https://doi.org/10.1037/a0024710>
- Meynell, H. A. (1998). *Redirecting philosophy: Reflections on the nature of knowledge from Plato to Lonergan*. University of Toronto Press.
- Miller, M. V., Carlson, J., & Sigurdsson, S. O. (2014). Improving treatment integrity in a human service setting using lottery-based incentives. *Journal of Organizational Behavior Management*, 34(1), 29–38. <https://doi.org/10.1080/01608061.2013.873381>
- Mintzberg, H. (1973). *The nature of managerial work*. Harper & Row.
- Mone, E., Eisinger, C., Guggenheim, K., Price, B., & Stine, C. (2011). Performance management at the wheel: Driving employee engagement in organizations. *Journal of Business and Psychology*, 26(2), 205–212. <https://doi.org/10.1007/s10869-011-9222-9>
- Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 79(4), 475–480. <https://doi.org/10.1037/0021-9010.79.4.475>
- Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, 34(1-3), 99–109. [https://doi.org/10.1016/S0925-7535\(00\)00008-4](https://doi.org/10.1016/S0925-7535(00)00008-4)
- Neyeloff, J. L., Fuchs, S. C., & Moreira, L. B. (2012). Meta-analyses and forest plots using a Microsoft Excel spreadsheet: Step-by-step guide focusing on descriptive data analysis. *BMC Research Notes*, 5(52), 1–6. <https://doi.org/10.1186/1756-0500-5-52>
- Nielsen, D., Sigurdsson, S. O., & Austin, J. (2009). Preventing back injuries in hospital settings: The effects of video modeling on safe patient lifting by nurses. *Journal of Applied Behavior Analysis*, 42(3), 551–561. <https://doi.org/10.1901/jaba.2009.42-551>
- O'Boyle, E. H., Forsyth, D. R., & O'Boyle, A. S. (2011). Bad apples or bad barrels: An examination of group- and organizational-level effects in the study of counterproductive work behavior. *Group & Organization Management*, 36(1), 39–69. <https://doi.org/10.1177/1059601110390998>
- O'Cathain, A. (2010). Assessing the quality of mixed methods research: Towards a comprehensive framework. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (2nd ed. ed., pp. 531–555). Sage.
- Ocampo, L. A., Tan, T. A., & Sia, L. A. (2018). Using fuzzy DEMATEL in modeling the causal relationships of the antecedents of organizational citizenship behavior (OCB) in the hospitality industry: A case study in the Philippines. *Journal of Hospitality and Tourism Management*, 34, 11–29. <https://doi.org/10.1016/j.jhtm.2017.11.002>
- Organ, D. W. (1977). A reappraisal and reinterpretation of the satisfaction-causes-performance hypothesis. *The Academy of Management Review*, 2(1), 46–53. <http://www.jstor.org/stable/257604>
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books.
- Organ, D. W. (1994). Personality and organizational citizenship behavior. *Journal of Management*, 20(2), 465–478. [https://doi.org/10.1016/0149-2063\(94\)90023-X](https://doi.org/10.1016/0149-2063(94)90023-X)
- Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance*, 10(2), 85–97. https://doi.org/10.1207/s15327043hup1002_2
- Organ, D. W. (2013). Organizational citizenship behavior and the good soldier. In M. G. Rumsey, C. B. Walker, & J. H. Harris (Eds.), *Personnel selection and classification* (pp. 69–84). Psychology Press.
- Organ, D. W. (2015). Organizational citizenship behavior. In J. D. Wright (Ed.), *International encyclopedia of the social and behavioral sciences* (2nd ed. ed., pp. 317–321). Elsevier.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. P. (2006). *Organizational citizenship behavior: Its nature, antecedents, and consequences*. Sage.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48(4), 775–802. <https://doi.org/10.1111/j.1744-6570.1995.tb01781.x>
- Orwin, R. G. (1983). A fail-safe N for effect size in meta-analysis. *Journal of Educational Statistics*, 8(2), 157–159. <https://doi.org/10.2307/1164923>
- Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan - A web and mobile app for systematic reviews. *Systematic Reviews*, 5(210), 1–10. <https://doi.org/10.1186/s13643-016-0384-4>
- Pace, R., Pluye, P., Bartlett, G., Macaulay, A., Salsberg, J., Jagosh, J., & Seller, R. (2010). *Reliability of a tool for concomitantly appraising the methodological quality of qualitative, quantitative and mixed methods research: A pilot study*. 38th Annual Meeting of the North American Primary Care Research Group (NAPCRG), Seattle, WA, USA.
