Understanding Employee Responses to Supervisory Feedback: Effects of Feedback Message, Supervisor, and Employee Characteristics on Feedback Processing

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Jetmir Zyberaj

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Dekan: Universitätsprofessor Dr. Claus H. Carstensen

Betreuerin: Universitätsprofessorin Dr. Judith Volmer

Weitere Gutachterin: Universitätsprofessorin Dr. Maike Andresen

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Prindërve të mi!
(*To my parents)*

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Dissertation Studies

The dissertation comprises three interrelated studies. Study 1 has been accepted and is published online at *Human Resource Development Quarterly*. Study 2 has been submitted and is currently under review by *Human Resource Management Review*. Study 3 has been accepted and published in *Cogent Business & Management*.

Study 1

Zyberaj, J. (2024). The effects of supervisory negative feedback and coaching on employees' responses to feedback: The moderating role of mindset. *Human Resource Development Quarterly*. Advance online publication. https://doi.org/10.1002/hrdq.21553

Study 2

Zyberaj, J. (2024, under review). The relationship between supervisory feedback characteristics and employee feedback processing: A systematic review and meta-analysis. *Human Resource Management Review*.

Study 3

Zyberaj, J. (2024). Not one, two, or three, it takes several supervisory feedback characteristics for effective feedback: a latent profile analysis and experimental vignette. *Cogent Business & Management*, *11*(1). Article 2357366. https://doi.org/10.1080/23311975.2024.2357366

Summary

Supervisory feedback plays a crucial role for employee motivation and performance. In this dissertation, I examined how three key factors in feedback, namely feedback message, supervisory characteristics, and employee characteristics affect employee feedback processing across three studies. Each study contributes to a deeper understanding of vital factors that influence how feedback is given and received, and how these, in turn, shape employee responses to feedback.

In Study 1, I investigated the effects of the *supervisory feedback message* on *employee feedback processing*, focusing on two types of feedback: negative feedback and employee coaching (i.e., negative and facilitative feedback). First, I conducted two pilot studies that validated the experimental vignettes used in the main study, assessing their feasibility and effectiveness in eliciting meaningful responses. Second, for the main study, I conducted a laboratory experimental vignette study ($N = 69$) with students from a public university in Germany, exploring how different types of supervisory feedback influence employee responses, including perceived accuracy, feedback acceptance, desire to respond, and intended response. I introduced *employee mindset* (i.e., fixed vs. growth mindset) as a moderator in these relationships. The main hypothesis was that employee coaching would be more accepted and lead to more positive employee responses than negative feedback alone, especially for those with a growth mindset. The results supported this hypothesis, revealing that employee coaching had a larger effect on employee responses to feedback compared to negative feedback alone. Similarly, moderation analysis showed that the positive effects of coaching were particularly pronounced among employees with a growth mindset.

In Study 2, I aimed to advance understanding of the key *supervisory feedback characteristics* related to *employee feedback processing*. I hypothesized that various supervisory feedback characteristics, such as charisma and credibility, would significantly

impact employee feedback processing, leading to more positive employee reactions. To test the hypothesis, I conducted a systematic review and a meta-analysis to explore the relationship between these supervisory feedback characteristics and employee feedback processing. I found 24 relevant studies, which included 75 effect sizes from a total of N = 595,950 employees. First, through the systematic review, I identified and categorized 26 supervisory feedback characteristics into eight broader categories, including charisma, credibility, feedback valence, feedback quality, support, fairness, learning goal orientation, and similarity. To validate these results, I also invited prominent feedback experts as subject-matter experts. Second, I meta-analyzed these results, which revealed a significant medium-to-large positive correlation between the supervisory feedback characteristics and employee feedback processing, with charisma and credibility as the most influential characteristics. Specifically, the strongest correlations were shown between charisma and the desire to respond to feedback, as well as feedback acceptance. These results supported the hypothesis and showed the critical role that certain supervisory feedback characteristics play in shaping employee responses. These results offer valuable insights for enhancing human resource management (HRM) practices by focusing on feedback interventions that emphasize such characteristics to foster more positive employee outcomes.

In Study 3, building on the findings from Study 2, I aimed to design *supervisory feedback profiles* and examine their impact on *employee feedback processing*. I hypothesized that higher-quality supervisory feedback profiles would lead to better feedback processing through their influence on task processes and meta-processes as mediating variables. To test this hypothesis, I first conducted a latent profile analysis using a person-centered approach to identify the number of supervisory feedback latent profiles within the sample. After that, I employed a within-subjects experimental vignette design to assess the effects of these feedback profiles on employee feedback processing, with *feedback sign* as a moderator and employee *task processes and meta-processes* as mediating variables. The study involved a

mixed-population sample ($N = 452$). The results revealed that, compared to low-quality feedback, high-quality supervisory feedback (i.e., supervisors scoring high on key characteristics such as charisma or credibility) had significant indirect effects on feedback processing through task processes and meta-processes. However, feedback sign did not moderate these effects, which aligns with previous research. Findings suggest that supervisors and employees can benefit from targeted trainings that improve feedback quality and processing, enhancing overall feedback effectiveness.

Overall, with these three studies, this dissertation provides a comprehensive analysis of how supervisory feedback characteristics influence employee feedback processing, with each study building upon the previous one. In Study 1, I established the importance of feedback message content, showing that employee coaching is more effective than negative feedback alone, particularly for employees with a growth mindset. Study 2 expanded on this by categorizing 26 supervisory feedback characteristics into eight key categories and highlighting the significant impact of characteristics like charisma and credibility on feedback processing. Building on these findings, in Study 3, I utilized these categories to design supervisory feedback profiles and examined their effects on employee feedback processing, confirming that high-quality feedback profiles lead to better feedback processing than low-quality profiles through task processes and meta-processes. Thus, these studies reveal the critical role of supervisory feedback in enhancing employee responses and provide insights for HRM practices aimed at improving feedback effectiveness through targeted training and development interventions.

1. Chapter I: General Introduction

Feedback is essential for organizations, serving as a key mechanism through which employee performance is evaluated, guided, and developed (London & Smither, 2002; Steelman et al., 2004). Effective feedback is crucial for fostering employee growth, enhancing motivation, and improving job performance (Anseel et al., 2015; Ilgen et al., 1979). Because of its significance in workplace settings, there has been an increase in feedback research exploring various dimensions, including its content, delivery, and impact on employee learning and development (London & Smither, 2002). However, despite the extensive volume of research, there are still open questions regarding feedback effectiveness, particularly in relation to supervisory feedback as the most common form of top-down feedback approach (DeNisi & Murphy, 2017). For instance, we still lack a clear understanding of why some employees accept feedback while others reject it.

Research has shown that feedback effectiveness (i.e., whether feedback is accepted or rejected) is influenced by various factors, including the characteristics of the feedback message itself, traits of employees receiving the feedback and those of the feedback provider, and the contexts in which feedback occurs (Gregory & Levy, 2015; Ilgen et al., 1979; Kluger & DeNisi, 1996). Due to its complexity, the feedback research has evolved between the content of the feedback message and the broader context in which feedback occurs (Gregory & Levy, 2015). Thus, factors such as the credibility of the feedback provider, the timing and frequency of feedback, and the psychological readiness of the employee to receive and act upon the feedback have been noted as crucial for feedback effectiveness (Ilgen et al., 1979; Kinicki et al., 2004; London, 2015; Steelman et al., 2004).

First, characteristics of the feedback provider have been reported to play a pivotal role in the feedback processing (Anseel et al., 2015; Ilgen et al., 1979; Kinicki et al., 2004). Research has shown that employees are more likely to accept and act upon feedback when it

is delivered by a credible and supportive supervisor (Anseel et al., 2015). For instance, Kinicki et al. (2004) reported that "source credibility has both direct and indirect effects on employees' desire to respond to feedback" (p. 1067). Similarly, Gregory and Levy (2015) suggested that feedback results in behavior change if recipient trusts the feedback provider and believes in their expertise. This aligns with the FPM (Ilgen et al., 1979), stating that the power and credibility of a source (i.e., expertise and trust) can largely determine feedback effectiveness.

In addition to the characteristics of the feedback provider, the nature of the feedback message itself plays a crucial role in determining how employees process and react to feedback (Ilgen et al., 1979; Kinicki et al., 2004; Kim & Kim, 2020). A key distinction in feedback message characteristics is between the sole negative feedback features and the feedback features that involve both negative and facilitative feedback (i.e., employee coaching). Negative feedback typically focuses on pointing out errors or areas of improvement without offering guidance on how to address these issues (Kim & Kim, 2020). In contrast, feedback that includes facilitative elements not only highlights areas for improvement but also provides actionable suggestions or support to help the employee develop the necessary skills or strategies to improve (Heslin et al., 2006). Research has shown that feedback combining negative and facilitative elements tends to be more effective in promoting performance improvements, particularly when delivered in a supportive manner (Heslin et al., 2009; London, 2015). This form of feedback, aligns with the principles of constructive feedback, which aims not only to correct but also to motivate and guide employees towards better performance. The facilitative elements in feedback help to maintain the recipient's focus on task processes and away from ego-threatening evaluations, enhancing the likelihood of feedback acceptance and positive behavioral change (Kluger & DeNisi, 1996).

Similarly, while much of the early research on feedback focused on the content and delivery of the feedback message, recent studies have increasingly emphasized the importance of individual differences among employees in shaping feedback outcomes (Eskreir-Winkler & Fishbach, 2019; Kim & Kim, 2020). One influential constructs in this area is the concept of mindset (i.e., fixed vs. growth), introduced by Dweck (1995, 2017). Growth mindset, characterized by the belief that abilities and intelligence can be developed through effort and learning, has been shown to positively influence how employees respond to feedback. In contrast, individuals with a fixed mindset view abilities as static and unchangeable, leading to resistance to feedback and a tendency to dismiss or avoid it altogether. Thus, individuals with a growth mindset benefit from feedback. In addition, FIT (Kluger & DeNisi, 1996) noted that feedback affects recipients' behavior by driving their attention towards meta-processes (ego and self-evaluations) or task processes (through motivation and learning). Feedback is effective if it keeps recipients focused on the task and away from self-evaluations and ego threats.

Overall, understanding the interplay between the characteristics of the feedback message, supervisory feedback, and those of employees, helps developing effective feedback interventions that promote positive feedback processing and better organizational outcomes (Gregory & Levy, 2015). Despite the extensive research in this field, more research is needed understanding of how different types of feedback (i.e., feedback that combines evaluative and developmental components) are processed by employees with varying mindsets (Gnepp et al., 2020). Additionally, there is a need for more research on how specific feedback characteristics, such as credibility or supportiveness, interact with employee traits to influence feedback acceptance and utilization (Kinicki et al., 2004). In this dissertation, across three studies, I address these issues by exploring the effects of supervisory feedback characteristics on employee feedback processing, with a focus on the moderating role of employee mindset and employee task processes and meta-processes. By integrating insights from FIT (Kluger &

DeNisi, 1996), FPM (Ilgen et al., 1979), and the broader literature on employee reactions (e.g., mindset and self-verification theories), this research seeks to contribute to a deeper understanding of the mechanisms underlying feedback effectiveness in organizational settings. The findings of this dissertation have important implications for both theory and practice, offering insights for designing feedback interventions that are more likely to be accepted and acted upon by employees, leading to employee learning and development, which in turn affects their performance.

2. Theoretical Background

Two influential frameworks provide the foundation for understanding how feedback influences employee reactions: the feedback intervention theory (FIT; Kluger & DeNisi, 1996) and the feedback processing model (FPM; Ilgen et al., 1979). The FIT (Kluger & DeNisi, 1996) focuses on how feedback shapes the recipient's attention, noting that directing attention toward the task and its goals enhances performance, whereas shifting it toward the self may hinder employee performance. In contrast, FPM (Ilgen et al., 1979) offers a process-oriented perspective, outlining how feedback is perceived, evaluated, and acted upon, and emphasizing the roles of message characteristics, source credibility, and employee individual differences in determining whether feedback leads to meaningful behavioral change in general. Together, these frameworks provide complementary insights into the mechanisms through which feedback exerts its effects in organizational settings.

2.1 Feedback Intervention Theory

The feedback intervention theory, developed by Kluger and DeNisi (1996), offers a comprehensive framework for understanding how feedback influences behavior in organizational settings. FIT is based on five main assumptions that explain the varying effects of feedback interventions (FIs) on performance. First, the theory posits that behavior is regulated by feedback-standard comparisons, where individuals compare feedback with their

internal goals or standards to assess their performance. Second, FIT assumes that goals are hierarchically organized, with higher-level self-related goals at the top and lower-level task-specific goals at the bottom. Third, the theory states that attention is limited, noting that only feedback-standard discrepancies that capture attention will influence behavior, typically at a moderate level of the hierarchy. Fourth, attention is directed away from self-related processes and towards task-specific processes, a concept known as the normal locus of attention. Finally, FIT assumes that FIs have the power to change the locus of attention, either enhancing or hindering performance depending on whether attention is directed towards the task or the self. Thus, task processes and meta-processes play a major role in determining feedback effectiveness.

These FIT assumptions underline the critical role of attention in determining the effectiveness of feedback. This aligns with Thorndike's (1913) "Law of Effect" (a foundational theory of the FIT), which states that behaviors followed by positive outcomes are more likely to be repeated, while those followed by negative outcomes are less likely to be repeated. Accordingly, feedback is most effective when it directs attention towards the task or underlying goals, thereby reinforcing behaviors that lead to task learning and performance improvement (Kluger & DeNisi, 1996). However, when feedback shifts attention to the self, it can trigger self-evaluation and ego protection behaviors, which may reduce motivation and impair performance, weakening the positive reinforcement of intended behaviors. This distinction is particularly important in understanding how different types of feedback can lead to different outcomes in employee reactions and their subsequent behavior.

In this dissertation, I employed FIT to explore how attention and focus influence feedback effectiveness, particularly in the context of supervisory feedback. By applying FIT, this research examines how different types of feedback messages, namely negative versus facilitative feedback, affect the recipient's focus (i.e., via task processes and meta-processes as well as the mindset) and their subsequent responses. The insights gained from FIT are

crucial for designing feedback interventions that maintain employees' focus on task-related processes and minimize the potential for negative self-evaluations.

2.2 Feedback Processing Model

The Feedback Processing Model (FPM), developed by Ilgen et al. (1979), is one of the first models that provides a detailed framework for understanding how individuals receive, interpret, and respond to feedback. This model outlines a two-stage process that involves both cognitive and motivational responses, highlighting the complexity of feedback processing and the various factors that influence its development.

According to FPM (Ilgen et al., 1979), the first stage of the FPM involves two crucial cognitive processes. First is the perception of the feedback message, where the recipient initially receives and processes the feedback provided. This stage is influenced by several factors, including the clarity and specificity of feedback and credibility of the feedback source. This construct is named as the perceived accuracy. Perceived accuracy is the degree to which employees believe that the feedback reflects their true performance, with higher perceived accuracy leading to greater likelihood of feedback acceptance. Thus, perceived accuracy is crucial because it determines whether the recipient considers the feedback to be valid and worth acting upon. The second is feedback acceptance, defined as the extent to which the recipient agrees with the feedback and is willing to integrate it into their future behavior. This evaluation is critical, as it determines whether the feedback will be embraced and used to guide future actions or dismissed as irrelevant or inaccurate.

The second stage of the FPM are behavioral responses, where the recipient decides whether to act on the feedback and make the necessary adjustments (Ilgen et al., 1979). This stage encompasses two motivational responses, specifically the desire to respond and the intended response. The desire to respond refers to the recipient's motivation to take action based on the feedback, while the intended response is the specific behavioral changes the recipient plans to implement. Both of these constructs are vital for understanding the

effectiveness of feedback, indicating the degree to which feedback leads to meaningful changes in behavior.

In this dissertation, I investigate how supervisory feedback (i.e., supervisory characteristics and the nature of the feedback message) predicts feedback processing outcomes across all three studies. Feedback processing, which encompasses perceived accuracy, feedback acceptance, desire to respond, and intended response, is the central outcome. However, the influence of supervisory feedback on these outcomes is complex and multifaceted. This influence is shaped by various employee characteristics that function as mediators and moderators in this relationship. To shed light on these characteristics, I examine how employee mindset (growth vs. fixed) and task processes and meta-processes influence the way feedback is interpreted and utilized. To explore these interactions, I employ a multi-method approach, including a literature review, meta-analysis, experimental vignette, and a moderated mediation analysis. Through these methods, my research aims to provide a nuanced understanding of how supervisory feedback impacts employee feedback processing.

2.3 Key Factors Influencing Employee Feedback Processing

2.3.1 Feedback Message

The feedback message is a critical component of the supervisory feedback process, encompassing not only the sign but also the type and focus of information regarding employee performance (Gregory & Levy, 2015). Effective feedback messages are essential for informing employees about their current performance levels and guiding and motivating them toward improved performance (London, 2015; Steelman & Rutkowski, 2004). In this dissertation, I examine the effects of supervisory negative feedback alone and a combination of negative and facilitative feedback, known as employee coaching.

Two qualities of feedback are particularly important: focus and specificity. Messages should target concrete behaviors or tasks rather than personality traits, which helps direct attention to actionable improvements and reduces defensiveness (London, 2015). Specific

feedback provides clear guidance on what was done well and what needs to be adjusted, increasing perceived accuracy and acceptance — key elements in the FPM (Ilgen et al., 1979) and FIT (Kluger & DeNisi, 1996). In this dissertation, I analyze how message specificity influences cognitive and motivational feedback outcomes

2.3.2 Feedback Valence

Whether feedback is positive or negative — also shapes employee reactions (Vancouver & Tischner, 2004). Positive feedback can boost morale and motivation (Anseel & Lievens, 2009), but relying solely on it may limit employee progress. Negative feedback is essential for identifying improvement needs, yet it can trigger defensiveness if not delivered constructively (Belschak & Den Hartog, 2009; Kim & Kim, 2020). Research has shown that employee orientation plays an important role on their reactions towards supervisory feedback (London, 2015). For instance, individual differences, such as mindset, influence these reactions. Thus, employees with a growth mindset (see mindset section) tend to respond more constructively to negative feedback, while those with a fixed mindset may see it as a threat (Dweck, 2017). This dissertation examines how feedback valence, specifically negative feedback versus a facilitative coaching approach, interacts with employee characteristics to influence feedback processing.

2.3.3 Negative vs. Facilitative Feedback

A central focus of this research is the comparison between negative feedback and facilitative feedback (i.e., coaching). Negative feedback typically involves a gap in one's performance, often highlighting areas that do not meet standards or expectations (Kluger & DeNisi, 1996). While negative feedback is vital in alerting employees to performance issues that require attention, it may also elicit defensive reactions, reduce motivation, and impair self-efficacy if not delivered appropriately (Steelman et al., 2004; Wu & Leung, 2001). In this dissertation, I examine how such feedback impacts feedback processing, particularly in relation to employee acceptance and the intention to respond.

Different from negative feedback, facilitative feedback adopts a more constructive approach by not only identifying performance gaps but also providing guidance and support to help employees improve (Heslin et al., 2006; Nieminen et al., 2013). This type of feedback aligns with principles of positive psychology and developmental coaching, aiming to empower employees and enhance their engagement and commitment to performance improvement (Heslin et al., 2006). In my research (i.e., Study 1), I examine facilitative feedback under the concept of employee coaching, analyzing its effectiveness in enhancing feedback processing outcomes. Research has shown that, with its emphasis on facilitation, guidance, and support, employee coaching not only improves the quality of the feedback interaction but also strengthens the supervisor-employee relationship, leading to better performance outcomes and more sustained behavioral change (Hsieh & Huang, 2018; Nieminen et al., 2013).

The implications of these findings for employee feedback processing are substantial. Facilitative feedback, by addressing the specific needs of the employee and offering constructive solutions, increases the likelihood of feedback acceptance and encourages proactive behavioral adjustments. This form of feedback is particularly effective in fostering a growth mindset, where employees view feedback as an essential tool for personal and professional development (Cutumisu, 2020; Keating & Heslin, 2015).

2.3.4 Employee Coaching

Employee coaching is a facilitative and developmental process that plays a crucial role in enhancing employee performance through ongoing support (Heslin et al., 2006; Nieminen et al., 2013). Heslin et al. (2006) define employee coaching by three key mechanisms: guidance, facilitation, and inspiration.

First, *guidance* involves the clear communication of performance expectations and the provision of constructive feedback on performance outcomes, emphasizing how employees can improve. This aspect of coaching aligns with the goal setting theory (Locke & Latham,

1990), which posits that specific and challenging goals enhance motivation and performance. Thus, by setting clear goals for success and aligning them with organizational objectives, coaching not only directs employees' efforts towards achieving desired outcomes but also fosters a sense of purpose and commitment (Hsieh & Huang, 2018). This alignment ensures that employees are not only motivated to reach their personal targets but are also contributing meaningfully to the broader aims of the organization (Bouskila-Yam & Kluger, 2011).

In addition, the *facilitation* mechanism goes beyond guidance by encouraging employees to analyze their performance, identify areas for improvement, and explore solutions to challenges. According to Heslin et al. (2006), this process empowers employees to take an active role in their development, promoting self-reflection and critical thinking. Facilitation helps employees internalize feedback and integrate it into their daily work, making them more likely to engage in continuous learning and improvement.

Finally, *inspiration* plays a critical role in coaching by challenging employees to realize and develop their potential, motivating them to strive for improvements (Heslin et al., 2006). This component of coaching fosters a growth mindset, encouraging employees to view challenges as opportunities for development rather than as threats (Dweck, 2006). By instilling a belief in their ability to achieve more, coaching empowers employees to take on new challenges and aim for higher levels of performance. The inspirational aspect of coaching not only boosts intrinsic motivation but also enhances resilience, enabling employees to maintain their efforts and recover from setbacks more effectively (Bandura, 1997; Zyberaj et al., 2020).

The implications of these coaching mechanisms for employee feedback processing are vital. Coaching-oriented feedback, with its focus on guidance, facilitation, and inspiration, is more likely to be perceived as supportive and constructive (London, 2015; Heslin et al., 2006). This perception increases the likelihood that employees will accept and act on the feedback, leading to improved performance outcomes. Hsieh and Huang (2018) stated that the

collaborative nature of coaching not only fosters trust between the supervisor and the employee but also creates a more open and honest feedback environment. When employees trust that their feedback is given with the intent to help them grow rather than to criticize alone, they are more likely to engage with the feedback process positively. This trust is essential for effective feedback processing, as it encourages employees to view feedback as a tool for development rather than as a threat to their self-esteem (Gregory & Levy, 2015). Thus, by aligning feedback with these coaching principles, organizations can enhance both the acceptance and the impact of feedback interventions (Steelman et al., 2004).

Furthermore, coaching impact is particularly useful because it fosters a growth-oriented mindset in employees, which is critical for effective feedback processing (Dweck, 2017). According to Dweck (2017), employees with a growth mindset view feedback, especially negative feedback, as an opportunity for learning and development rather than as a threat to their self-esteem. This mindset makes them more receptive to feedback and more likely to implement changes based on the feedback received. Because coaching emphasizes continuous development, it reinforces growth mindset, making feedback a more powerful tool for driving performance improvements (Dweck, 2017; Jordan & Audia, 2012).

In Study 1, I analyzed the effectiveness of coaching-oriented feedback messages in enhancing feedback processing responses. Results revealed that coaching approaches lead to deeper better behavioral changes compared to traditional negative feedback methods. This is probably because coaching strengthens the supervisor-employee relationship, building trust and facilitates open communication, which are essential for effective feedback exchange (Heslin et al., 2006; Hsieh & Huang, 2018). By understanding the dynamics of negative and facilitative feedback, the influence of feedback valence, and the principles of effective coaching, organizations can enhance their feedback practices to support employee growth. The insights gained from this research contribute to the development of more effective

feedback frameworks and highlight the critical role of strategic feedback messaging in organizational success.

2.3.5 Employee Characteristics

Research has shown that employee characteristics are one of the key predictors of employee reactions, significantly influencing feedback processing and its effectiveness in organizations (Ilgen et al., 1979; Kinicki et al., 2004). For instance, mindset (whether growth or fixed) plays a pivotal role in how feedback is received and utilized. Dweck's (1995, 2013, 2019) mindset theory posits that individuals with a growth mindset are more likely to view feedback, particularly negative feedback, as an opportunity for learning and development. They are less likely to become defensive and more inclined to use feedback to improve their performance (Dweck, 1999). According to the FPM (Ilgen et al., 1979) personality characteristics such as self-esteem and locus of control play a major role for employee reactions towards supervisory feedback. Similarly, the FIT (Kluger & DeNisi, 1996) highlights the critical role of personality characteristics in determining the effectiveness of feedback. For instance, FIT notes that self-esteem influences how individuals receive feedback, with those having higher self-esteem more likely to accept negative feedback constructively. Moreover, this theory suggests goal orientation as another key factor since individuals with a learning orientation see feedback as an opportunity for improvement, whereas those with a performance orientation may become defensive. Finally, Kluger and DeNisi (1996) reported that feedback orientation, which encompasses one's overall receptiveness to feedback, is vital noting that individuals with high feedback orientation actively seek, accept, and act on feedback, enhancing its impact. According to FIT (Kluger & DeNisi, 1996), in addition to these personality traits, task processes, such as the strategies and actions individuals employ to achieve goals, and meta-processes, which include higher-level cognitive functions like self-monitoring and reflection, significantly influence feedback effectiveness. In this dissertation, I employ these two vital processes due to their significant impact on employee attention and

their role in moderating the effectiveness of feedback interventions, as noted by the FIT (Kluger & DeNisi, 1996).

2.3.6 Task Processes and Meta-Processes

According to FIT (Kluger & DeNisi, 1996), the central question regarding feedback interventions is: What effect does a particular intervention have on an individual's attention? To address this question, it is essential to understand two critical processes that influence attention: task processes and meta-processes. Task processes refer to the specific actions and strategies that employees use to complete their work. Meta-processes involve higher-order thinking strategies, such as planning, monitoring, and evaluating one's own performance (Kluger & DeNisi, 1996). Research has shown that both task and meta-processes are integral to how feedback is processed and utilized by employees (Gregory & Levy, 2015; Kim & Kim, 2020). For instance, employees who engage in effective task processes are likely to respond more positively to the feedback they receive and apply it to improve their performance (Gregory & Levy, 2015). Moreover, employees who are skilled in meta-cognitive strategies are better equipped to analyze feedback, identify areas for improvement, and adjust their behaviors accordingly (Vancouver & Tischner, 2004). Research has shown that this ability to self-regulate is particularly important when processing negative feedback, as it allows employees to view feedback as a tool for growth rather than as a criticism of their abilities (Kluger & DeNisi, 1996). Thus, fostering strong task processes and meta-processes among employees is essential for enhancing the effectiveness of feedback interventions.

2.3.7 Mindset

Research has shown that employees with a growth mindset are more likely to engage with feedback in a way that promotes learning and development (Cutumisu, 2019; Jeffs et al., 2021). Employees with a growth mindset are more receptive to feedback, particularly when it is negative, and are motivated to use it to improve their performance (Anseel & Lievens, 2009). This is in contrast to employees with a fixed mindset, who may avoid feedback or

reject it if it challenges their self-concept (Gregory & Levy, 2015). For instance, recent findings by Jeffs et al. (2021) and Cutumisu (2018) showed that individuals with a growth mindset are more likely to engage with feedback constructively, seeing it as an opportunity for growth rather than a threat to self-concept. According to their findings, this engagement enhances the effectiveness of feedback interventions by encouraging a focus on improvement and long-term development, supporting both task engagement and the meta-cognitive processes necessary for sustained performance improvement.

Furthermore, studies have found that employees with a growth mindset are more likely to engage in behaviors that facilitate feedback processing, such as seeking clarification and asking for additional feedback (London, 2015). This proactive approach to feedback is crucial for effective feedback processing, as it ensures that employees not only understand the feedback they receive but also apply it in a way that leads to tangible improvements in performance (Jeffs et al., 2021). Therefore, fostering a growth mindset among employees should be a priority for organizations seeking to maximize the effectiveness of their feedback processes.

2.3.8 Feedback Source Characteristics

Beyond the content of the feedback message and the characteristics of the recipient, the attributes of the feedback source represent an important determinant of feedback effectiveness. Research has shown attributes, such as perceived credibility, trustworthiness, and expertise of the feedback provider, strongly influence how recipients interpret and respond to feedback (Anseel et al., 2015; Ilgen et al., 1979; Kinicki et al., 2004). For instance, when employees perceive the source as competent and unbiased, they are more likely to perceive the feedback as accurate and accept it, even when it is negative (Steelman & Rutkowski, 2004).

Moreover, research has shown that trustworthiness is particularly crucial in supervisory contexts where feedback may have significant implications for performance

evaluations, promotions, and career development (Gregory & Levy, 2015; London, 2015). A lack of trust in the source can lead to defensive reactions or rejection of the message, regardless of its quality (London, 2015). Similarly, the relationship quality between supervisor and employee, encompassing elements such as perceived support and interpersonal respect, can moderate the impact of feedback (Gregory & Levy, 2015). Strong, high-quality relationships may buffer against the negative emotional impact of critical feedback. In this dissertation, while the primary focus is on message format and recipient characteristics, the role of the feedback source is noted as an important contextual element influencing the perception and acceptance of feedback.

2.3.9 Contextual Factors

Feedback does not occur in a vacuum, rather, it is embedded within a broader organizational and cultural context that shapes how it is delivered, received, and acted upon (Gregory & Levy, 2015). For example, in an environment where feedback is frequent, constructive, and framed as a developmental tool, employees may be more receptive and motivated to act upon it (Bouskila-Yam & Kluger, 2011). Conversely, in cultures where feedback is infrequent or viewed as punitive, recipients may approach feedback with skepticism (London, 2015).

In addition, cultural values also play a significant role (Gregory & Levy, 2015; London, 2015). For example, employees from collectivist cultures may prioritize relationships and therefore respond differently to direct negative feedback than employees from individualist cultures, who may place greater emphasis on personal achievement and self-improvement (Tuytens & Devos, 2012). Recognizing these contextual influences is important for interpreting feedback outcomes and for designing interventions that are both situationally appropriate and culturally sensitive.

2.4 Feedback Processing

Feedback processing is a critical element of how employees interpret and act upon the feedback they receive, significantly influencing their subsequent behavior and performance

(Atwater & Brett, 2006; Ilgen et al., 1979). According to FPM (Ilgen et al., 1979), feedback processing encompasses both cognitive and motivational responses triggered by feedback, including perceived accuracy, feedback acceptance, desire to respond, and intended response. Research has shown that employee reactions to feedback, such as perceptions of fairness, accuracy, and satisfaction, are strong predictors of subsequent performance outcomes (Chun et al., 2018; Christensen-Salem et al., 2018; Kinicki et al., 2004; Pichler, 2012; Sheldon et al., 2014).

Building on this foundation, I examined how different formats of supervisory feedback, specifically negative feedback and employee coaching, influence these critical employee reactions. In line with the FPM (Ilgen et al., 1979), I investigated four interdependent variables representing both cognitive (perceived accuracy and feedback acceptance) and motivational (desire to respond and intended response) aspects of feedback processing. Different from previous studies, such as Kinicki et al. (2004), this research incorporates feedback acceptance as a crucial cognitive response, which has often been neglected in earlier work. Additionally, while Kinicki et al. (2004) focused on the characteristics of the feedback source, such as credibility, my research emphasizes the impact of future-focused feedback formats, like employee coaching, compared to traditional performance feedback formats, such as negative feedback alone (Belschak & Den Hartog, 2009). This approach aligns with the recommendations of FIT (Kluger & DeNisi, 1996), which advocates for a deeper exploration of the processes induced by feedback interventions, rather than simply assessing their overall impact on performance. Furthermore, I examined the moderating role of employee mindset and task and meta-processes in the relationship between supervisory feedback and employee reactions, contributing to a more nuanced understanding of how feedback processing evolves.

2.4.1 Cognitive Responses: Perceived Accuracy and Feedback Acceptance

According to FIT (Ilgen et al., 1979), the cognitive evaluation of feedback begins with the perception of its accuracy. Research has shown that perceived accuracy is a critical determinant of feedback acceptance (Brett & Atwater, 2001; Kinicki et al., 2004). For instance, Kinicki et al. (2004) reported that employees are more likely to accept feedback they perceive as accurate and fair. In their study, Kinicki et al. (2004) found that perceived accuracy is influenced by factors such as the credibility of the feedback provider and the specificity of the feedback message. Feedback that is specific and focused on behaviors rather than personal attributes is more likely to be perceived as accurate, leading to greater acceptance (London, 2015). The theory of planned behavior (Ajzen, 1985, 1991) also offers insights into these processes. According to this theory, perceived behavioral control, similar to perceived accuracy in the context of feedback, is a key determinant of the intention to perform a behavior, in this case, the acceptance and utilization of feedback. When employees perceive the feedback as accurate and within their ability to act upon, they are more likely to accept it, leading to a stronger intention to respond positively.

2.4.2 Motivational Responses: Desire to Respond and Intended Response

Once feedback is cognitively processed and accepted, employees then decide how to respond to it. According to FPM (Ilgen et al., 1979), the desire to respond and the nature of the intended response are crucial outcomes in feedback processing. These motivational responses are shaped by the content and delivery of the feedback message, as well as by employee characteristics. For instance, employees with a growth mindset are more likely to view feedback as an opportunity for development, which increases their motivation to improve (Dweck, 2000; Heslin & Vandewalle, 2008). However, employees with a fixed mindset may resist feedback, perceiving it as a threat to their self-concept. According to the theory of planned behavior (Ajzen, 1985, 1991), an individual's intention to act is influenced by their attitudes toward the behavior and perceived behavioral control. Thus, the desire to respond is

influenced by the employee's attitude toward the feedback (e.g., viewing it as constructive or threatening) or the perceived ability to act on the feedback. This theory suggests that when employees perceive feedback as both useful and actionable, and when they feel supported by their environment, they are more likely to engage in the intended response, which in turn enhances their job performance.

2.5 Contribution of This Dissertation

2.5.1 Integrating Message and Recipient Characteristics in Feedback Processing

The first major contribution of this dissertation lies in the integration of message characteristics and recipient attributes within a unified framework for understanding supervisory feedback processing. This is crucial because much of the existing literature has investigated these domains separately. While research on message characteristics has focused on factors such as valence, specificity, focus, and delivery style (Gregory & Levy, 2015; Steelman & Rutkowski, 2004), studies on recipient characteristics have emphasized personality traits, mindsets, and feedback orientation (Dweck, 2017; Kluger & DeNisi, 1996; London, 2015). Although these streams have generated valuable insights, they have often operated in parallel, leaving unanswered questions about how the interplay between feedback giver and receiver it shapes feedback outcomes. This dissertation addresses that gap by examining two distinct supervisory feedback formats—negative feedback and facilitative coaching—and exploring how their effects on employee feedback processing are moderated by recipient attributes, including growth mindset, task processes, and meta-processes. This combined approach enables a richer understanding of why the same feedback message may lead to different reactions depending on the recipient's cognitive and motivational resources. By capturing these joint effects, this research moves the field of feedback research forward, where message quality and individual differences operate together to determine cognitive and behavioral responses.

2.5.2 Elevating Feedback Acceptance as a Central Cognitive Outcome

A second major contribution is the conceptual and empirical elevation of feedback acceptance as a distinct and central cognitive outcome within the feedback processing domain. Although perceived accuracy has been extensively studied as a precursor to feedback use (e.g., Kinicki et al., 2004), acceptance, the extent to which recipients acknowledge, agree with, and internalize feedback, has often been treated as an implicit or secondary element. This dissertation distinguishes acceptance from accuracy, recognizing that employees may view feedback as accurate without embracing it, or conversely, accept feedback for developmental purposes even when they perceive some elements as incorrect. By explicitly including feedback acceptance alongside perceived accuracy, this work refines both theoretical models and measurement practices in the field. Acceptance is positioned as a pivotal mediator between feedback characteristics and subsequent motivational outcomes, such as the desire to respond and intended behavior change. The findings suggest that without acceptance, even accurate feedback may fail to produce meaningful action, noting the importance of designing feedback interventions that not only convey accurate performance information but also foster openness and willingness to engage with it. Thus, this research contributes to a more comprehensive understanding of the cognitive processes that translate feedback into performance improvement.

2.5.3 Integrating FIT and FPM into a Comprehensive Model

A third contribution is the theoretical integration of FIT (Kluger & DeNisi, 1996) and the FPM (Ilgen et al., 1979) into a comprehensive framework. While FIT provides a powerful lens for understanding the role of attentional focus in determining the effects of feedback, it does not elaborate in detail the sequential cognitive and motivational steps through which feedback is processed. Conversely, FPM offers a stage-based account of perception, evaluation, and behavioral intention, but gives less attention to the dynamic shifts in attention that may occur throughout the process. By aligning the sequential stages of FPM with the

attentional mechanisms proposed in FIT, this dissertation proposes a more integrated model that accounts for both structure and process. Specifically, this thesis clarifies how attentional shifts toward the task or the self can influence the cognitive/evaluative stage (e.g., perceived accuracy and acceptance) and, in turn, the motivational stage (e.g., desire to respond and intended response). This integration not only reconciles two influential but previously isolated theoretical perspectives, but also provides a stronger conceptual basis for understanding how different feedback formats, such as negative feedback and employee coaching, operate through attentional and evaluative pathways to shape outcomes. This way, the work offers a theoretical contribution that can inform both academic research and HRM practitioners, enhancing the accuracy with which interventions are tailored to increase employee learning and performance.

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3. Chapter II: Study 1 – The Effects of Supervisory Negative Feedback and Coaching On Employees' Responses to Feedback: The Moderating Role of Mindset

Abstract

Feedback is a vital human resource development (HRD) practice, extensively researched and used to regulate employee behavior and performance. However, despite a century of research and immense significance and use, we still do not fully know why some accept feedback while others reject it. Critics blame both providers and recipients, as well as feedback message format, for this failure. In this study, I investigated whether the focus of the supervisory feedback (negative vs. negative and facilitative) could enhance employees' responses to feedback (e.g., acceptance and use). I also examined whether employees' mindset (i.e., fixed vs. growth) would moderate these relationships. I proposed that employee coaching (i.e., negative and facilitative) would be more accepted than negative feedback alone. In addition, I expected a positive moderating role of the growth mindset between supervisory feedback and employees' responses. To test these assumptions, I conducted a laboratory experimental vignette study ($N = 69$). In line with propositions, employee coaching had a larger effect on the employees' responses to feedback (e.g., feedback acceptance; $M = 4.95$, $SD = 1.24$) than negative feedback alone ($M = 4.08$, $SD = 1.35$). In addition, simple slope results showed that employee coaching was significantly higher than negative feedback for growth mindset (i.e., +1 SD). Finally, path analysis revealed that the interaction between negative feedback, employee coaching, and mindset yielded the strongest positive effect on employees' responses to feedback. Overall, findings add to and endorse calls for more future-focused HRD practices during feedback interventions. In addition, for effective feedback, this study calls for HRD practitioners to account for all critical factors involved in feedback exchanges, from provider to recipient and feedback message.

Keywords: supervisory feedback, employee coaching, employee mindset, employee responses to feedback

3.1 Introduction

Performance feedback is an essential Human Resource Development (HRD) intervention that organizations utilize for both developmental and administrative purposes (London, 2015). While positive feedback is generally well-received, negative feedback often incites fear and increases negative reactions among employees (Kluger & DeNisi, 1996; London & Smither, 2002). In addition, performance feedback, even positive, can sometimes hurt employee performance (Kluger & DeNisi, 1996). Critics frequently attribute these feedback failures to the sources, typically employees' superiors such as supervisors (Adler et al., 2016). To address these failures, feedback researchers suggest adopting more future-oriented leadership approaches to mitigate negative reactions and enhance the effectiveness of feedback interventions (Gnepp et al., 2020; Rasheed et al., 2015). For example, the use of feedback coaches has been advocated as a superior method during HRD interventions, providing guidance and facilitation during feedback sessions (Murphy, 2020; Nieminen et al., 2013; Hsieh & Huang, 2018).