- Paez, A. (2017). Grey literature: An important resource in systematic reviews. *Journal of Evidence-based Medicine*, 10(3), 233–240. <https://doi.org/10.1111/jebm.12265>
- Park, J.-A., Johnson, D. A., Moon, K., & Lee, J. (2019). The interaction effects of frequency and specificity of feedback on work performance. *Journal of Organizational Behavior Management*, 39(3–4), 164–178. <https://doi.org/10.1080/01608061.2019.1632242>
- Patterson, M. G., Warr, P. B., & West, M. A. (2004). Organizational climate and company performance: The role of employee affect and employee level. *Journal of Occupational and Organizational Psychology*, 77(2), 193–216. <https://doi.org/10.1348/096317904774202144>
- Pearce, J. L., & Gregersen, H. B. (1991). Task interdependence and extrarole behavior: A test of the mediating effects of felt responsibility. *Journal of Applied Psychology*, 76(6), 838–844. <https://doi.org/10.1037/0021-9010.76.6.838>
- *Peng, J. C., & Chiu, S. F. (2010). An integrative model linking feedback environment and organizational citizenship behavior. *The Journal of Social Psychology*, 150(6), 582–607. <https://doi.org/10.1080/00224540903365455>
- Peterson, R. A., & Brown, S. P. (2005). On the use of beta coefficients in meta-analysis. *Journal of Applied Psychology*, 90(1), 175–181. <https://doi.org/10.1037/0021-9010.90.1.175>
- Petrou, P., Baas, M., & Roskes, M. (2020). From prevention focus to adaptivity and creativity: The role of unfulfilled goals and work engagement. *European Journal of Work and Organizational Psychology*, 29(1), 36–48. <https://doi.org/10.1080/1359432x.2019.1693366>
- Pluye, P., Robert, E., Cargo, M., Bartlett, G., O'Cathain, A., Griffiths, F., Boardman, F., Gagnon, M. P., & Rousseau, M. C. (2011). *Proposal: A mixed methods appraisal tool for systematic mixed studies reviews*. McGill University. Retrieved from <http://mixedmethodsappraisaltoolpublic.pbworks.com>
- Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual- and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, 94(1), 122–141. <https://doi.org/10.1037/a0013079>

- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, 1(2), 107–142. [https://doi.org/10.1016/1048-9843\(90\)90009-79](https://doi.org/10.1016/1048-9843(90)90009-79)
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26(3), 513–563. <https://doi.org/10.1177/014920630002600307>
- Pousette, A., & Jacobsson, C. (1999). Consequences of feed-back environment in human service organizations. *Goteborg Psychological Reports*, 29(7), 1–21. https://www.ipd.gu.se/digitalAssets/1286/1286052_gpr99_nr7.pdf
- Prue, D. M., & Fairbank, J. A. (2008). Performance feedback in organizational behavior management. *Journal of Organizational Behavior Management*, 3(1), 1–16. https://doi.org/10.1300/J075v03n01_01
- Prue, D. M., Frederiksen, L. W., & Bacon, A. (1978). Organizational Behavior Management: An annotated bibliography. *Journal of Organizational Behavior Management*, 1(4), 216–257. https://doi.org/10.1300/J075v01n04_01
- Puffer, S. M. (1987). Prosocial behavior, noncompliant behavior, and work performance among commission salespeople. *Journal of Applied Psychology*, 72(4), 615–621. <https://doi.org/10.1037/0021-9010.72.4.615>
- *Rasheed, A., Jehanzeb, K., & Rasheed, M. (2013). An investigation of the antecedents of organizational citizenship behavior: Case of Saudi Arabia. *International Journal of Psychological Studies*, 5(1), 128–138. <https://doi.org/10.5539/ijps.v5n1p128>
- *Randhawa, G., & Kaur, K. (2015). An empirical assessment of impact of organizational climate on organizational citizenship behaviour. *Paradigm*, 19(1), 65–78. <https://doi.org/10.1177/0971890715585202>
- Reetz, N. K., Whiting, S. W., & Dixon, M. R. (2016). The impact of a task clarification and feedback intervention on restaurant service quality. *Journal of Organizational Behavior Management*, 36(4), 322–331. <https://doi.org/10.1080/01608061.2016.1201035>
- Robbins, S. P., & Judge, T. A. (17th global ed.). (2017). *Organizational behavior*. Pearson Education.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38(2), 555–572. <https://doi.org/10.5465/256693>