This study contributes to this line of research by reconciling past findings on the impact of leadership approaches on employee responses to performance feedback. I proposed that three factors can mitigate feedback failures during HRD interventions.

First, performance feedback can differ in its effects by focusing on the future (Gnepp et al., 2020; London et al., 2023a; Wang et al., 2016). I test this proposition by employing supervisory feedback as the most common form of feedback source (DeNisi & Murphy, 2017). I define supervisory feedback as the information provided to employees about their performance by their superior, such as a supervisor (Ilgen et al., 1979; Kinicki et al., 2004). Noteworthy, in this study, I only account the effects of the information (i.e., feedback sign) provided by the supervisor and not the possible effects of the source characteristics (for a review on source characteristics, see Lechermeier and Fassnacht, 2018). To test the impact of the focus of supervisory feedback, I employ negative feedback and employee coaching.

Negative feedback is a deficiency in one's job performance and is usually provided by evaluating recipients' past performance to raise their awareness about the performance gap. Employee coaching is an extension of feedback. Coaching concerns providing feedback that aims to further guide and facilitate one's job performance by providing feedback in a way that keeps recipients focused on the task and guides them towards improvements. Noteworthy, because positive feedback features tend to overlap with several features of employee coaching (e.g., both take positive approaches into ones' performance and elicit positive mood), I only utilize employee coaching to simplify research model and avoid redundancy. Despite differences, both feedback and coaching are crucial for HRD practices and add to the implications of leadership during performance management interventions.

Second, I suggest that employee characteristics might explain some of the results of these relationships. Specifically, I propose that the type of mindset (Dweck, 2017; Dweck & Yeager, 2019) might provide further insights into employee reactions and how they view the utility of feedback. Dweck (2017) defined mindset as implicit beliefs about one's malleability of personal attributes, such as intelligence, composed of growth and fixed mindset. A growth mindset entails beliefs that attributes, such as intelligence, are malleable and can be improved through efforts. Fixed mindset beliefs disregard learning through efforts based on convictions that intelligence is fixed and unmalleable. Mindset is a vital HRD practice for individual and organizational outcomes (Han & Stieha, 2020; Keating & Heslin, 2015). By involving mindset, this study adds to feedback literature by elucidating how individual differences in beliefs about attribute malleability—specifically growth and fixed mindsets—shape feedback reception and utility (Dweck & Yeager, 2019). Highlighting the role of mindset aligns with emerging HRD practices prioritizing adaptability and learning (Han & Stieha, 2020; Keating & Heslin, 2015), offering a nuanced understanding of the psychological mechanisms underpinning varied feedback responses. This investigation provides a theoretical framework for interpreting mixed feedback outcomes and suggests practical feedback strategies to foster

environments conducive to learning and growth. Consequently, integrating mindset theory into feedback research addresses a critical gap in our understanding of feedback dynamics and presents actionable insights for optimizing HRD outcomes.

Third, following criticism about the employee reactions, I aimed to shed light on employees' responses to feedback (i.e., how recipients perceive and respond to feedback). To explain employee responses, I employed four facets based on Ilgen et al.'s (1979) feedback processing model: perceived accuracy, acceptance of feedback, desire to respond to feedback, and intended response. I suggest that these intermediate psychological processes might facilitate understanding employee reactions to supervisory feedback.

This study contributes in several ways to research on performance feedback. First, it empirically tests the assumptions that employee coaching, as a future-focused form of feedback, might help explain employee reactions toward supervisory feedback. Previous research has tested other forms of future-focused feedback, such as feedforward (Budworth et al., 2015). However, past research focused on job-related outcomes. Testing these assumptions regarding employee reactions might add insights into psychological mechanisms' role in feedback (Anseel & Lievens, 2009; Keeping & Levy, 2000; Kluger & DeNisi, 1996). In addition, researchers call for more future-focused approaches as better alternatives compared to sole evaluations (Gnepp et al., 2020; Murphy, 2020). For instance, Gnepp et al. (2020) noted that focusing on the future helps "people focus on features under their control… and leads people to take more responsibility, initiate actions, engage in effortful striving, and achieve more of their goals" (p. 4). Second, by investigating mindset, this study adds to the role of recipients' characteristics for supervisory feedback. Differences between individuals' beliefs in knowledge as fixed (fixed mindset) or malleable (growth mindset) might explain their reactions toward performance evaluations (Jordan & Audia, 2012). Together, supervisory feedback focus and employee mindset might explain why some

accept feedback while others reject it. Employee responses, in turn, explain subsequent employee performance.

3.2 Hypotheses Development

Among feedback sources, the top-down (supervisor to subordinate) approach of feedback is most commonly used in organizations (DeNisi & Murphy, 2017). Typically, supervisory feedback provides specific information about subordinates' current performance, intending to increase their motivation and job performance (Eva et al., 2019). However, despite these positive intentions, supervisory feedback often fails to achieve these goals, especially when feedback is negative (Belschak & Den Hartog, 2009; Kluger & DeNisi, 1996).

3.2.1 Employee Responses to Feedback

Employee reactions to feedback are shown to be good predictors of the subsequent employee performance (Anseel et al., 2011; Kinicki et al., 2004; Pichler, 2012; Pichler et al., 2020; Sheldon et al., 2014). Research has shown that for employees to benefit from feedback, various employee reactions must be accounted, such as fairness, accuracy, or satisfaction with the feedback (Brett & Atwater, 2001; Pichler, 2012; Sparr & Sonnentag, 2008). Similarly, the way feedback is framed, formatted, or delivered has also implications on employees' reactions to feedback (Chun et al., 2018; Kim et al., 2024). This study investigates how different formats of supervisory feedback, namely negative feedback and employee coaching, influence employees' reactions to feedback.

Following the feedback processing model of Ilgen et al. (1979), this study explores four interdependent variables, which sum employee reactions from both cognitive and motivational aspects. The first two reactions (perceived accuracy and acceptance of feedback) entail cognitive reactions, while the second chain (desire to respond and intended response) are motivational. A study by Kinicki et al. (2004) investigated perceived accuracy, as well as the desire to respond and intended response. However, Kinicki et al. (2004) neglected

feedback acceptance, which I intend to add as another important initial cognitive response from employees. In addition, Kinicki et al. (2004) focused on source's characteristics as predictors (i.e., credibility), while I focus on current calls to test future-focused formats of feedback (i.e., employee coaching). Findings by Kinicki et al. (2004) showed that employees' reactions moderate the relationship between sources' characteristics and some types of feedback they used and the subsequent performance. Adding to this research, the target of this study is to further advance the understanding of whether the newly recommended formats of feedback, known as future-focused formats (e.g., Gnepp et al., 2020), make a difference on employees' reactions to feedback, compared to more traditional performance feedback formats, such as negative feedback alone (Belschak & Den Hartog, 2009). In addition, different from Kinicki et al. (2004), this study follows the initial recommendation by the feedback intervention theory (Kluger & DeNisi, 1996) for research that focuses "on the processes induced by [feedback interventions] FIs and not on the general question of whether FIs improve performance" (p. 278). Thus, this study utilizes employee mindset as a moderating variable between supervisory feedback formats and the employee reactions (as an outcome).

3.2.2 Supervisory Negative Feedback

Generally, people accept positive feedback more than negative (Anseel & Lievens, 2009; Goller & Späth, 2023). The self-enhancement theory (Shrauger, 1975) supports this claim, stating that individuals prefer and seek feedback that aligns with their positive self-views. On the contrary, negative feedback threatens one's ego concerns and self-image, evoking feelings of defensiveness (London & Smither, 2002), which might reduce employee willingness to respond to it positively (Anseel & Lievens, 2009). However, despite rejections, negative feedback is crucial for learning and growth.

Recent studies demonstrated that negative feedback hinders one's learning motivation due to its ego-threatening features, causing recipients to tune out (i.e., move away from the

task at hand) and preventing their further information processing (Eskreis-Winkler & Fishbach, 2019) and hindering employee creativity (Kim & Kim, 2020). Others have shown that negative feedback can also affect employee reactions. For instance, researchers reported a negative association between supervisory negative feedback and employee perceptions of feedback, such as accuracy (Brett & Atwater, 2001) and fairness (Sparr & Sonnentag, 2008). Because of the threats to one's ego and self-image and the tendencies of individuals for ego protection (London & Smither, 2002), I expect employees to react negatively to supervisory negative feedback, such as by rejecting it or expressing a low desire to respond to it:

> Hypothesis 1: Supervisory negative feedback will negatively affect employee responses to feedback.

3.2.3 Employee Coaching

Recently, there has been evidence that feedback that focuses on solutions rather than mistakes mitigates the harmful effects of feedback (Keith et al., 2022). Such findings align with research noting the role of future-focused approaches, such as future-focused feedback (Gnepp et al., 2020), strength-based performance appraisal (Bouskila-Yam & Kluger, 2011), feedforward interview (Kluger & Nir, 2010), or employee coaching (Heslin et al., 2006).

Following claims about feedback coaches (Murphy, 2020), I used employee coaching to test future-focused feedback for important reasons. First, coaching has a long history of usage in organizational psychology, making it a valid construct in work settings. Second, coaching has been shown to yield many benefits for employees (Aguinis, 2013; Gregory & Levy, 2011). Unlike feedback, coaching encourages and shows how things are done through demonstrations and guidance (Aguinis, 2013; London, 2015; London & Smither, 2002). One key feature that makes employee coaching effective is the future-focused approach to enhance employee capabilities through guidance, facilitation, and inspiration (Gregory & Levy, 2011; Heslin et al., 2006; London & Smither, 2002). Finally, employee coaching can be used in experimental studies, enabling control and manipulation.

Accounting for the positive implications of employee coaching features (i.e., guidance, facilitation, and inspiration), I suggest that employee coaching will positively impact employee responses. Research on transformational leadership has shown that leaders guide and inspire via personal considerations and sharing. Hence, because feedback primarily fails due to its subjectivity and threats to one's self-image (Kim & Kim, 2020; London & Smither, 2002), I suggest that these features of employee coaching (i.e., future-and strength-focused, facilitative) reduce self-concerns positively affecting employee responses:

> Hypothesis 2: Employee coaching will positively affect employee responses to feedback.

3.2.4 The Moderating Role of Mindset

Sometimes, recipients' personalities might account for the most considerable variance in feedback effects (Raftery & Bizer, 2009; Steelman & Rutkowski, 2004). For example, Murphy (2020) noted that "some performance deficiencies are likely to be a result of the employee's low level of motivation and commitment to the plan" (p. 14). Similarly, London and Smither (2002) stated that employee feedback orientation (i.e., one's propensity to process feedback mindfully or belief in the value of feedback) might influence feedback or coaching receptivity. London and Smither (2002) noted that those high in feedback orientation are more receptive toward coaching since coaching supports the value of feedback and encourages its use.

Relatedly, the prominent researcher on mindset, Dweck (1995, 2000, 2013, 2019), argues that one's beliefs on knowledge as malleable or fixed can influence learning orientation. Dweck (2000) states that fostering a growth mindset can facilitate employee learning and growth. Similarly, Jordan and Audia (2012) claimed that differences between individuals' beliefs in knowledge as fixed (fixed mindset) or malleable (growth mindset) explain their reactions toward performance evaluations. According to Jordan and Audia (2012), low performance may indicate a permanent deficit in the job-related ability of fixed

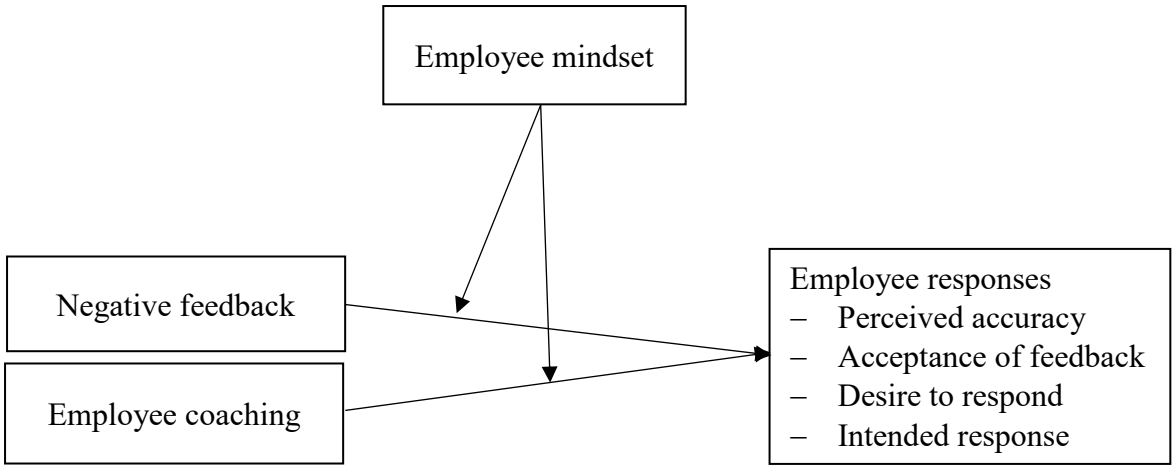
mindset individuals. On the contrary, personal efforts can improve deficiencies for individuals with a growth mindset. Gnepp et al. (2020) reported growth mindset influences how people think about the future. Feedback interventions that focus on improving performance (future-focused feedback) might be more readily accepted by people with a growth mindset than those with a fixed mindset. I investigate whether mindset (growth vs. fixed) moderates the effects of the supervisory feedback on employees' responses:

> Hypothesis 3: Employee mindset will moderate the relationship between experimental condition (i.e., the supervisory negative feedback vs. employee coaching) and employee responses, in such a way that growth mindset strengthens these relationships and fixed mindset weakens them.

For an overview of the study variables and hypothesized relationships, see Figure 1.

Figure 1

Research Model



3.3 Method

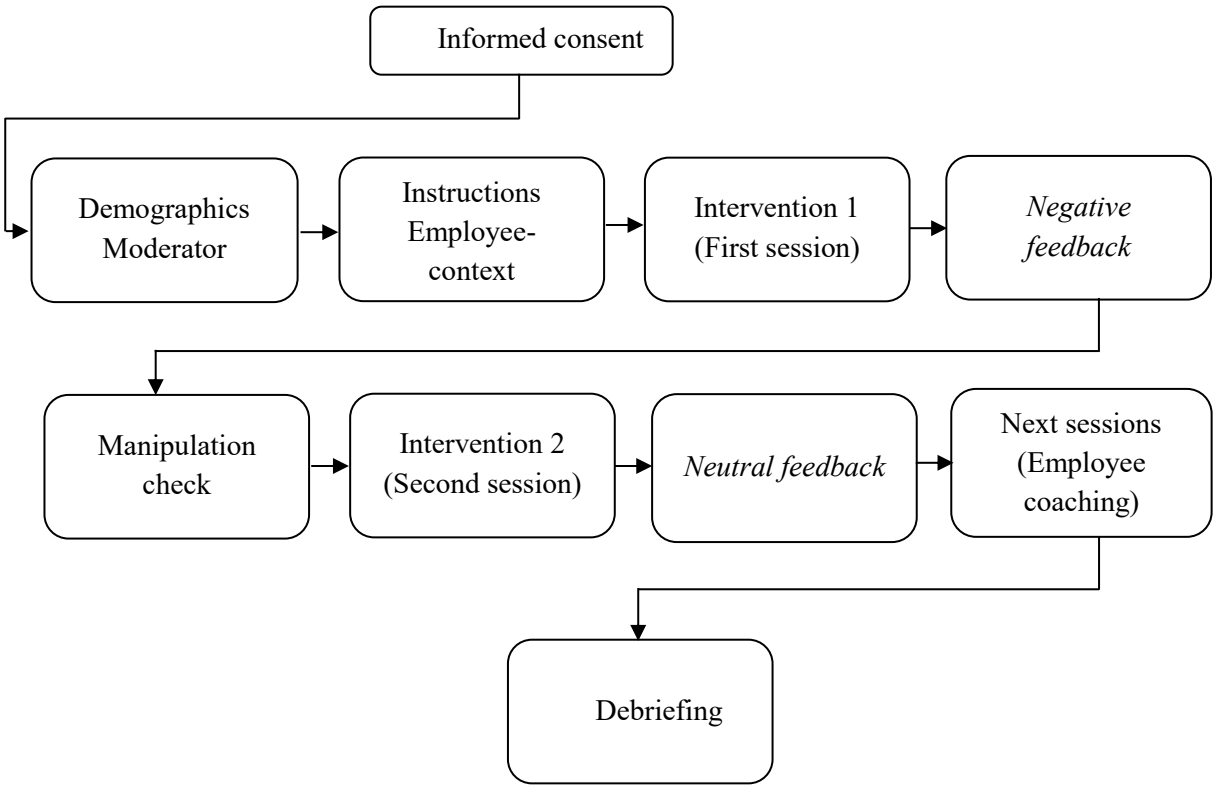
3.3.1 Research Design and Procedure

I designed four vignettes and conducted two pilot studies to validate the study material. To test the hypotheses, I conducted a laboratory experiment with students from a public university in Germany. I employed a within-subject design and manipulated two

independent variables (negative feedback and employee coaching) based on a 2 (negative feedback vs. neutral feedback) by 2 (employee coaching vs. neutral employee coaching) experimental design. Figure 2 shows the overall study procedure for the negative feedback condition. This design offered the exposure of the same individuals to different experimental conditions, allowing for comparative analysis between various conditions within the same subject.

Figure 2

Experimental Procedure



Note. Procedure refers to both negative and neutral conditions; the same procedure applies to employee coaching conditions; conditions (i.e., first feedback and then coaching) were randomized.

3.3.2 Vignettes

The experimental vignette methodology helps exercise control over independent variables to gather evidence regarding causation in research (Aguinis & Bradley, 2014). Vignettes are also good because they do not require in-depth knowledge about the topic and can be easily used

to elicit meaning for participants (Hughes & Huby, 2002). They can be presented through images, videos, or written format (Hughes & Huby, 2002). Written vignettes are most appropriate when the research aims to assess explicit processes and outcomes. Moreover, they suit within-subjects research designs (Aguinis & Bradley, 2014). See supplementary material for a vignette example.

Vignettes tested employee knowledge about a product they work on. Specifically, the vignettes required the participants to read about four different products, answer questions about them and receive pre-programmed feedback about their answers. After that, I rated their reactions to the feedback. Feedback was given based on their performance (see pilot studies and the supplementary material).

3.3.3 Pilot Studies

I conducted two pilot studies via Amazon's Mechanical Turk (MTurk) to test and validate vignettes. I employed strict criteria following recommendations by Aguinis et al. (2020). Respondents were told they would participate in a leadership study in exchange for €1.00. To qualify for the study, participants had to be employees and proficient in English. I also used CAPTCHA for approving valid users and invited only MTurk Master Workers and those with Human Intelligence Task (HIT) approval rates of < 95. Finally, I employed attention check questions to measure participants' engagement.

With the two pilot studies, I aimed to answer important questions about vignettes: (1) Can participants complete the study without difficulties, and whether vignettes have the required statistical power (statistical power; i.e., whether they are strong enough to yield the required number of participants)? (2) Will intervention yield some effects on the results of the experiments (intervention power)?

3.3.4 Pilot Study 1

I tested the first question with 32 MTurk participants. I analyzed vignettes' power (i.e., their ability to produce the desired results or a change or progress in recipients' learning processes)

by looking at the effects of vignettes. I conducted these analyses in *R*, using the *lme4* package, by applying the linear mixed-effects models (LME) as a statistical model (Laird & Ware, 1982). I looked at the effect through changes before and after the intervention. For iterations, I used a variation of approach responses. I firstly derived a 2, 3, 4 (questions) by 2, 3, 4 (answers) approach. Results were significant ($p < .009$) with a relatively strong difference after the intervention (between $r = .18$ and $r = .29$). I further increased the iterations to a 5 x 5 approach. This combination yielded better results in terms of a higher difference after the intervention ($p < .001$, $b = .34$). In the 6 x 6 approach, results were still significant ($p < .020$); however, the strength of the difference after the intervention was lower ($b = .27$) compared to the 5 x 5 approach. Therefore, I decided to proceed with the 5 x 5 approach. In all these iterations, I included the change or progress in recipients' learning processes based on the effects of negative feedback shown by previous research ($f^2 = 0.19$), starting with a 0.50 level of significance (i.e., p before intervention), and adding the expected change (i.e., p after intervention) of 0.19 (0.50 + 0.19 = 0.69). Thus, the overall effect of vignettes was expected to result in a 15% increase (difference before [0.50], and then adding up the after [+0.19] effect) on recipients' learning processes. Finally, participants rated the difficulty of the vignettes and the respective five answer options. Results showed that around 60% of participants rated both vignettes and answer options as neutral or easy, while the rest as difficult (25%) or very difficult (5%).

3.3.5 Pilot Study 2

I recruited 25 MTurks and conducted inferential statistics to check for the effects of the interventions. I also set inclusion and exclusion criteria due to negative feedback condition. I excluded participants based on scores (i.e., scoring all answer options correctly and disqualifying for negative feedback; $n = 3$), attention check ($n = 2$), and outliers ($n = 1$), resulting in a final sample size of 19 participants. I conducted t-tests and found statistically significant effects of supervisory negative feedback for employee responses but not for all

four facets. Specifically, the experimental condition (i.e., supervisory negative feedback) had larger effects on both feedback acceptance (M = 3.80) and desire to respond to feedback (M = 4.12) compared to the neutral condition (M = 3.30; M = 3.36), revealing a relatively strong power of intervention.

3.3.6 Main Study: Materials and Procedure

3.3.6.1 Sample Size

Based on power analysis, I aimed at a sample size of around 60 participants (f^2 = 0.19, α = .05, β = .80; Faul et al., 2009). However, because of the exclusion and inclusion criteria (e.g., negative feedback, quality check; see pilot study 2), I aimed for 20 additional participants.

3.3.6.2 Measures

3.3.6.3 Experimental Manipulation

Randomization of Experimental Conditions. In addressing potential order effects on the feedback conditions (main conditions and main conditions vs. neutral conditions), the experimental design incorporated randomization at two levels to reduce the sequence of conditions in confounding the results. First, participants were randomly assigned to the two experimental conditions, ensuring an equitable distribution across the main feedback conditions (i.e., negative feedback and employee coaching). Second, within each assigned condition, the order of presentation for neutral feedback and the main feedback intervention was also randomized. This randomization approach helped mitigate any sequence effects, such as primacy or recency biases, that could influence the participants' responses. Randomization of the order in which feedback was presented ensures that the observed effects are attributed to the content and quality of the feedback, rather than the order of its presentation. This, in turn, reduces the potential biases of feedback sequencing.

Supervisory Negative Feedback. Participants were provided negative feedback after performing in the vignette (see supplementary material for an example). After their answers, a window informed participants that their supervisor was checking their progress and would

provide feedback if needed (i.e., those performing well were disqualified, and no feedback was provided). Participants were told to wait for their supervisor's feedback for around 30 seconds.

I manipulated supervisory negative feedback by including several features based on past research operationalization. I firstly provided outcome feedback (i.e., "your current score is x%") and told participants that their score "does not describe the product optimally and accurately." After that, I provided normative feedback and told them they "scored below average and worse than x% of their peers." I also made feedback specific (i.e., "specifically, this means that you scored only vs. answers correctly, but vs. answers incorrectly"). This feedback format includes several features of constructive feedback, such as timely and specific (Belschak & Den Hartog, 2009; Kim & Kim, 2020). In the neutral condition, I told participants they "scored in a percentile between 30 and 60" (Kim & Kim, 2020).

Employee Coaching. I followed the employee coaching elements by Heslin et al. (2006) for employee coaching. Heslin et al. (2006) noted guidance (e.g., constructive feedback that helps recipients improve), facilitation (e.g., providing ways to analyze, explore and solve problems), and inspiration (e.g., challenging employees with ways to develop their potential) as three integral components of employee coaching. Hence, I first provided correct, timely, and constructive feedback (i.e., "Your current score is x%. Unfortunately, your answers describe the product poorly and below average"). After that, I aimed to inspire them after their failure by telling them, "Because this is an important product, we want to help you improve and make progress learning about the product." Further, I encouraged them to explore new ways of solving their learning difficulties by providing some learning strategies and encouraging them "to try various learning strategies." For example, I told them to "try to associate the current product with an application context", or encouraged them "to review material more often and try to compare with other materials that [they] have learned before." Finally, I inspired them by asking them to keep learning and use my feedback for further

development (i.e., "… do not be discouraged by your current performance. You should only use your performance, together with my comments, to guide your further learning and improvement").

3.3.6.4 Moderator: Mindset (Growth and Fixed Mindset)

I employed the Implicit Theory of Intelligence Scale (ITIS) developed by Abd-El-Fattah and Yates (2006) to measure *mindset*. The scale is comprised of two dimensions, with seven items for each. The first dimension measures *fixed* mindset. A sample item is "You are born with a fixed amount of intelligence". Cronbach's α was .84. The second dimension measures *growth* mindset. A sample item is "Good preparation before performing a task is a way to develop your intelligence." Cronbach's α was .90. Responses ranged between 1 (*strongly disagree*) to 5 (*strongly agree*) for both parts. I reverse-coded the *fixed* mindset and took the average of fixed and growth mindset dimensions to create a single mindset variable. In this variable, higher scores indicate a growth mindset and lower scores indicate fixed mindset.

3.3.6.5 Outcome: Employees' Responses to Feedback

I used a five-item measure Kinicki et al. (2004) developed to measure perceived accuracy. A sample item was "The information discussed at the appraisal session was accurate." For the *acceptance of feedback*, I used four items from Anseel and Lievens (2009). A sample item was "The feedback I received was an accurate evaluation of my performance." The *desire to respond* was measured using four items from Kinicki et al. (2004). A sample item was "I have no intention of using the feedback to guide my performance on the next task." Finally, I used one item from Anseel and Lievens (2009) for the *intended response*. The item was: "Because of my most recent performance appraisal session, I intend to put forth a great deal of additional effort towards doing my job." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's α were acceptable to very good (between .77 – .95).

3.3.6.6 Statistical Analyses

I applied both descriptive and inferential analyses. I conducted descriptive and factor analyses (i.e., confirmatory factor analyses) for the measures' qualities. In addition, I employed regression and moderation analyses to test the main hypotheses (direct and moderation effects). Further, I used a structural equation modeling technique, path analysis, to check for differences between employee responses facets. I used SPSS and R for the analyses.

3.3.6.7 Results: Main Study

I conducted a laboratory experiment with students from a public university in Germany. Before data collection, I preregistered the study in the open science framework (https://osf.io/9hkfz/). I collected the data between June 2021 and October 2022. Students were invited to take part in return for university credits. In addition, they were offered private feedback on their performance and a chance to participate in a lottery of €50. Because vignettes were designed and tested in English, I translated them and the study measures (English to German) via the back-translation method with the help of three Ph.D. researchers proficient in German (native) and English. Researchers noted one item as difficult to understand, which was discussed with a third researcher. Before the experiment, I submitted vignettes and study procedures to the university ethics committee for approval (dossier number: 2021-04/17).

I was able to collect data from 78 students. However, I excluded 8 participants due to their good performance (i.e., scoring all answer options in the vignette correctly, making them ineligible for negative feedback) and 1 participant due to failure in attention check questions. Hence, the final sample was 69 participants (56% female; M_{age}= 24.62 years, SD_{age} = 6.32). Most participants were from Germany (92%), held a Bachelor's degree (34.8%), and were employed, with 42% over five years of work experience.

3.3.6.8 Study 1: Manipulation Check

I tested whether manipulation had the desired effects by asking participants a single question after supervisory feedback and employee coaching: "To what degree did you find the comments of your supervisor helpful?" Participants indicated their answers on a scale of 1 (*not helpful*) to 7 (*very helpful*).

I conducted a paired-sample t-test to measure if the manipulation check worked. Results revealed differences in the effects for both negative feedback ($M = 3.60$; $SD = 2.09$) vs. neutral condition ($M = 3.22$; $SD = 1.58$), and employee coaching ($M = 6.12$; $SD = 1.44$) vs. neutral condition ($M = 3.29$; $SD = 1.45$). These differences were significant for employee coaching ($t(64) = 10.889$; $p < .001$; $d = 1.34$), but not for the negative feedback ($t(66) = .991$; n.s. ; $d = 0.12$).

3.3.6.9 Main Study: Descriptive Statistics and Confirmatory Factor Analysis

Table 1 summarizes descriptive statistics and correlations between study variables. Significant correlations were found between the experimental condition and some facets of employee responses (e.g., $r = .54$, $p < .001$), while others showed weaker, nonsignificant relationships (e.g., $r = .19$, $p = .12$).

I also conducted confirmatory factor analysis (CFA) to check for the fit of the measurement models within the assumed models (Table 2). I conducted one and two-factor models (for the moderator) and one and four models for employee responses (the outcome). Results confirmed the theoretically assumed models. Compared to the one-factor model, the two-factor model for the moderator showed a much better fit ($\chi^2 = 186.558$, $df = 91$, CFI = .77, TLI = .70, RMSEA = .14, SRMR = .19). Similarly, compared to the one-factor model, the (original) four-factor model of employee responses had a better model fit ($\chi^2 = 429.030$, $df = 55$, CFI = .90, TLI = .94, RMSEA = .12, SRMR = .09).

Table 1

Means, Standard Deviations, and Zero-Order Correlations Between Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Gender [a]	0.58	0.50								
2. Age	24.62	6.30	.05							
3. Condition [b]	0.50	0.50	.00	.00						
4. Fixed mindset	2.15	0.80	.18	.06	.00					
5. Growth mindset	3.84	0.93	.09	-.04	.00	-.28**				
6. Perceived accuracy	4.34	1.48	-.08	-.18	.24**	.01	.34**			
7. Feedback acceptance	4.33	1.32	-.04	-.23**	.19	.04	.41**	.70**		
8. Desire to respond	3.36	0.88	.02	-.14	.54**	.04	.18	.44**	.46**	
9. Intended response	3.69	1.12	.01	-.08	.35**	.08	.24**	.42**	.56**	.56**

Note. [a] Gender: Male = 1; female = 0. [b] Condition: Negative feedback = 0, Employee coaching = 1.

**$p < .01$.

Table 2

Confirmatory Factor Analyses with Different Factor Models for the Study Variables

Model	χ^2	*df*	CFI	TLI	RMSEA	SRMR	AIC	BIC
Moderator								
One-factor model	294.461	91	.54	.46	.21	.19	2615.278	2676.161
Two-factors model	186.558	91	.77	.70	.14	.12	2509.374	2572.432
Outcomes								
One-factor model	537.265	66	.79	.74	.16	.10	2692.661	2745.929
Four-factors model	429.030	55	.90	.94	.12	.09	2654.676	2719.041

Note. One-Factor Model: Fixed and growth mindset, together; Two-factor model: Fixed and growth mindset, separately (original model); One-factor model: Perceived accuracy, acceptance of feedback, desire to respond to feedback, and intended response, together; Four-factor model: Perceived accuracy, acceptance of feedback, desire to respond to feedback, and intended response, separately.

AIC = Akaike information criterion; BIC = Bayesian information criterion; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; TLI = Tucker-Lewis index.

3.3.6.10 Main Study: Hypotheses Testing

I conducted repeated measures ANOVA for each employee responses facet. I found the conditions to significantly differ for all employee responses facets: the desire to respond, intended response, feedback acceptance, and perceived accuracy ($F(2.32, 148) = 83.20$, $p < .001$, $\eta_p^2 = 0.57$; $F(3, 192) = 29.1$, $p < .001$, $\eta_p^2 = 0.31$; $F(2.34, 150) = 17.6$, $p < .001$, $\eta_p^2 = 0.21$; and $F(2.56, 164) = 25.4$, $p < .001$, $\eta_p^2 = 0.28$, respectively). After that, I conducted pairwise t-tests with Bonferroni correction to detect which conditions differ significantly in each facet of the feedback conditions.

In the first hypothesis, I expected that negative feedback would have a negative effect on employee responses. The results did not support this hypothesis. However, negative feedback showed larger means than the neutral feedback condition on all four facets (feedback acceptance, $M = 4.08$, $SD = 1.35$; perceived accuracy, $M = 4.00$, $SD = 1.32$; desire to respond, $M = 2.89$, $SD = 0.81$; and intended response, $M = 3.31$, $SD = 1.11$), compared to neutral condition (feedback acceptance, $M = 3.40$, $SD = 0.89$; perceived accuracy, $M = 3.05$, $SD = 1.02$; desire to respond, $M = 2.39$, $SD = 0.71$; and intended response, $M = 2.78$, $SD = 1.20$). These differences were statistically significant with Bonferroni-adjusted p values (e.g., for the desire to respond; $t(64) = 5.25$, $p < .001$). However, results confirmed the second and third hypotheses with employee coaching having larger positive effect on all facets of employee responses (feedback acceptance, $M = 4.95$, $SD = 1.24$; perceived accuracy, $M = 4.70$, $SD = 1.56$; desire to respond, $M = 3.84$, $SD = 0.68$; and intended response, $M = 4.10$, $SD = 1.00$), compared to both neutral condition and negative feedback. These differences were statistically significant (e.g., for the desire to respond, $t(64) = 11.31$, $p < .001$). See Table 3. Table 4 compares the effects of each condition on employee responses facets.

Table 3

Means and Standard Deviations for the Effects of Conditions on Employee Responses

	Employee responses							
	Perceived accuracy		Feedback acceptance		Desire to respond		Intended response	
Conditions	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Employee coaching	4.70	1.56	4.95	1.24	3.84	0.68	4.10	1.00
Neutral coaching	3.40	1.10	3.54	1.05	2.41	0.79	2.59	1.10
Negative feedback	4.00	1.32	4.08	1.35	2.89	0.81	3.31	1.11
Neutral feedback	3.05	1.02	3.40	0.89	2.39	0.71	2.78	1.20

Note. $N = 65–68$.

Table 4

Pairwise Comparisons between the Experimental Conditions for Employee Responses

	Employee responses											
	Perceived accuracy			Feedback acceptance			Desire to respond			Intended response		
Comparison	*t*	*d*	*p*	*t*	*d*	*p*	*t*	*d*	*p*	*t*	*d*	*P*
Employee coaching vs. negative feedback	3.61	0.45	.001	3.23	0.40	.001	7.69	0.96	.001	4.63	0.58	.001
Employee coaching vs. neutral coaching	5.68	0.71	.001	5.21	0.65	.001	11.31	1.41	.001	8.72	1.09	.001
Negative feedback vs. neutral feedback	4.86	0.60	.001	3.42	0.43	.001	5.25	0.66	.001	2.79	0.35	.01
Neutral coaching vs. neutral feedback	2.18	0.21	.03	1.02	0.13	n.s.	0.25	0.03	n.s.	-1.25	-0.16	n.s.

Note. $N = 64$.

Furthermore, I tested the moderating role of employee mindset (Figure 3) in the relationship between conditions (negative feedback vs. employee coaching) and employee responses. The results yielded a significant interaction between condition and mindset in predicting perceived accuracy ($b = 0.81$, $p = .031$), feedback acceptance ($b = 0.70$, $p = .028$), and intended response ($b = 0.73$, $p = .037$), but not desire to respond ($b = 0.01$, n.s.). For further details, see Table 5. Later, I conducted simple-slope analyses for perceived accuracy, feedback acceptance, and intended response because the interaction between condition and mindset was significant for these facets of employee responses. The results showed that a growth mindset strengthened the relationship between the employee-coaching condition and employee responses (e.g., feedback accuracy: $b = 0.72$, $t = 4.02$, $p = .004$). However, this difference was not significant for a fixed mindset (–1 SD; $b = –0.66$, $t = 0.75$, n.s.). I found the same pattern for feedback acceptance (growth mindset: $b = 0.72$, $t = 3.23$, $p = .012$; fixed mindset: $b = -0.66$, $t = 0.11$, n.s.) and intended response (growth mindset: $b = 0.72$, $t = 4.89$, $p = .001$; fixed mindset: $b = -0.66$, $t = 1.13$, n.s.). For further details, see Figure 3.

Figure 3

Regression Slopes for the Interaction of Employee Coaching and Negative Feedback and Mindset on Employee Responses

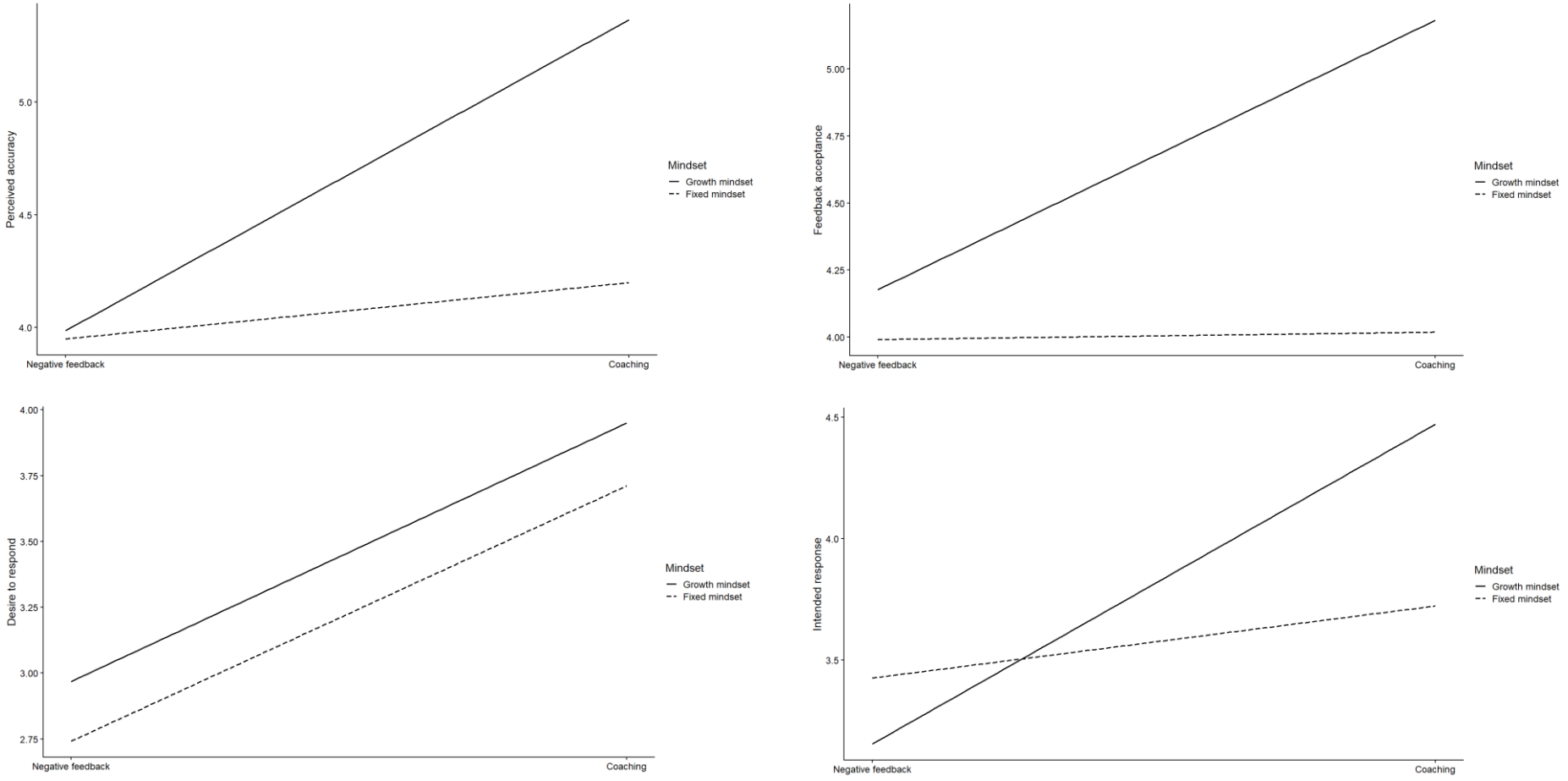


Table 5

Regression Results for the Main Study Variables and Employee Responses Facets

	Perceived accuracy		Feedback acceptance		Desire to respond		Intended response	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Predictor	*B*	*B*	*B*	*B*	*B*	*B*	*B*	*B*
(Intercept)	6.45**	6.46**	6.28**	6.29**	3.72**	3.72**	3.40**	3.41**
Condition [a]	0.81**	0.79**	0.52*	0.50*	0.98**	0.98**	0.81**	0.79**
Mindset [b]	0.43*	0.03	0.49**	0.13	0.17	0.16	0.17	-0.20
Age	-0.11*	-0.11*	-0.10*	-0.10*	-0.04	-0.04	0.00	0.00
Gender [c]	-0.26	-0.26	-0.04	-0.04	0.12	0.12	0.04	0.04
Interaction		0.81*		0.70*		0.01		0.73**
F	5.34**	5.51**	4.94**	5.07**	13.10**	10.80**	4.00**	4.69**
R^2	0.18	0.22	0.17	0.21	0.36	0.36	0.15	0.19
Δ*F vs. Model 1*		5.41*		4.91*		0.00		7.14**
Δ*R vs. Model 1*		0.04		0.04		0.00		0.04

Note. Unstandardized regressions are reported. Interaction refers to condition x mindset.