- Rosenberg, M. S. (2005). The file-drawer problem revisited: A general weighted method for calculating fail-safe numbers in meta-analysis. *Evolution*, 59(2), 464–468. <https://doi.org/10.1111/j.0014-3820.2005.tb01004.x>
- Rosenthal, R. (1978). Combining results of independent studies. *Psychological Bulletin*, 85(1), 185–193. <https://doi.org/10.1037/0033-2909.85.1.185>
- Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology*, 87(1), 66–80. <https://doi.org/10.1037/0021-9010.87.1.66>
- Russell, J. S., & Goode, D. L. (1988). An analysis of managers' reactions to their own performance appraisal feedback. *Journal of Applied Psychology*, 73(1), 63–67. <https://doi.org/10.1037/0021-9010.73.1.63>
- Sackett, P. R., Berry, C. M., Wiemann, S. A., & Laczko, R. M. (2006). Citizenship and counterproductive behavior: Clarifying relations between the two domains. *Human Performance*, 19(4), 441–464. https://doi.org/10.1207/s15327043hup1904_7
- Sandaker, I. (2009). A selectionist perspective on systemic and behavioral change in organizations. *Journal of Organizational Behavior Management*, 29(3–4), 276–293. <https://doi.org/10.1080/01608060903092128>
- Santos, A., Hayward, T., & Ramos, H. M. (2012). Organizational culture, work and personal goals as predictors of employee well-being. *Journal of Organizational Culture, Communications and Conflict*, 16(1), 25–48. <https://www.abacademies.org/articles/jocccvol16no12012.pdf?page=33>
- *Sawalha, N., Kathawala, Y., & Magableh, I. (2017). Educator organizational citizenship behavior and job satisfaction moderation in the GCC expatriate-dominated market. *International Journal of Organizational Analysis*, 27(1), 19–35. <https://doi.org/10.1108/IJOA-09-2017-1247>
- Schäfer, T., & Schwarz, M. A. (2019). The meaningfulness of effect sizes in psychological research: Differences between sub-disciplines and the impact of potential biases. *Frontiers in Psychology*, 10, 813. <https://doi.org/10.3389/fpsyg.2019.00813>
- Schardt, C., Adams, M. B., Owens, T., Keitz, S., & Fontelo, P. (2007). Utilization of the PICO framework to improve searching PubMed for clinical questions. *BMC Medical Informatics and Decision Making*, 7(16), 1–6. <https://doi.org/10.1186/1472-6947-7-1>
- Schein, E. H. (2004). *Organizational culture and leadership*. Jossey-Bass.
- Schmidt, S., Roesler, U., Kusserow, T., & Rau, R. (2014). Uncertainty in the workplace: Examining role ambiguity and role conflict, and their link to depression - A meta-analysis. *European Journal of Work and Organizational Psychology*, 23(1), 91–106. <https://doi.org/10.1080/1359432X.2012.711523>
- Scott, K. L., Zagenczyk, T. J., Li, S., Gardner, W. L., Coglisier, C., & Laverie, D. (2018). Social network ties and organizational citizenship behavior: Evidence of a curvilinear relationship. *European Journal of Work and Organizational Psychology*, 27(6), 752–763. <https://doi.org/10.1080/1359432x.2018.1517115>
- Simon, H. A. (1957). *Administrative behavior: A study of decision-making processes in administrative organization* (2nd ed. ed.). Macmillan.
- Simon, H. A. (1964). On the concept of organizational goal. *Administrative Science Quarterly*, 9(1), 1. <https://doi.org/10.2307/2391519>
- Sims, H. P., & Lorenzi, P. (1992). *The new leadership paradigm: Social learning and cognition in organizations*. Sage.
- Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68(4), 653–663. <https://doi.org/10.1037/0021-9010.68.4.653>
- *Sommer, K. L., & Kulkarni, M. (2012). Does constructive performance feedback improve citizenship intentions and job satisfaction? The roles of perceived opportunities for advancement, respect, and mood. *Human Resource Development Quarterly*, 23(2), 177–201. <https://doi.org/10.1002/hrdq.21132>
- Sparr, J. L., & Sonnentag, S. (2008). Fairness perceptions of supervisor feedback, LMX, and employee well-being at work. *European Journal of Work and Organizational Psychology*, 17(2), 198–225. <https://doi.org/10.1080/13594320701743590>
- Spector, P. E., & Fox, S. (2005). A model of counterproductive work behavior. In S. Fox & P. E. Spector (Eds.), *Counterproductive workplace behavior: Investigations of actors and targets* (pp. 151–174). American Psychological Association.