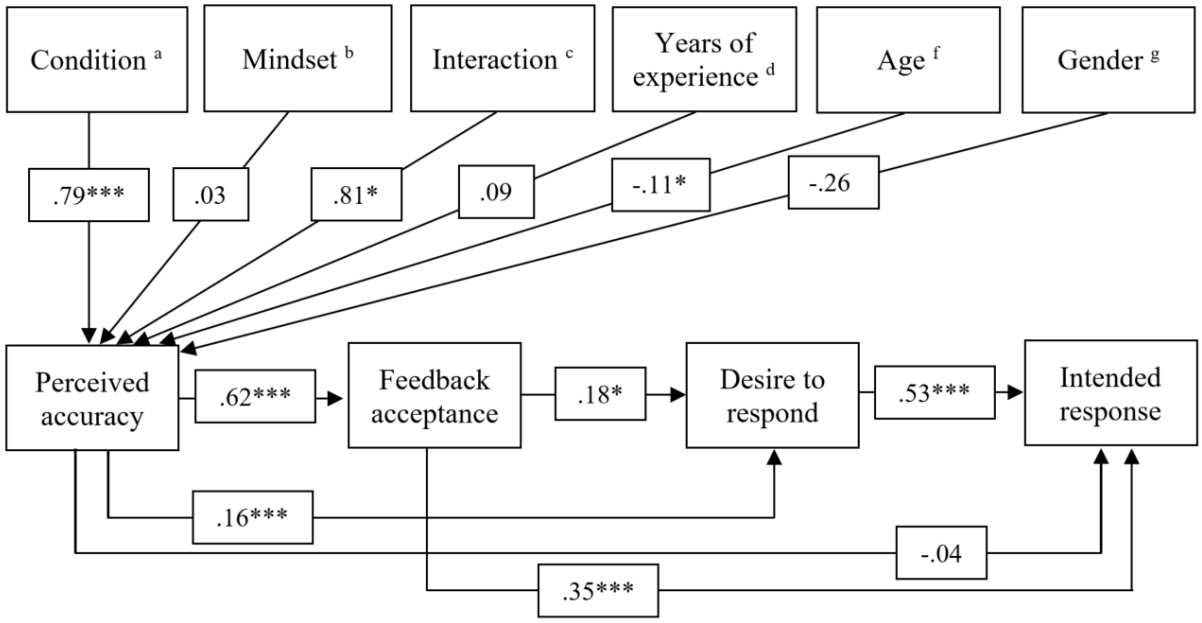
[a] Condition: Negative feedback = 0, Employee coaching = 1. [b] Mindset: Fixed mindset = 0, Growth mindset = 1. [c] Gender: Male = 1, female = 0.

*$p < .05$. **$p < .01$.

Finally, although I did not hypothesize specific relationships among the four employee response facets, following Ilgen et al.'s (1979) feedback-processing model, I explored whether the effects differed across them. According to Ilgen et al. (1979), employee responses follow a sequence of cognitive (perceptions and acceptance) and motivational (desire and intentions) processes. To ensure that the observed effects were robust across these feedback mechanisms, I conducted a path analysis including perceived accuracy, feedback acceptance, desire to respond, and intended response as sequential outcomes. Figure 4 presents the results of the path analysis. The results revealed a strong positive effect of the interaction between the main experimental conditions and mindset ($b = 0.81$, $t(75) = 2.48$, $p = .016$). Likewise, condition effects indicated a large effect of employee coaching on employee responses—particularly on perceived accuracy ($b = 0.79$, $t(20) = 4.14$, $p < .001$)—compared with negative feedback. Consistent with Ilgen et al.'s (1979) framework, the effects varied across the four facets of employee responses. Perceived accuracy had a strong positive effect on feedback acceptance ($b = 0.62$, $p < .001$), the link from feedback acceptance to desire to respond showed a smaller yet significant effect ($b = 0.18$, $p = .041$), and the transition from desire to respond to intended response was again substantial ($b = 0.53$, $p < .001$). Overall, these results suggest that employees who perceive feedback as accurate are more likely to accept it, develop a desire to respond, and ultimately intend to act on the feedback.

Figure 4

Path Analysis for Employee Responses Facets



Note. Standardized path coefficients are presented.

[a] Condition: Employee coaching = 1, negative feedback = 0. [b] Mindset: Growth mindset = 1, fixed mindset = 0. [c] Interaction = Conditions x mindset. [d] Years of experience = mean-centered (higher scores indicate more experience). [f] Age = mean-centered (higher scores indicate older adults). [g] Gender: Male = 1, female = 0.

*$p < .05$. ***$p < .001$.

3.4 Discussion

The main objective of this study was to add to research on feedback by investigating whether the focus of supervisory feedback makes a difference in employees' responses to feedback. In line with expectations, I found that employee coaching is a better intervention for facilitative feedback processing than negative feedback. Similarly, I found that employee mindset moderates the relationship between supervisory feedback (negative feedback vs. employee coaching) and employee responses. Thus, although Hypothesis 1 was not supported (negative feedback did not reduce employee responses compared with neutral feedback), Hypotheses 2 and 3 were supported. By investigating the theoretical model in a laboratory experiment, I was able to draw causal inferences about the hypothesized relationships between key study variables.

3.4.1 Theoretical Implications and Practical Contributions

The results of this study yield several theoretical and practical implications for organizational feedback interventions and HRD practices. By integrating relevant theoretical frameworks, I contribute to theory and practice regarding the implications of the (often)-contradictory findings regarding feedback interventions.

Theoretically, this research showed that whether supervisors focus on employees' past performance or future could make a difference in employee responses to their feedback. Traditionally, supervisory feedback has been criticized mainly due to the threat it yields to the recipients' ego and self-image (Belschak & Den Hartog, 2009; Kluger & DeNisi, 1996). In addition, critics note the difficulty of evaluating one's past performance due to biases in subjective evaluations (Adler et al., 2016; Gnepp et al., 2020; Murphy, 2020). With this research, I contribute to this stream of criticism by investigating how the focus of supervisory feedback can yield better effects on how employees react to it. I found that employee coaching, which focuses on the future and aims to facilitate and guide one's work performance, could mitigate these adverse effects of supervisory feedback. Indeed, a recent

study found that even negative feedback can yield positive effects when it is future-framed (Tarantelli et al., 2022). Hence, theoretical frameworks should aim at merging more future-focused approaches shown to be more effective for employees' responses to feedback.

In addition, I add to feedback intervention theory (FIT; Kluger & DeNisi, 1996) by investigating the implications of employee personality and their responses. FIT (Kluger & DeNisi, 1996) noted personality factors as possible moderators in the relationship between feedback and one's job performance. These findings showed that employee mindset can affect how employees respond to feedback. Results revealed that a growth mindset significantly moderates the relationship between supervisory feedback and employee responses. For employee coaching, results showed a significant positive difference in effects. Hence, in addition to personality factors noted by the FIT (Kluger & DeNisi, 1996), future research and feedback intervention theory must note the implications that both personality and the feedback format have for employee responses. Recent research shows that both personality and format of feedback have implications on how employees react to feedback (Eskreis-Winkler & Fishbach, 2019; Fenwick et al., 2019; Kim et al., 2024; Tarantelli et al., 2022; Zyberaj, 2024) and their subsequent job performance (Goller & Späth, 2023; Keith et al., 2022; Kim & Kim, 2020).

Practically, these findings support the many research claims and findings on the implications of future-focused forms of feedback (Gnepp et al., 2020; Heslin et al., 2006; Murphy, 2020; Tarantelli et al., 2022). First, in line with previous research and theories (Bouskila-Yam & Kluger, 2011; Heslin et al., 2006; Kluger & Nir, 2010), I found that focus of supervisory feedback about employee job performance can make a difference in how they respond to feedback. Findings showed that employee coaching yields positive employee responses to supervisory feedback. Hence, I adhere to calls to refrain from providing only past-focused and error-based feedback that can reduce employee efforts (Aguinis et al., 2012; Murphy, 2020). Instead, supervisors should employ more coaching- and strengths-based

approaches. For instance, leaders can use transformational leadership (Fenwick et al., 2019) and future- and strength-based approaches (Aguinis et al., 2012; Bouskila-Yam & Kluger, 2011; Gnepp et al., 2020; Kluger & Nir, 2010) that align with employee coaching aiming to facilitate, guide, and inspire employees (Heslin et al., 2006; London & Smither, 2002). By providing future-focused feedback, supervisors increase the chances that employees accept feedback and increase their motivation to use it further.

Moreover, findings encourage supervisors to pay attention to the employees' personalities. Results showed that employees with a growth mindset process employee coaching much better than those with a fixed mindset. This aligns with past research noting the significance of employees' personality for job performance (Cutumisu & Lou, 2020; Ilgen et al., 1979; Jordan & Audia, 2012; Kim & Kim, 2020; London et al., 2023b). However, different from past research, I investigate the implications of employee mindset concerning their reactions to feedback. Employee reactions can help us explain when and how employees engage in self-concerns after feedback (Eskreis-Winkler & Fishbach, 2019; Jordan & Audia, 2012; Keith et al., 2022). For instance, Jordan and Audia (2012) noted that an organizational culture that emphasizes a growth mindset might reduce defensive self-enhancement. For employees to benefit from employee coaching (and negative feedback), organizations should enhance employee mindset by installing a culture that embraces employee failure and supports learning and growth, which would attenuate employee tendencies for mere self-enhancement and react to feedback more positively.

A recent review found that for mindset interventions to be effective, organizations should account for different stakeholders involved in change processes and involve all levels of organizations, including teams and organizations (Han & Stieha, 2020). A large national experiment found that context plays a major role in positive mindset interventions (Yeager et al., 2019). Hence, organizations might aim to intervene in supervisors (i.e., increasing their

beliefs that such interventions work) and simultaneously train employees for more positive attitudes toward learning and growth.

Finally, different from past research, I add to feedback research by investigating various cognitive and motivational mechanisms that might explain the failure of feedback interventions. Following the feedback processing model of Ilgen et al. (1979), I cast light on employee responses to supervisory feedback. The importance of employee reactions was also noted by the FIT (Kluger & DeNisi, 1996), stating the need for research that focuses "on the processes induced by [feedback interventions] FIs and not on the general question of whether FIs improve performance" (p. 278). In line with these calls and the theory of planned behavior (Ajzen, 1991), path analysis results showed that there are differences in reactions between the cognitive (perceptions and acceptance) and motivational (desire and intentions) mechanisms of feedback processing. Often, employees' expression of feedback acceptance might not denote their motivation to use it. Hence, supervisors should heed employee reactions and ensure employees express both acceptance and desire to use the feedback. This, in turn, increases the chances for better job-related outcomes.

3.4.2 Practical Implications for the HRD Interventions

The present study offers several insights for HRD practitioners. First, it encourages the adoption of coaching as a key supervisory function and a future-focused approach, emphasizing the need for supervisors to focus on guiding employees toward future achievements rather than dwelling on past performance shortcomings. This approach mitigates the negative impacts of feedback and aligns with developmental coaching practices that foster employee growth. Second, understanding that employee mindset plays a critical role in how feedback is processed and acted upon, HRD strategies can include mindset development programs. Such programs can help cultivate a growth mindset across the organization, thereby enhancing the receptivity and utility of feedback.

Organizations can also consider training supervisors to deliver feedback that supports a growth mindset, encouraging resilience and a continuous improvement outlook among employees. Third, study findings advocate for a nuanced understanding of feedback mechanisms, suggesting that HRD interventions should be multifaceted, incorporating both cognitive and motivational components of employee responses. This holistic approach ensures that feedback is accepted and motivates employees towards positive change, a prerequisite for better job performance.

3.4.3 Limitations and Future Research

Although I employed a robust research design, the study has some limitations that can be reduced by future research. First, although I carefully designed and validated the vignettes utilized for the experiment, the task type I used might have implications for the results. I did try to contextualize the task. However, it might be important to consider it. Research has shown that task type moderates the relationship between feedback and performance (e.g., van Dijk & Kluger, 2011). A study found that images depicting performance success could benefit negative feedback (Itzchakov & Latham, 2020). Hence, future research might consider validating these findings with a field experiment, which would naturally represent employee tasks or involve different task types with the same experimental procedure.

Second, although I constructed a set of variations in the negative feedback aligning with previous research, I included mainly normative feedback and evaluated employee performance compared to peers' performance. This type of negative feedback might increase dissatisfaction with feedback and employees could react strongly against it. Feedback can often be misunderstood, which could affect how others react to it (Deeley et al., 2019). Thus, future scholars could examine employee reactions by eliminating normative feedback, referring to one's performance alone.

Third, I used employee reactions and did not investigate employee performance further. Following the theories and the research findings I utilized, I firmly believe that reactions are

good indicators of subsequent employee performance. Motivation is a good predictor of job performance (Hemakumara, 2020; Kopelman & Thompson, 1976). However, I encourage future research to employ job-related outcomes for more insights into the implications of employee responses to feedback.

Fourth, because moderator effects are usually weak in power and stability, current results must be replicated with a larger sample. Finally, the current study participants were from Germany, which has implications for the generalizability of the findings. Hence, future research should validate these findings in other cultures and contexts.

3.5 Conclusion

In this study, I aimed to contribute to factors that could explain the failure of supervisory performance feedback. I proposed that the focus of supervisory feedback could make a difference in how employees react to it and suggest employee mindset to moderate these relationships. Results supported my propositions. Although findings show positive reactions to negative feedback and employee coaching, the latter had much larger effects. Following these findings, supervisors should adopt future-focused approaches that support employee learning and growth via facilitation and guidance. Employee coaching reduces possible adverse reactions and increases chances for mindful processing of supervisory feedback.

Similarly, organizations should target enhancing employee growth mindset, which moderates the effects of employee coaching. Moreover, I found that a positive interaction between employee coaching and mindset might yield the best positive reactions. Hence, organizations should simultaneously aim to enhance supervisory feedback and employee mindset for effective HRD interventions.

Finally, more attention should be given to employee reactions concerning supervisory feedback than direct job outcomes. Employee acceptance of feedback does not denote one's

motivation to utilize it. Failure in one's job performance after feedback might indicate that employees did not intend to use what they claimed to have accepted. Thus, organizations should train employees to be more receptive to supervisory feedback and find ways to boost their motivation to apply it on the job.

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3.7 Conflict of Interest Statement

I have no conflict of interest to declare.

3.8 References

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4. Chapter III: Study 2 – The Relationship between the Supervisory Feedback Characteristics and Employee Feedback Processing: A Systematic Review and Meta-Analysis

Abstract

Feedback is a pivotal human resource management (HRM) intervention that organizations utilize to regulate employee behavior and improve performance. Among feedback sources, supervisory feedback (SF) prevails in organizations. However, employees often reject it, making it imperative for further research. Using systematic review and meta-analysis, I investigated the most studied SF characteristics and examined their relationships with employee feedback processing. I found 24 relevant studies, which yielded 75 effect sizes (N = 595,950 employees) and 26 SF characteristics. Most studies (n = 12) highlighted credibility as the most studied SF characteristic. Furthermore, with a random effects model, the meta-analytic results showed a medium-large positive correlation between the SF characteristics and employee feedback processing ($\overline{r}$ = .36, 95% *CI* [.30, .41], p < .001). Moreover, I classified the 26 characteristics into broader SF categories (n = 8). Among these categories, meta-analytic results showed that charisma correlated strongest with employee feedback processing ($\overline{r}$ = .65), followed by credibility ($\overline{r}$ = .44), feedback valence ($\overline{r}$ = .43), feedback quality ($\overline{r}$ = .41), support ($\overline{r}$ = .40), and feedback fairness ($\overline{r}$ = .20). Non-significant, weak correlations were shown between supervisory learning-goal orientation ($\overline{r}$ = .12) and similarity ($\overline{r}$ = .05) as SF characteristics and employee feedback processing. Findings yield important implications for HRM and both for leadership and employees.

Keywords: Performance feedback, supervisory feedback characteristics, feedback processing, systematic review, meta-analysis

4.1 The Relationship between Supervisory Feedback Characteristics and Employee Feedback Processing: A Systematic Review and Meta-Analysis

Providing feedback about one's work performance effectiveness is a common human resource management (HRM) practice and an essential resource for employee learning and growth (Carroll et al., 2022; Coutifaris & Grant, 2022; Johnson & Connelly, 2014; Mertens et al., 2021; Simon et al., 2021; Vancouver & Tischner, 2004). Feedback providers (i.e., supervisors) use feedback to improve employee (i.e., subordinate) behavior and performance by guiding them towards desired behaviors and goals.

Despite its extensive use and supervisors' positive intentions for this crucial HRM intervention, feedback is not always effective and sometimes backfires with negative effects (Bak, 2020; Kluger & DeNisi, 1996). In a meta-analytic study, Kluger and DeNisi (1996) demonstrated that feedback interventions (FIs) end with detrimental effects up to one-third of the time. Similar results show recent findings (Kim & Kim, 2020; Lee et al., 2019; Shao & Martin, 2020). For instance, researchers on employee creativity found negative feedback to be effective only in the bottom-up (subordinate to supervisor) approach, while it hindered creativity in the top-down (supervisor to subordinate) approach (Kim & Kim, 2020). Hence, although supervisory feedback is the most prevalent form of feedback source (Bak, 2020; DeNisi & Murphy, 2017), its effectiveness often remains inconclusive. To further understand the implications for HRM, it is imperative to study the various factors that hinder or improve the features of supervisory feedback for employee feedback processing and, thus, performance.

I propose that several *feedback processes* might explain this failure of supervisory feedback as an HRM for recipients' performance: the recipients may (a) not *perceive* it as accurate, (b) may not *accept* it, may accept it but have neither (c) *desire* nor (d) *intentions* to act upon it (Anseel & Lievens, 2009; Campagna et al., 2022; Grundmann et al., 2021; Ilgen et al., 1979). I define feedback processing (dependent variables) as how recipients perceive

(cognitive processes) and react (motivational and behavioral processes) to supervisory feedback. These cognitive and motivational processes are crucial HRM processes for employee learning and growth (Bakker & Demerouti, 2007; Son & Kim, 2016).

These processes might explain the effects of supervisory feedback as a vital HRM intervention on subsequent employee performance (Ajzen, 1991; Anseel & Lievens, 2009). The first two processes relate to perceptions and acceptance (e.g., fairness or accuracy) of feedback concerning the performance evaluation accuracy from the supervisor. Ilgen et al. (1979) argued that neither perception nor acceptance guarantees performance. Therefore, they noted the importance of the motivational and behavioral processes.

According to Ilgen et al. (1979), the "desire to respond to feedback leads to the formation of beliefs about the response the recipient intends to make" (p. 364). Indeed, previous research has shown that factors such as acceptance or intentions can mediate the relationships between feedback and subsequent performance (Kinicki et al., 2004; Westerman et al., 2018). These findings align with the reasoned action theory (Fishbein & Ajzen, 1975) and the theory of planned behavior (Ajzen, 1985, 1991), which note the role of intentions as the most approximate and best predictor of recipients' responses.

In turn, feedback processes are affected by various characteristics of the feedback provider, such as expertise or trust (Bear et al., 2017; Ryu & Hong, 2020; Westerman et al., 2018). Research notes that recipients react and process feedback differently when it comes from trustworthy sources (Campagna et al., 2022; Kinicki et al., 2004; Westerman et al., 2018). A recent study found that trustworthiness beliefs motivate future perceptions and behaviors (Campagna et al., 2022). In addition, supervisory feedback valence (i.e., positive or negative) is shown to affect recipients' reactions (Bell & Arthur, 2008; Johnson & Connelly, 2014), with the majority accepting positive supervisory feedback more readily than negative feedback (Bell & Arthur, 2008; Grundmann et al., 2021). I refer to these characteristics of the

supervisors and their feedback as *supervisory feedback characteristics* (independent variable) and propose to correlate them with employee feedback processing.

The existing literature review has noted the role of supervisors' characteristics as crucial facets of HRM (Lee et al., 2019) for employee feedback processing (cf. Lechermeier & Fassnacht, 2018). However, previous reviews are qualitative only, focus on the overall feedback characteristics of the sources, and, most importantly, do not provide quantitative results about these relationships. Hence, I aim to identify additional predictors of feedback processes not included in the past reviews and quantify the effect sizes of all supervisory feedback characteristics in the literature. I report a systematic review and meta-analysis of the relevant literature to achieve this goal.

Combining a systematic review with a meta-analysis is important for several reasons. First, because of the large number of research conducted on supervisory feedback characteristics, a systematic review is imperative to aggregate, evaluate, and synthesize findings from previous research on the impact of supervisory feedback characteristics on employee feedback processing. This approach identifies patterns, gaps, and inconsistencies within the extant literature, offering a nuanced understanding of the supervisory characteristics.

Second, through meta-analysis, I statistically combine the results of previous studies to determine the magnitude of the effects of supervisory feedback characteristics on employee feedback processing. By quantifying these effect sizes, the analysis provide empirical evidence regarding the strength and direction of these effects, offering valuable insights for HRM researchers and practitioners.

Furthermore, the meta-analysis facilitates the identification of moderating variables and trends, thereby enriching the theoretical and practical understanding of feedback processes in organizational settings.

Altogether, this study contributes to feedback research as an essential field for HRM in several ways. First, it adds to understanding the role of supervisory feedback characteristics as crucial HRM facets for feedback processing. Ilgen et al. (1979) alluded to supervisors as a critical factor for feedback processing, claiming that "the source of feedback may be the most important influence on the extent to which recipients accept their feedback" (p. 352). Using a systematic review approach, I synthesize the supervisory feedback characteristics concerning feedback processing from previous research. Although there is ample work about the effects of supervisory feedback characteristics, this work (a) lacks a thorough review of the characteristics and is greatly scattered across studies, (b) is merely cross-sectional, and (c) the majority of studies focused on a single process of the feedback. Thus, I provide a more thorough overview by focusing on feedback processing and reducing these limitations.

Second, this study provides insights into the role of feedback-induced processes instead of direct performance. This significant contribution relates to the early calls from the Feedback Processing Model (FPM; Ilgen et al., 1979) and Feedback Intervention Theory (FIT; Kluger & DeNisi, 1996) for research on feedback-induced processes such as motivational reactions (Grundmann et al., 2021). The FPM of Ilgen et al. (1979) suggested that feedback effects on behavior follow a process, which includes the perception of feedback, acceptance of feedback, desire to respond to feedback, and the intended response. For supervisors to succeed with their feedback, recipients should perceive and accept feedback as accurate, which precedes their desire and intended response within the response process. These claims were later supported by FIT (Kluger & DeNisi, 1996), noting that the focus of research should be on the feedback-induced processes and not merely on the general question of whether FIs improve performance. Thus, I aim to reveal more about the significance of feedback processing.

Third, I provide empirical evidence about supervisory feedback characteristics' role in feedback processing through meta-analysis. I am not aware of any study that quantified such effects meta-analytically. This is essential in accounting for the conflicting results shown by

various research findings. For instance, studies have shown differences in feedback provision (Jampol & Zayas, 2021) and feedback reactions (Geddes & Konrad, 2003) based on the gender of the giver and the receiver of the feedback. Similarly, path-analytic findings show that supervisory feedback effects vary even within the feedback processes stipulated by Ilgen et al.'s 1979 model (Zyberaj & Volmer, 2021). Thus, recipients might accept feedback but still lack a desire and intention to act upon it. By quantifying the various findings into single effect sizes, the present study advances understanding of the significance of different supervisory feedback characteristics for employee feedback processing.

4.2 Theoretical Framework

To understand the impact of supervisory characteristics on employee feedback processing and reactions within HRM practices, this paper draws on two foundational theoretical frameworks. The first set, incorporating the feedback processing model (Ilgen et al., 1979) and the feedback intervention theory (Kluger & DeNisi, 1996), sheds light on the implications of the supervisory feedback characteristics for crucial HRM outcomes, namely feedback processing. These models provide a lens through which we can understand the effects of various feedback characteristics, such as clarity or specificity, on employee development and performance. The second set of theories, the reasoned action theory (Fishbein & Ajzen, 1975) and the theory of planned behavior (Ajzen, 1985, 1991), offers insights into the psychological mechanisms driving employees' reactions following supervisory feedback. Examining how employees' attitudes over behavior influence their intentions and actions in response to feedback, these theories help further decode the complexities of feedback dynamics in HRM practices. Together, these theoretical perspectives provide a comprehensive understanding of the role of supervisory feedback in HRM, highlighting the interplay between supervisory feedback characteristics, employee perceptions, and feedback effectiveness.

4.2.1 The Feedback Processing Model and Feedback Intervention Theory

The feedback processing model (Ilgen et al., 1979) outlines how employees process feedback about their performance. The model provides a comprehensive understanding of the psychological mechanisms and stages through which recipients interpret and utilize feedback, emphasizing the cognitive and emotional pathways involved in feedback reception and action. According to the model, feedback processing consists of the recipient's perception of the feedback, the cognitive evaluation of its content, the emotional reactions, and the subsequent decision-making regarding behavioral change. This process is not linear but involves complex interactions among these various factors. The model further posits that feedback can only lead to changes in behavior, performance, or attitudes if it is accurately perceived, adequately processed, and effectively integrated into the recipient's action plans. Feedback processing can result in various outcomes, from acceptance and motivation to improvement, rejection, and defensiveness, depending on how they interact.

In addition, the feedback intervention theory (Kluger & DeNisi, 1996), posits that the characteristics of supervisory feedback play a pivotal role in shaping employee reactions to performance feedback. According to FIT, the effectiveness of feedback largely depends on where the feedback directs the recipient's attention (i.e., towards the self or task). Feedback interventions are most effective when they focus the employee's attention away from the self and towards the task or learning aspects of the task. Moreover, supervisory feedback characteristics such as specificity or manner of delivery influence this focus of attention and thereby affect employee reactions. For instance, specific and clear feedback that is closely tied to task performance or learning strategies encourages positive cognitive and emotional processing, leading to constructive HRM reactions such as increased motivation, engagement, and performance improvement. This theory highlights how carefully crafted supervisory feedback can positively influence employee reactions following performance feedback by

steering attention in productive directions that support learning and performance enhancement.

4.2.2 The Reasoned Action Theory and Planned Behavior Theory

The reasoned action theory (Fishbein & Ajzen, 1975) underscores the role of intentions in the decision-making process, suggesting that the stronger an individual's intention to perform a specific behavior, the more likely they are to carry it out. This model implies that by understanding and potentially influencing an individual's attitudes and perceptions, one can predict and even change their behavioral intentions and, consequently, their behaviors. This framework has been widely applied in various HRM fields, including health behaviors and marketing, to understand and influence human behavior. Similarly, expanding reasoned action theory, the planned behavior theory (Ajzen, 1985, 1991), introduces perceived behavioral control as an additional determinant of intentions and behavior.

Related to performance feedback as an HRM practice, the planned behavior theory suggests that an employee's response to feedback is shaped by their attitude towards the behavior change suggested and their perceived behavioral control. This theory posits that for feedback to translate into performance improvement effectively, the recipients must not only intend to act on the feedback (influenced by their attitudes and subjective norms) but also feel capable of doing so (perceived behavioral control). These theories elucidate why some feedback interventions may fail to enhance performance despite positive attitudes and supportive norms. If employees doubt their abilities to enact the suggestions, their intentions might not translate into actual behavior change. This insight underscores the importance of equipping employees with the necessary HRM tools (resources, training, and support) to bolster their perceived behavioral control, thereby enhancing the likelihood of feedback leading to intended performance improvements.

4.3 Hypotheses Development

Factors associated with feedback interventions as HRM practices are well established. However, with its inconclusive effects, the reasons why some subordinates accept feedback and benefit from it while others reject it remain unclear (Adler et al., 2016), making performance feedback an imperative field of research for HRM researchers (Lee et al., 2019; London, 2015). Previous research has shown that these reasons yield insights into the relevant factors in a feedback exchange (Anseel & Lievens, 2009; Kacmar et al., 2009). In such an exchange, feedback provision (i.e., supervisory feedback) and reactions (i.e., employee feedback processing) are intertwined and interact to determine feedback effects (Adler et al., 2016; Ilgen et al., 1979; Kinicki et al., 2004). Similarly, research has long noted the role of feedback valence in feedback exchanges (Kluger & DeNisi, 1996). Ilgen et al. (1979) claimed that "source and message characteristics interact with recipient characteristics to produce a reaction to feedback by the recipient" (p. 352). Thus, for a better understanding of the feedback processing by the recipients, it is crucial to explore the implications of both feedback providers' characteristics and recipients' reactions, as well as the role of feedback valence.

4.3.1 Supervisory Feedback Valence and Employee Feedback Processing

Feedback valence (i.e., positive or negative) is derived by comparing an individual's performance to a standard desired outcome (Kluger & DeNisi, 1996). As an HRM practice, such a comparison yields either positive or negative feedback. Positive feedback concerns one's performance better than the average (Gregory & Levy, 2015; Kluger & DeNisi, 1996). In short, it informs the recipient about the achieved goal or outcomes. This type of feedback is generally accepted more easily than negative feedback (Brett & Atwater, 2001; London, 2015). According to the self-verification theory (Swann, 1987), recipients accept positive feedback more easily because it aligns with their self-views. Positive feedback can have

positive effects because it reaffirms individuals' good performance, reinforces their positive behaviors, and increases their self-efficacy (Bandura, 1986).

Unlike positive feedback, negative feedback is a deficit in one's performance (e.g., a standard gap between current and desired performance). However, if accepted, negative feedback can sometimes have better effects because recipients will likely exert more effort after a negative feedback experience (Finkelstein & Fishbach, 2012; Gregory & Levy, 2015; Kluger & DeNisi, 1996). Negative feedback provides recipients new ways to improve, supporting their learning and growth (Finkelstein & Fishbach, 2012; Lechermeier & Fassnacht, 2018; Strijbos et al., 2010). However, despite the benefits, negative feedback is rejected more than positive because of its salience and effects on the recipient's personality (i.e., threatening one's ego and self-image; Gregory & Levy, 2015; Kluger & DeNisi, 1996; London, 2015). Self-verification theory (Swann, 1987) notes that individuals are usually prone to accepting feedback that aligns with their positive self-views. I aim to investigate the relationship between feedback valence and employee feedback processing at a general level and not specifically for each valence (i.e., positive/negative feedback). Based on research about the significance of each type of feedback valence, I assume a positive relationship between the supervisory feedback valence and employee feedback processing:

> Hypothesis 1 (H1): There will be a positive relationship between the supervisory feedback valence and employee feedback processing (e.g., feedback acceptance or intended response).

Moreover, feedback recipients utilize feedback valence to gauge the perceived characteristics of the feedback providers. Research has shown that individuals providing positive feedback are viewed more positively (Argyris, 1991; Kacmar et al., 1996) and as more credible (Steelman & Rutkowski, 2004) compared to negative feedback. For instance, Kacmar et al. (1996) found that recipients reported more positive impressions (both regarding intentions and characteristics) about their supervisors when receiving positive feedback than

negative feedback. Similar findings were reported by Westerman et al. (2015), noting that positive feedback elicits more positive feelings towards the supervisor than negative feedback, which can often be threatening. Thus, I expect a positive relationship between positive feedback and employee-perceived supervisory characteristics and a negative one between negative feedback and employee perceptions of supervisory characteristics:

> Hypothesis 2 (H2): There will be a positive relationship between the supervisory positive feedback valence and perceived supervisory feedback characteristics, such that supervisors providing positive feedback will be viewed more positively, e.g., more trustworthy. Supervisory negative feedback valence will correlate negatively.

4.3.2 Supervisory Feedback Characteristics and Employee Feedback Processing

Feedback source entails feedback provider and their characteristics (Greller & Herold, 1975). Reported as the most common form of feedback source (DeNisi & Murphy, 2017), supervisory feedback as a crucial HRM practice concerns providing relevant and valuable information to employees and facilitating their learning, development, and improvements on the job (Zhou, 2003). In addition, the source characteristics denote one's personal and feedback qualities (e.g., expertise in a specific subject or the type of feedback utilized during feedback).

Research has shown that sources significantly impact recipients' perceptions of the feedback during HRM interventions (Gregory & Levy, 2015). Research on social power suggests that supervisory effects are primarily related to their position of authority and chances to exert rewards or punishments (Magee & Galinsky, 2008). When recipients believe their feedback provider has power over them, they tend to view feedback more favorably and accept it more easily (Johnson & Connelly, 2014). Other research reported that "friendly" (e.g., amusing) leaders are more effective with their feedback (Karakowsky et al., 2020) than those perceived as "unfriendly" (Johnson & Connelly, 2014). Karakowsky et al. (2020) stated that leaders' humor (signifying trust, benevolence, and competence) cultivates follower

feedback-seeking behavior. Similarly, features such as status and expertise are effective for both feedback acceptance (Collins & Stukas, 2006) and the intrinsic motivation of the recipients (Cusella, 1982). Therefore, I propose that positively perceived supervisory feedback characteristics will positively correlate with recipients' feedback processing:

Hypothesis 3 (H3): There will be a positive relationship between supervisory feedback characteristics and employee feedback processing. This relationship will be stronger for supervisors with better-perceived characteristics (e.g., expert, trustworthy).

4.3.3 Research Questions

Based on the theoretical background and the derived hypotheses, the following research questions (RQ) advance the relevance of the chosen methodologies, namely the systematic review and the meta-analysis. First, through the systematic review, this study will provide an overview of the critical supervisory feedback characteristics. Second, meta-analysis will provide a direct effect about the relationship between the supervisory feedback characteristics and employee feedback processing. Following these steps, these research questions will be investigated.

RQ1 (systematic review): What are the most prominent supervisory feedback characteristics researched about employee feedback processing?

To answer this question, a systematic review will be conducted. This method is an appropriate and necessary methodology due to its comprehensive and methodical approach to literature evaluation. This allows for the identification, assessment, and synthesis of all relevant studies on supervisory feedback within HRM practices, providing a holistic view of the supervisory feedback characteristics and how they have been conceptualized and measured across diverse contexts. This approach ensures the review is exhaustive and minimizes bias, offering a solid foundation for a meta-analytic study. Moreover, a systematic review can illuminate the methodologies and theoretical frameworks employed in previous studies, highlighting

potential gaps in the literature and underscoring the need for a meta-analytic approach to quantify the effects of supervisory feedback characteristics on employee feedback processing.

RQ2 (meta-analysis): Will there be a relationship between the supervisory feedback characteristics and employee feedback processing, and what is the magnitude?

A meta-analysis will be conducted to answer this question. Meta-analysis is the most suitable method for addressing this as it enables the quantification of the effects of supervisory feedback characteristics on employee feedback processing. By statistically aggregating results from multiple studies, meta-analysis can provide a more precise estimate of the effect size, offering clear evidence of the strength and direction of the relationship between supervisory feedback characteristics and employee feedback processing. This method is particularly valuable in the HRM field, where interventions aim to be evidence-based and tailored for maximum effectiveness. A meta-analysis also addresses the call for more international and focused HRM research by analyzing data from diverse settings, thus enhancing the generalizability and applicability of the findings across different cultural and organizational landscapes.

Altogether, by employing both systematic review and meta-analysis methodologies, this study will significantly advance understanding of the dynamics involved in supervisory feedback and its processing by employees in HRM contexts. The systematic review will map the terrain, identifying how supervisory feedback characteristics have been studied and what has been the focus, while the meta-analysis will quantify the impact of these characteristics, providing robust evidence to inform future HRM practices and theory development.

4.4 Method

4.4.1 Selection of Studies

I employed two research methodologies: (a) research synthesis and (b) meta-analysis, both relevant to HRM interventions and practices. Using research synthesis, I collected data about

the most prominent (i.e., most studied) qualities of supervisory feedback (RQ1). In addition, I used the results of the research synthesis to generate correlations between supervisory feedback characteristics and employee feedback processing by employing meta-analysis (RQ2). Before the literature review process, I developed a review protocol that guided this study. Two subject-matter experts (Ph.D.) reviewed the protocol and provided feedback before commencing with the literature review.

4.4.2 Literature Search

To begin, I identified keywords based on the main variables of interest. To ensure that the chosen keywords represented the variables, I employed two strategies as recommended in the literature (e.g., Daniels, 2019). First, I conducted a dummy (i.e., initial) search in the Web of Science (WoS) to see the results from the selected words. Results showed a relatively high number of studies (around $N = 400$). Second, although this was a relatively large number of papers from the keywords, I followed the second recommendation and contacted two experts of feedback research, who suggested adding three more keywords.

For the final search, I first conducted a literature search on *WoS*, *PsychINFO*, *Google Scholar*, and the *EBSCO* databases to identify empirical studies on supervisory feedback and feedback processing. Second, I did a direct manual search in relevant academic journals, including the *Journal of Applied Psychology*, *Personnel Psychology*, *Academy of Management Journal*, *Human Relations*, and *Human Resources Management Journal*. Third, I searched professional association sites (e.g., *ResearchGate, Academy of Management*). Finally, I cross-referenced several reviews and meta-analyses to search for relevant papers.

For the search, I used the following keywords and phrases: *performance feedback*, *performance appraisal*, *negative feedback*, *positive feedback*, *feedback processing*, *perceived feedback*, *acceptance of feedback*, *desire to respond to feedback*, *intended response*, *feedback provider*, *feedback source*, and *supervisory feedback*. In addition, I added *constructive feedback*, *developmental feedback*, and *feedback acceptance* after expert advice.