- Steelman, L. A., Levy, P. E., & Snell, A. F. (2004). The feedback environment scale: Construct definition, measurement, and validation. *Educational and Psychological Measurement*, 64(1), 165–184. <https://doi.org/10.1177/0013164403258440>
- Steichen, T. (2000). METATRIM: Stata module to perform nonparametric analysis of publication bias. *Statistical Software Components*, S410501. Boston College Department of Economics. Retrieved from <https://ideas.repec.org/c/boc/bocode/s410501.html>
- Sterne, J. (2003). METAFUNNEL: Stata module to produce funnel plots for meta-analysis. *Statistical Software Components*, S434101. Boston College Department of Economics. <https://ideas.repec.org/c/boc/bocode/s434101.html>
- Tang, T. L.-P., & Ibrahim, A. H. S. (1998). Antecedents of organizational citizenship behavior revisited: Public personnel in the United States and in the Middle East. *Public Personnel Management*, 27(4), 529–550. <https://doi.org/10.1177/009102609802700407>
- Teas, R. K., & Horrell, J. F. (1981). Salespeople satisfaction and performance feedback. *Industrial Marketing Management*, 10(1), 49–57. [https://doi.org/10.1016/0019-8501\(81\)90027-4](https://doi.org/10.1016/0019-8501(81)90027-4)
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207–222. <https://doi.org/10.1111/1467-8551.00375>
- Turnispeed, D. L. (2003). Organizational citizenship behavior in the hospitality and tourism industry. In S. Kusluvan (Ed.), *Managing employee attitudes and behaviors in the tourism and hospitality industry* (pp. 247–262). Nova Publishers.
- Tziner, A., & Latham, G. P. (1989). The effects of appraisal instrument, feedback and goal-setting on worker satisfaction and commitment. *Journal of Organizational Behavior*, 10(2), 145–153. <https://doi.org/10.1002/job.4030100205>

- Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41(1), 108–119. <https://doi.org/10.2307/256902>
- 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>
- Vigoda-Gadot, E., & Angert, L. (2007). Goal setting theory, job feedback, and OCB: Lessons from a longitudinal study. *Basic and Applied Social Psychology*, 29(2), 119–128. <https://doi.org/10.1080/01973530701331536>
- Wallroth, C. (1968). An analysis of means-end structures. *Acta sociologica*, 11(1/2), 110–118. <https://doi.org/10.1177/000169936801100108>
- Wei, X., Qu, H., & Ma, E. (2012). Decisive mechanism of organizational citizenship behavior in the hotel industry – An application of economic game theory. *International Journal of Hospitality Management*, 31(4), 1244–1253. <https://doi.org/10.1016/j.ijhm.2012.03.004>
- Wigert, B., & Harter, J. (2017). *Re-engineering performance management*. Gallup. Retrieved from <http://news.gallup.com/reports/208811/re-engineering-performance-management.aspx>
- Wilder, D. A., Austin, J., & Casella, S. (2009). Applying behavior analysis in organizations: Organizational behavior management. *Psychological Services*, 6(3), 202–211. <https://doi.org/10.1037/a0015393>
- Wilk, L. A., & Redmon, W. K. (1998). The effects of feedback and goal setting on the productivity and satisfaction of university admissions staff. *Journal of Organizational Behavior Management*, 18(1), 45–68. https://doi.org/10.1300/J075v18n01_04
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601–617. <https://doi.org/10.12691/jbms-1-4-2>
- Williams, S., & Shiaw, W. T. (1999). Mood and Organizational Citizenship Behavior: The Effects of Positive Affect on Employee Organizational Citizenship Behavior Intentions. *The Journal of Psychology*, 133(6), 656–668. <https://doi.org/10.1080/00223989909599771>
- Wine, B., & Pritchard, J. K. (2018). Behavior analysis and organizations. In B. Wine & J. K. Pritchard (Eds.), *Organizational behavior management: The essentials* (pp. 8–12). Hedgehog Publishers.
- Yammarino, F. J., & Dansereau, F. (2009). A new kind of organizational behavior. In F. J. Yammarino & F. Dansereau (Eds.), *Multi-level issues in organizational behavior and leadership* (pp. 69–76). Emerald Group Publishing.
- Yankelovich, D., & Immerwahr, J. (1984). Putting the work ethic to work. *Society*, 21(2), 58–76. <https://doi.org/10.1007/BF02695027>
- Zeinabadi, H. (2010). Job satisfaction and organizational commitment as antecedents of organizational citizenship behavior (OCB) of teachers. *Procedia - Social and Behavioral Sciences*, 5, 998–1003. <https://doi.org/10.1016/j.sbspro.2010.07.225>
- Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44(4), 682–696. <https://doi.org/10.2307/3069410>