4.4.2.1 Inclusion and Exclusion Criteria

For the inclusion criteria, I employed the Population, Intervention, Control, and Outcome (PICO) framework (Amir-Behghadami & Janati, 2020). The *population* had to be employees or student samples with work experience, and I looked into performance feedback (i.e., positive and negative feedback) as an *intervention*. Regarding *control*, I examined feedback as ambiguous (i.e., unclear) or no feedback. I based the *outcomes* on Ilgen et al.'s (1979) FPM – the perceived feedback, acceptance, desire to respond to feedback, and intended response. In addition, papers had to be peer-reviewed, include relevant statistics (i.e., correlations or univariate *t*, *F*), and be published after 1979 in English. Thus, I excluded qualitative papers with no empirical data, those published in languages other than English, grey literature (i.e., literature that is not peer-reviewed and not indexed in bibliographic resources), and any paper that included student samples with no previous work experience (Appelbaum et al., 2018; Daniels, 2019).

4.4.2.2 Coding

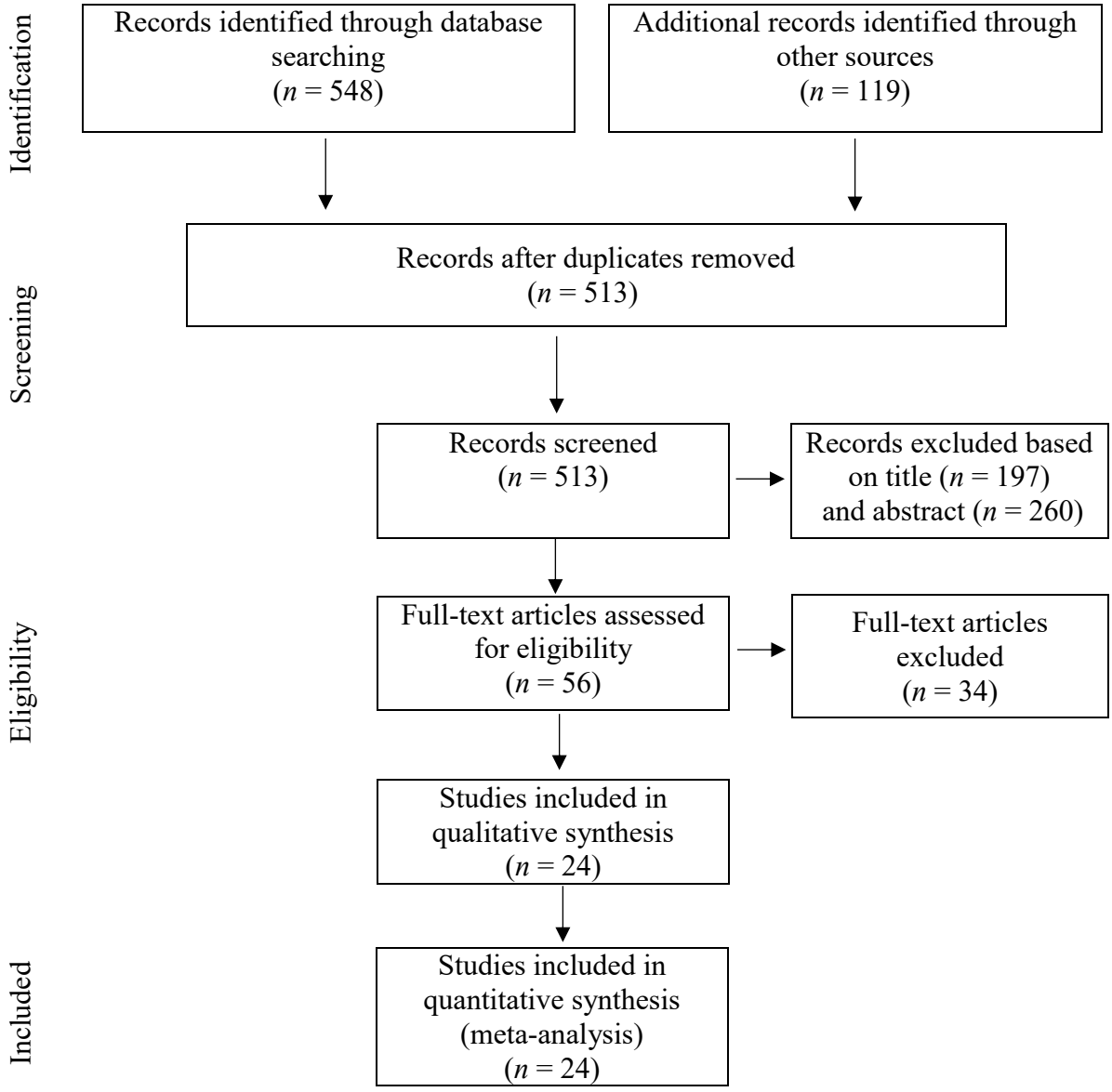
A search on our primary databases yielded 548 studies, while I retrieved 119 more studies from additional sources (e.g., cross-references and a professional sites search). After I removed the duplicates, the final number of studies for the review was 513, which were screened by two researchers (coders in the following). The first coder was the first author of this paper. The second coder was a researcher in work and organizational psychology (a fourth-year Ph.D. candidate) trained on the research goals and review steps using the review protocol.

To measure the reliability of the independent screening conducted by the two coders, I used Cohen´s κ (Cohen, 1960) measure of interrater reliability, which was .82 for the studies included (an almost perfect agreement rate of 91% agreement). Any disagreement between the two coders was resolved with the discussion of a third expert. After the full-text revisions, I included 24 studies (from 22 primary studies) in the final systematic review and meta-

analysis (I marked these studies with an asterisk in the reference list). The majority of the papers (n = 457) were excluded from the analysis based on the title (n = 197) and abstract (n = 260). After all steps, we reviewed 56 papers based on full-text screening and excluded 34. To depict the coded results, I employed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) reporting guidelines (Liberati et al., 2009; Moher et al., 2009). Figure 1 shows PRISMA results.

Figure 1

Results of the PRISMA Flow Diagram for the Study Selection Process



In the next step, the two coders independently extracted the relevant data from the studies included, using the guidelines of the PICOS framework. At this stage, I also used the Mixed Methods Appraisal Tool or MMAT (Pluye & Hong, 2014) to assess the possible bias risks in the included studies (see Table 1). MMAT is a reliable tool for evaluating empirical studies, including qualitative and quantitative, as well as mixed-methods research (Hong et al., 2018; Pace et al., 2012). The tool entails two screening questions, which look into the research questions and data collected, and five classes related to the quality of the research methodology of the studies. The appraisal of the studies is conducted using three possible options: *Yes*, *No*, and *Can't tell*. Thus, using MMAT, the two coders independently screened the articles and assessed the quality of the studies (κ = .80). I found few publication biases due to nonresponse bias (n = 5), sample representativeness (n = 2), and measure appropriateness (n = 3). Table 1 shows the results of the MMAT.

Table 1

Assessment of Risk of Bias in the Included Studies

	1. Screening Questions		4. Quantitative Descriptive Studies				
Author(s), year	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?
Anseel and Lievens (2009)	Yes	Yes	Yes	Yes	Yes	*Can't tell*	Yes
Bell and Arthur (2008)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Christensen-Salem et al. (2018)	Yes	Yes	Yes	*No*	Yes	Yes	Yes
Gaddis et al. (2004)	Yes	Yes	Yes	Yes	*Can't tell*	Yes	Yes
Geddes and Konrad (2003)	Yes	Yes	Yes	Can't tell	Yes	*Can't tell*	Yes
Harrison and Dossinger (2017)	Yes	Yes	Yes	Yes	Yes	*No*	Yes
Kacmar et al. (2009)	Yes	Yes	Yes	*No*	Yes	Yes	Yes
Kinicki et al. (2004)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leung et al. (2001; study 1)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leung et al. (2001; study 2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Moon (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reinke and Baldwin (2001)	Yes	Yes	Yes	Yes	Yes	*Can't tell*	Yes
Roberson and Stewart (2006)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ryu and Hong (2020)	Yes	Yes	Yes	Yes	Yes	*No*	Yes
Son and Kim (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Steelman and Rutkowski (2004)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stone et al. (1984)	Yes	Yes	Yes	Yes	*Can't tell*	Yes	Yes
Tata (2002)	Yes	Yes	Yes	Yes	Yes	*Can't tell*	Yes
Tuytens and Devos (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
van de Vliert et al. (2004)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Westerman et al. (2018)	Yes	Yes	Yes	No	Yes	Yes	Yes
Wu and Leung (2000)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Young et al. (2017; study 1)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Young et al. (2017; study 2)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note. Mixed methods appraisal tool (MMAT).

Finally, I appraised the relevance of the studies using Rayyan's inclusion and exclusion criteria pages (Ouzzani et al., 2016). In this step, the two coders independently screened all the studies' titles, abstracts, and keywords (N = 513).

To ensure the confidentiality and reliability of coding, the process was blinded using Rayyan's "blind" feature. At the end of this stage, coders checked each other's excluded studies and discussed possible disagreements (κ = .80). Discrepancies between coders were resolved by consulting a third expert.

Next, coders read full texts of the remaining studies, coded the studies by reporting the main information, and agreed upon the final study selection. Using guidelines that Daniels (2019) recommended, I reported the studies' sample size, participants' gender, profession (i.e., students, workers, or mixed), and country (see Table 2). I also reported the studies' tools for supervisory feedback and feedback processing concerning the measures. I looked into the measures that studies reported and variable definitions for feedback processing. Although I was interested in the variables reported by Ilgen et al. (1979), I included studies that (a) used similar theoretical frameworks for their variables and (b) had definitions aligned with those of Ilgen et al. (1979). In Table 2, I report on the features of the supervisory feedback characteristics and the feedback processing variables. Furthermore, I coded the papers about their research design (e.g., experimental manipulation) and the feedback valence (i.e., positive feedback).

Finally, I reported the correlations between the different supervisory feedback characteristics, the various feedback processing outcomes, and their respective effect sizes. See Table 2 for the results of these coding procedures.

Table 2

Overview of Studies Included in Systematic Review and Meta-Analysis

Author(s) (Year)	N	Men (%)	Sample Profession	Country	Correlation of SF and FP	Fisher's z ES (95% CI)	Supervisor Feedback Tool Author(s)	Supervisory Feedback		Feedback Processing Measurement Tool		
								Characteristics of SF	Feedback processing tool authors(s)	Correlational or experimental	FI Valence	Outcome
Anseel and Lievens (2009)	125	36	University students	Belgium	$r = .50$, $p < .001$	.55 (.37, .73)	Chapman et al. (2003)	FI Valence	Tonidandel et al. (2002)	Experimental manipulation	NF, PF	FA
Bell and Arthur (2008)	141	47	Managers	USA	$r = .30$, $p < .001$	.31 (.14, .48)	Goldberg (1992)	FI Valence	Bell and Arthur (2008)	Self-report	NF, PF	FA
Christensen-Salem et al. (2018)	63	81	Mixed	USA	$r = .67$, $p < .001$	.81	Zhou (2003)	SDF	Bell and Arthur (2008)	Self-report	Impression	FA
Gaddis et al. (2004)	258	35	University students	USA	$r = .32$, n.s.	.33 (.21, .45)		Positive affect		Experimental manipulation	NF Other	Effectiveness perceptions (FA)
Geddes and Konrad (2003)	200	57	Mixed	USA,UK, Canada, Ireland, Australia, New Zealand, South Africa	Gender vs. PAP [i], $r = -.03$ n.s.; Gender dissimilarity vs. PAP, $r = -.00$, n.s.; Race vs. PAP, $r = -.23$, $p < .001$; Race dissimilarity vs. PAP, $r = .12$, n.s.	.03 (.37, .73) .00 (.37, .73) -.23 (.37, .73) .12 (-.02, .26)	Tsui and O'Reilly (1989)	Gender Race	Ilgen et al. (1979)	Self-report	NF	Fairness; Accuracy; Usefulness (FA)
Harrison and Dossinger (2017)	39	69	Graphic designers	USA	$r = .17$, $p < .05$	.17 (-.15, .50)	Pennebaker et al. (2007)	Ambivalence	Litman (2008)	Self-report	Ambivalent feedback	FA
Kacmar et al. (2009)	86	44	University students	USA	FI valence vs. Reaction to Supervisor, $r = .70$, $p < .001$; FI valence vs. Reaction to appraisal, $r = .68$, $p < .001$; FI valence vs. Feedback Intentions, $r = .62$, $p < .001$; [j] IM vs. Reaction to Supervisor = .18, n.s. IM vs. Reaction to Supervisor = .05, n.s.	.87 .83 .73 (.51, .94) .18 (-.03, .40) .05	Room (2009)	FI Valence Impression management	Greller (1978) Fedor (1990)	Experimental manipulation	NF, PF	Reactions Intentions

Author(s) (Year)	N	Men (%)	Sample Profession	Country	Correlation of SF and FP	Fisher's z ES (95% CI)	Supervisor Feedback Tool Author(s)	Supervisory Feedback		Feedback Processing Measurement Tool		
								Characteristics of SF	Feedback processing tool authors(s)	Correlational or experimental	FI Valence	Outcome
Kinicki et al. (2004)	128	20	Bank employees	USA	Specificity of feedback vs. PA, $r = .51$, $p < .05$; vs. FA, $r = 48.$, $p < .05$; vs. DR, $r = 24.$, $p < .05$; vs. IR, $r = 30.$, $p < .05$; Frequency of feedback vs. PA, $r = .33$, $p < .05$; vs. FA, $r = .43$, $p < .05$; vs. DR, $r = .28$, $p < .05$; vs. IR, $r = .32$, $p < .05$; FI Valence vs. PA, $r = .50$, $p < .05$; vs. FA, $r = .26$, $p < .05$; vs. DR, $r = .16$, n.s.; vs. IR, $r = .16$, n.s.; Trust vs. PA, $r = .40$, $p < .05$; vs. FA, $r = .41$, $p < .05$; vs. DR, $r = .28$, $p < .05$; vs. IR, $r = .24$, $p < .05$; Credibility vs. PA, $r = .36$, $p < .05$; vs. FA, $r = .50$, $p < .05$; vs. DR, $r = .31$, $p < .05$; vs. IR, $r = .39$, $p < .05$	.56 (.39, .74) .52 (.35, .70) .24 (.07, .42) .31 (.13, .48) .34 (.17, .52) .46 (.28, .64) .29 (.11, .46) .33 (.16, .51) .55 (.38, .72) .27 (.09, .44) .16 (-.01, .34) .16 (-.01, .34) .42 (.25, .60) .44 (.26, .61) .29 (.11, .46) .24 (.07, .42) .38 (.20, .55) .55 (.37, .72) .32 (.15, .50) .41 (.24, .59)	Vandaveer (1982)	Feedback-rich environment Trust Credibility	Ivancevich's (1982) Kinicki et al. (2004)	Self-report	NF, PF	Perceived accuracy; FA; Desire to respond; Intended response
Leung et al. (2001; study 1)	135	77	University students	USA, Hong Kong	Just treatment vs. FA $r = .27$, $p < .001$ Unjust treatment vs. FA $r = -0.23$, $p < .001$	.28 (.11, .45) .23 (.09, .38)	Leung et al. (2001)	Just treatment	Podsakoff et al. (1990)	Experimental manipulation		FA
Leung et al. (2001; study 2)	189	52	Mixed	Hong Kong	Unjust treatment vs. FA $r = -.10$, $p < .001$	-.10 (-.24, .04)	Moorman (1991)	Just treatment	Leung et al. (2001)	Experimental manipulation		FA
Moon (2019)	400	56	Mixed	South Korea	Feedback specificity vs. FA, $r = .66$, $p < .001$; Trust in manager vs. FA, $r = .88$, $p < .001$	.79 (.69, .89) 1.38	Quaglieri (1982) Fulk et al. (1985)	Trust Feedback specificity	Nease et al. (1999)	Self-report	NF, PF	FA
Reinke and Baldwin (2001)	595	85	Army employees	USA	Trust vs. Accuracy, $r = .55$, $p < .001$; Trust vs. Fairness, $r = .67$, $p < .001$; Expertise vs. Accuracy, $r = .37$, n.s.	.62 (.54, .70) .81 (.73, .89) .39 (.31, .47) .59 (.51, .67) .00 (-.08, .08) 08. (-.16, .00)	Kahn et al. (1981)	Feedback specificity Trust Expertise Similarity	Nagle (1953)	Self-report		Accuracy Fairness

Author(s) (Year)	N	Men (%)	Sample Profession	Country	Correlation of SF and FP	Fisher's z ES (95% CI)	Supervisor Feedback Tool Author(s)	Supervisory Feedback		Feedback Processing Measurement Tool		
								Characteristics of SF	Feedback processing tool authors(s)	Correlational or experimental	FI Valence	Outcome
Roberson and Stewart (2006)	236	43	University students	USA	$r = .23$, $p < .001$	.23 (.11, .36)	Fedor et al. (1989)	Credibility	Podsakoff and Fahr (1989)	Self-report		FA
Ryu and Hong (2020)	598,003	56	Federal Employee Viewpoint Survey (FEVS)	USA	Constructive performance feedback vs. Fairness, $r = .61$, $p < .001$; Trust vs. Fairness, $r = .81$, $p < .001$;	.71 (.71, .71) 1.13	Jong (2016)	Constructive feedback Trust	Yang and Kassekert (2009) Kim and Kim (2014)	Self-report	Constructive Performance Feedback	Fairness
Son and Kim (2016)	243	59	Mixed	South Korea	[n] PLGO vs. FA, $r = .12$, n.s.; Feedback quality vs. FA, $r = .23$, $p < .001$ Credibility vs. FA, $r = .20$, $p < .001$	.12 (-.001, .25) .23 (.11, .36) .31 (.18, .44)	VandeWalle (1997) Steelman et al. (2004)	Learning-goal orientation Feedback quality Credibility	Allen et al. (2010)	Self-report		FA
Steelman and Rutkowski (2004)	405	88	Manufacturing employees	USA	Credibility vs Satisfaction, $r = .73$, $p < .001$; FI Quality vs Satisfaction, $r = .76$, $p < .001$; FI Delivery vs Satisfaction, $r = .69$, $p < .001$; Credibility vs Motivation, $r = .36$, $p < .001$; FI Quality vs Motivation, $r = .40$, $p < .001$; FI Delivery vs Motivation, $r = .34$, $p < .001$	.93 .1 .85 (.75, .95) .38 (.28, .47) .42 (.33, .52) .35 (.26, .45	Steelman et al. (2004)	Credibility Feedback quality Consideration	Steelman et al. (2004) Dorfman et al. (1986)	Self-report	NF	Satisfaction with feedback; Motivation to use FI
Stone et al. (1984)	107	65	University students[4]	USA	$r = .55$, $p < .001$	.62 (.43, .81)		Expertise		Experimental manipulation	NF, PF	FA
Tata (2002)	151	59	Technicians and clerics	USA	Perceived adequacy of account vs. Intended response, $r = .16$, $p < .05$; Perceived sincerity of account vs. Intended response, $r = .12$, n.s.;	.16 (.00, .32) .12 (-.04, .28) .19 (.03, .35)	Bies and Shapiro (1987) Bies et al. (1988)	Adequacy of account Sincerity of account Fairness Credibility	Moorman (1991) Konovsky and Cropanzano (1991)	Self-report	NF	Intended Response
Tuytens and Devos (2012)	299	29	Secondary school teachers	Belgium	Charismatic leadership vs. FA, $r = .63$, $p < .001$	.74 (.63, .86) .83 (.72, .94) .56 (.45, .68)	Bycio et al. (1995)	Charisma Procedural justice	Heneman and Milanowski (2003)	Self-report		FA Feedback utility

Author(s) (Year)	N	Men (%)	Sample Profession	Country	Correlation of SF and FP	Fisher's z ES (95% CI)	Supervisor Feedback Tool Author(s)	Supervisory Feedback		Feedback Processing Measurement Tool		
								Characteristics of SF	Feedback processing tool authors(s)	Correlational or experimental	FI Valence	Outcome
van de Vliert et al. (2004)	433	59	University students	China Netherlands	Quality of feedback vs. Constructive intentions, r = .14, n.s.; Quality of feedback vs. Destructive intentions, r = .17, n.s.; Collectivist orientation vs. Constructive intentions, r = .11, n.s.; Collectivist orientation vs. Destructive intentions, r = .15, n.s.	.14 (.05, .24) .17 (.08, .27) .11 (.02, .20) .15 (.06, .25)	Singelis (1994)	Perceived quality of feedbacks Supervisors' collectivist orientation	London (1997) Schein (1988)	Self-report	Various	Intention
Westerman et al. (2018)	447	40.9	Mixed	USA	Expertise vs. DR, r = .32, p < .001; Trustworthiness vs. DR, r = .30, p < .001; Goodwill vs. DR, r = .40, p < .001;	.33 (.24, .42) .31 (.22, .40) .42 (.33, .52)	McCroskey and Teven (1999)	Credibility	Isterman et al. (2018)	Experimental manipulation	NF, PF	DR (i.e., Impression)
Wu and Leung (2000)	248	44	Manufacturing employees	China	Supervisor dominance vs. FA, r = -.29, p < .001 Subordinate nurturance vs. FA, r = .39, p < .001	-.30 (-.42,-.17) .41 (.29, .54)	Wu and Leung (1996)	Perceived supervisory intentions	Podsakoff et al. (1990) Wu and Leung (2000)	Self-report	NF	Intention; FA
Young et al. (2017; study 1)	177	51	Mixed	USA	Empathic concerns vs. Perceived effectiveness, r = .29, p < .05	.30 (.15, .45)	Richard et al. (2016)	Empathy	Watson et al. (1988)	Self-report	NF	Perceived effectiveness
Young et al. (2017; study 2)	306	29	Manageme-nt employees	USA	Empathic concerns vs. Perceived effectiveness, r = .59, p < .001	.68 (.57, .79)	Gentry et al. (2015) Sadri et al. (2011)	Empathy	Steelman et al. (2004)	Self-report	NF	Feedback quality

Note. FP = Feedback processing, SF = Supervisory feedback, FI = Feedback, NF = Negative feedback, PF = Positive feedback, FA = Feedback acceptance, SDF = Supervisor developmental feedback, PAP = Performance appraisal, IM = Impression management, PA = Perceived Accuracy, DR = Desire to respond, IR = Intended response, PLGO = Perceived feedback sources' learning-goal orientation.

4.5 Results

4.5.1 Systematic Review Findings

The results of the systematic review are based on 24 studies. As shown in Table 2, most of the studies were published between 2000 and 2010. Although many studies included experimental manipulation designs (n = 7), the majority used self-reports through questionnaires (n = 15).

4.5.2 Sample Description

Overall, the sample size varied among studies, with an average of 250 participants (Mdn = 218). The smallest sample was 39 participants (Harrison & Dossinger, 2017), while the largest was 598,003 (Ryu & Hong, 2020). Most studies reported samples with mixed professions (n = 7) or university students (n = 6). Student samples were especially prevalent for studies with experimental manipulation designs (n = 5). Furthermore, in over 50% of the studies (n = 14), most of the participants were male. Finally, most studies (n = 17) were conducted in the United States.

4.5.3 Supervisory Feedback Characteristics

Among all, measures pertaining to the characteristics of the supervisors, such as credibility, were the most common. Measures varied greatly, with some comprising four items (e.g., Christensen-Salem et al., 2018) up to 50 items (e.g., Wu & Leung, 2000). Noteworthy is that supervisors' characteristics were also assessed using other criteria, such as feedback valence or quality. Some studies used feedback valence (i.e., positive or negative) to measure supervisors' characteristics. In other words, these studies assessed the "qualities" of supervisors by gauging employees' reporting of their supervisors' 'goodness' (i.e., credible or not) through their feedback valence. In line with the first hypothesis (H1), results showed positive correlations between the supervisory feedback characteristics and employee feedback processing. See Table 3 for the frequencies of the overall predictors.

Table 3

Predictors and Their Frequencies from the Studies on Supervisory Feedback

Number of characteristics	Predictor	Frequency [a]	SME categorization	Total of predictors [c]
		Number of studies		
1	Trust	5	Credibility	1 (Credibility)
2	Credibility	4	Credibility	
3	Expertise	2	Credibility	
4	Feedback valence	4	FI valence	2 (FI Valence)
5	Just treatment	2	Fairness	3 (FI Fairness)
6	Feedback specificity	2	FI quality	4 (FI Quality)
7	Empathy	2	Support	5 (Support)
8	Feedback quality	9	FI quality	
9	Goodwill	1	Support	
10	Supervisor developmental feedback	1	FI quality	
11	Positive affect	1	Support	
12	Gender	1	Similarity	6 (Similarity)
13	Race	1	Similarity	
14	Ambivalence	1	FI quality	
15	Impression management	1	Fairness	
16	Feedback-rich environment	1	FI quality	
17	Similarity	1	Similarity	
18	Constructive feedback	1	FI quality	
19	Learning-goal orientation	1	Learning-goal orientation	7 (Learning-goal orientation)
20	Consideration	1	Fairness	
21	Adequacy of account	1	Fairness	
22	Sincerity of account	1	Credibility	
23	Charisma	1	Charisma	8 (Charisma)
24	Procedural justice	1	Fairness	
25	Supervisors' cultural orientation [c]	1	Similarity	
26	Perceived supervisory intentions	1	Fairness	

Note. SME = Subject-matter experts, FI = Feedback.

[a] Number of studies represents the number of single studies that studied the respective characteristic (i.e., one or more studies per paper; two or more variables were studied by a single study).[b] For categorization, the numbering was done according to the frequency level.

[c] Collectivist vs. individualist orientation.

4.5.4 Supervisory Feedback Characteristics: Subject-Matter Expert Categorization

Results of the systematic review revealed 26 different supervisory feedback characteristics, with credibility (e.g., trust, expertise) being the most prominent characteristic (n = 12). Since most of the characteristics were similar (e.g., overlapping concepts), I categorized them using a two-step approach.

First, I classified them based on theories and definitions from the included studies. The classifications resulted in seven major categories. Second, I employed subject-matter experts (SMEs) to validate the categorization. I sent the characteristics to four experts in the field (three distinguished professors and one senior researcher, Ph.D.). SMEs categorized the 26 characteristics between four and six major categories (see Table 1 in the supplementary material).

Overall, SMEs confirmed all the initial categories. However, they disagreed on two characteristics: Charisma and learning-goal orientation. While they agreed with the initial categorization of charisma as a separate category, learning-goal orientation was the only difference between all raters and the initial categorization. Hence, I decided to have the learning-goal orientation as a category alone. All these results are presented in Table 3 (see SMEs categorization). I ranked categories (i.e., one to eight) based on the frequency level reported in the included studies (i.e., the number of times each characteristic was used in each study). Finally, I asked SMEs to name categories based on their classifications. With these results, I answer the first research question.

4.5.5 Categorization of Supervisory Feedback Characteristics: Rationale

The first and most prominent category reported in the included studies was *credibility*, comprised of credibility, trust, expertise, and sincerity of account. According to the FPM (Ilgen et al., 1979), the credibility of a feedback source entails one's expertise and trust. They denote supervisors' familiarity with the task and recipient's performance as well as subordinates' trust in the intentions of their supervisor. Similarly, Tata (2002) found that

accounts from supervisors (indicating concessions and justifications) positively affected recipients' reactions by reducing anger and increasing their perceptions of interpersonal fairness. These findings answer the second research question and hypothesis, which assumed a correlation between supervisory feedback characteristics and employee feedback processing.

The second category was *feedback valence*, indicating positive and negative feedback. Kacmar et al. (2009) found that recipients utilize the valence of their supervisory feedback to gauge their supervisors' "goodness". They found that providing positive feedback resulted in attributing 'more positive feedback intentions to the supervisor than subjects who received negative feedback' (p. 511). These results align with and answer the first hypothesis. The third category was *fairness*, covering just treatment, consideration, adequacy, impression management, procedural justice, perceived supervisory intentions, and fairness. Researchers used procedural justice (Leung et al., 2001; Tuytens & Devos, 2012) to examine the quality of interpersonal treatment, arguing that it affects recipients' attributions of authority figures. Similarly, Steelman et al. (2004) found that supervisors' manner of feedback provision (e.g., as considerate) influences employee perceptions and their motivation to use feedback. Likewise, Wu and Leung (2000) showed that recipients use perceived supervisory intentions (e.g., constructive or non-constructive) to assess their intentions (e.g., support or dominance).

The fourth category was *feedback quality*, entailing feedback specificity and quality, supervisor developmental feedback, ambivalence, feedback-rich environment, and constructive feedback. Kinicki et al. (2004) reported that a feedback-rich environment is one in which feedback is provided frequently and in a specific manner. Similarly, for feedback to be effective, Ryu and Hong (2020) noted that feedback providers must be concrete and objective. Harrison and Dossinger (2017) used the ambivalent feedback notion to denote difficult-to-distinguish feedback, where reactions (positive and negative) are highly similar.

The fifth category was *support*, including empathy, affect, and goodwill. Young et al. (2017) used leaders' display of empathic concern as a characteristic that might promote the effectiveness of supervisory feedback. They argued that leaders' empathic concerns contribute to their feedback effectiveness by mitigating subordinates' affective responses to their negative feedback. The sixth category was *similarity*, describing mainly demographic similarities (i.e., race and gender) between supervisor and follower.

The seventh category was *learning-goal orientation*. Based on the signaling theory of Spence (1978), Son and Kim (2016) defined learning-goal orientation through learning and performance, stating that they shape how individuals approach, interpret, and respond in various settings. Son and Kim (2016) reported that a supervisor's learning-goal orientation 'may serve as a critical cue for the employee to use in evaluating the quality of the feedback provided by the leader' (p. 84).

Finally, the eighth and final was *charisma*. Charismatic leaders influence employees' reactions through inspiration and vision (Tuytens & Devo, 2012). For an overview of these characteristics and their categorization, see Table 3. SMEs reviewed and approved the final supervisory feedback characteristics categories.

4.5.6 Feedback Processing

Although there were some consistencies in the papers concerning feedback processing (i.e., most of the studies focused on feedback acceptance, $n = 12$), few studies reported on it as postulated by Ilgen et al. (1979). According to Ilgen et al. (1979), to gauge the meaning behind employees' reactions accurately, one should account for both acceptance of feedback and their desire and intentions toward an intended response. The last step, representing the motivational components of employees, is crucial in determining the effectiveness of supervisory feedback and HRM practice (Ilgen et al., 1979; Kinicki et al., 2004; Zyberaj & Volmer, 2021). Consistent with other research, Ilgen et al. (1979) reported that intentions significantly predict individuals' responses to feedback. More recent findings (cf. Kinicki et

al., 2004) found a mediating role of feedback acceptance between the feedback environment (i.e., feedback specificity) and the subsequent intentions to respond to feedback.

4.5.7 Statistical Analyses

Meta-Analytic Approach. For the meta-analysis, I calculated effects sizes (ES) and confidence intervals (CI), which I depict in Figure 3. I used RStudio and the *metafor* package (Viechtbauer, 2010) and followed several steps. First, because some studies did not report their correlations, I converted their inferential statistics (i.e., *F*-statistics, *t*-tests) into correlation metrics (*r*) using the R package *compute.es* (Del Re, 2013). For other effect sizes, I used the Campbell collaboration site (www.campbellcollaboration.org).

Second, to aggregate and compare the results of the selected studies, I quantified their correlation results (through the *escalc* function) using the random effects model as a statistical approach.

Third, I calculated the findings' mean effect sizes and heterogeneity by applying the restricted maximum likelihood (REML; i.e., accounting for degrees of freedom used for estimating fixed effects). Finally, I investigated the relationships between each supervisory feedback category and employee feedback processing. I reported the correlations between each predictor and (a) overall employee feedback processing and (b) each facet. Because most of the literature is correlational, I meta-analyzed the effects into correlation coefficient, *r*. Similarly, because some studies reported multiple interventions (i.e., more than one correlation nested within the same study), I conducted a multilevel/multivariate (three-way or three-level) meta-analysis (Van den Noortgate et al., 2014). In RStudio, I used the *rma.mv* function in the *metafor* (Viechtbauer, 2010) and fitted the multivariate meta-analysis models with random effects.

4.5.8 Relationship between Supervisory Feedback Characteristics and Employee Feedback Processing

From the 24 studies, meta-analytic results revealed a significant medium-large overall positive correlation between the supervisory feedback characteristics and employee feedback processing ($\overline{r}$ = .36, 95% *CI* [.30, .41], $p < .001$; Cohen, 1992).

I conducted further analyses to examine the role of each supervisory feedback characteristic on employee feedback processing. Results revealed that charisma correlated strongest ($\overline{r}$ = .65; 95% *CI* [.39, .92], $p < .001$) with employee feedback processing, followed by credibility ($\overline{r}$ = .44), followed by feedback valence ($\overline{r}$ = .43), feedback quality ($\overline{r}$ = .41), support ($\overline{r}$ = .40), and fairness ($\overline{r}$ = .20). However, results showed a weak and non-significant correlation between the learning-goal orientation ($\overline{r}$ = .12) and similarity ($\overline{r}$ = .05) and employee feedback processing. Overall, the hypotheses about the importance of supervisory feedback characteristics for employee feedback processing were supported. Table 4 shows the effect sizes on the relationship between the supervisory feedback characteristics and feedback processing.

Table 4

Results of Meta-Analyses of the Relationship between Supervisory Feedback Characteristics and Feedback Processing

Supervisory feedback characteristic	*k*	*N*	$\overline{r}$	95% *CI*	
				LL	*UL*
Charisma	2	598	.65***	.39	.92
Credibility	22	588,120	.44***	.36	.52
Feedback valence	9	1,036	.43***	.31	.58
Feedback quality	19	588,120	.41***	.32	.51
Support	4	1,188	.40***	.21	.60
Fairness	10	1,909	.20**	.08	.33
Learning goal orientation	1	243	.12	-.27	.51
Similarity	8	2,856	.05	-.13	.14

Note. Coefficients without asterisks are nonsignificant. *k* = number of correlations, *N* = combined sample size. Table 5 shows the specific effects of each supervisory feedback characteristic on each feedback-processing facet. The strongest correlation was shown between charisma and the desire to respond to feedback ($\overline{r}$ = .68, $p < .001$) as well as feedback acceptance ($\overline{r}$ = .63, $p < .001$). Similarly, a strong positive correlation was shown between feedback quality and perceived feedback ($\overline{r}$ = .59, $p < .001$), and between credibility and perceived feedback ($\overline{r}$ = .59, $p < .001$). *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

**$p < .01$, ***$p < .001$.

In the final step, I plotted the findings to depict the results through a normality test (Figure 2). As shown, many effects aligned with and weighed on the plot's right-hand side, showing a medium and relatively consistent positive correlation between various supervisory feedback characteristics and feedback processing.

Figure 2

Test of Normality of the Included Studies

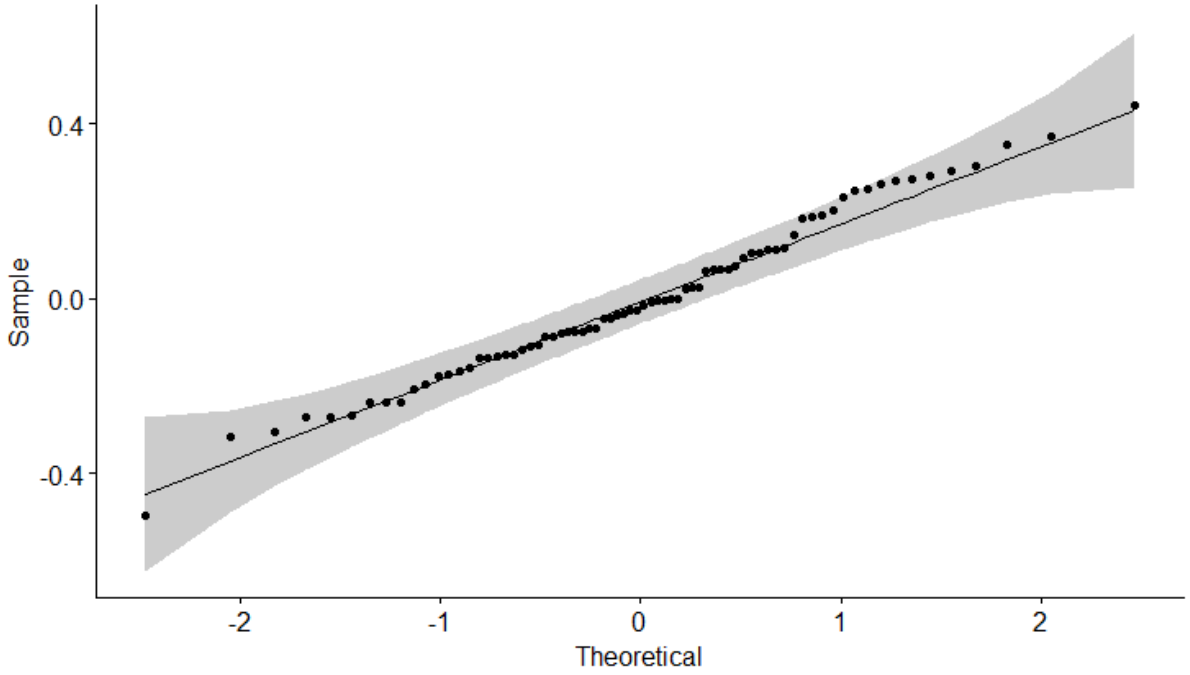


Table 5

Results of Meta-Analyses of the Relationship between the Supervisory Feedback Characteristics and Feedback Processing Facets

Supervisory feedback characteristic				95% *CI*		Feedback processing
	k	*N*	$\bar{r}$	*LL*	*UL*	
Credibility	8	588,120	.56***	.45	.68	Perceived feedback
	6	1,242	.48***	.19	.98	Acceptance of feedback
	5	1,555	.32***	.28	.37	Desire to respond
	3	407	.25	.10	.41	Intended response
Feedback valence	1	128	.50***	.16	.84	Perceived feedback
	5	566	.49***	.29	.70	Acceptance of feedback
	1	128	.16	-.01	.33	Desire to respond
	2	214	.41***	.22	.60	Intended response
Fairness	-	-	-	-	-	Perceived feedback
	6	1,308	.17	-.02	.36	Acceptance of feedback
	1	299	.48***	.39	.57	Desire to respond
	3	388	.18**	.02	.34	Intended response
Feedback quality	5	588,120	.59***	.45	.74	Perceived feedback
	6	1,001	.45***	.26	.65	Acceptance of feedback
	4	1,066	.35***	.30	.40	Desire to respond
	4	1,122	.22***	.10	.35	Intended response
Support	2	483	.45***	.22	.48	Perceived feedback
	1	258	-	-.13	.77	Acceptance of feedback
	1	447	.40***	.32	.48	Desire to respond
	-	-	-	-	-	Intended response

Supervisory feedback characteristic				95% *CI*		Feedback processing
	k	*N*	$\overline{r}$	*LL*	*UL*	
Similarity	2	1,190	.04	-.27	.19	Perceived feedback
	4	800	.04	-.27	.19	Acceptance of feedback
	-	-	-	-	-	Desire to respond
	2	866	.13	-.04	.30	Intended response
Charisma	-	-	-	-	-	Perceived feedback
	1	299	.63**	.19	.99	Acceptance of feedback
	1	299	.68***	.62	.74	Desire to respond
	-	-	-	-	-	Intended response
Learning-goal orientation	-	-	-	-	-	Perceived feedback
	1	243	.12	-.34	.58	Acceptance of feedback
	-	-	-	-	-	Desire to respond
	-	-	-	-	-	Intended response

Note. Coefficients without asterisks are nonsignificant. *k* = number of correlations, *N* = combined sample size. Relationships with missing values (-) had few effect sizes and a small sample (< 2) to calculate correlations (*r*). *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit.

**$p < .01$. ***$p < .001$.

4.5.9 Evaluation of Publication Bias

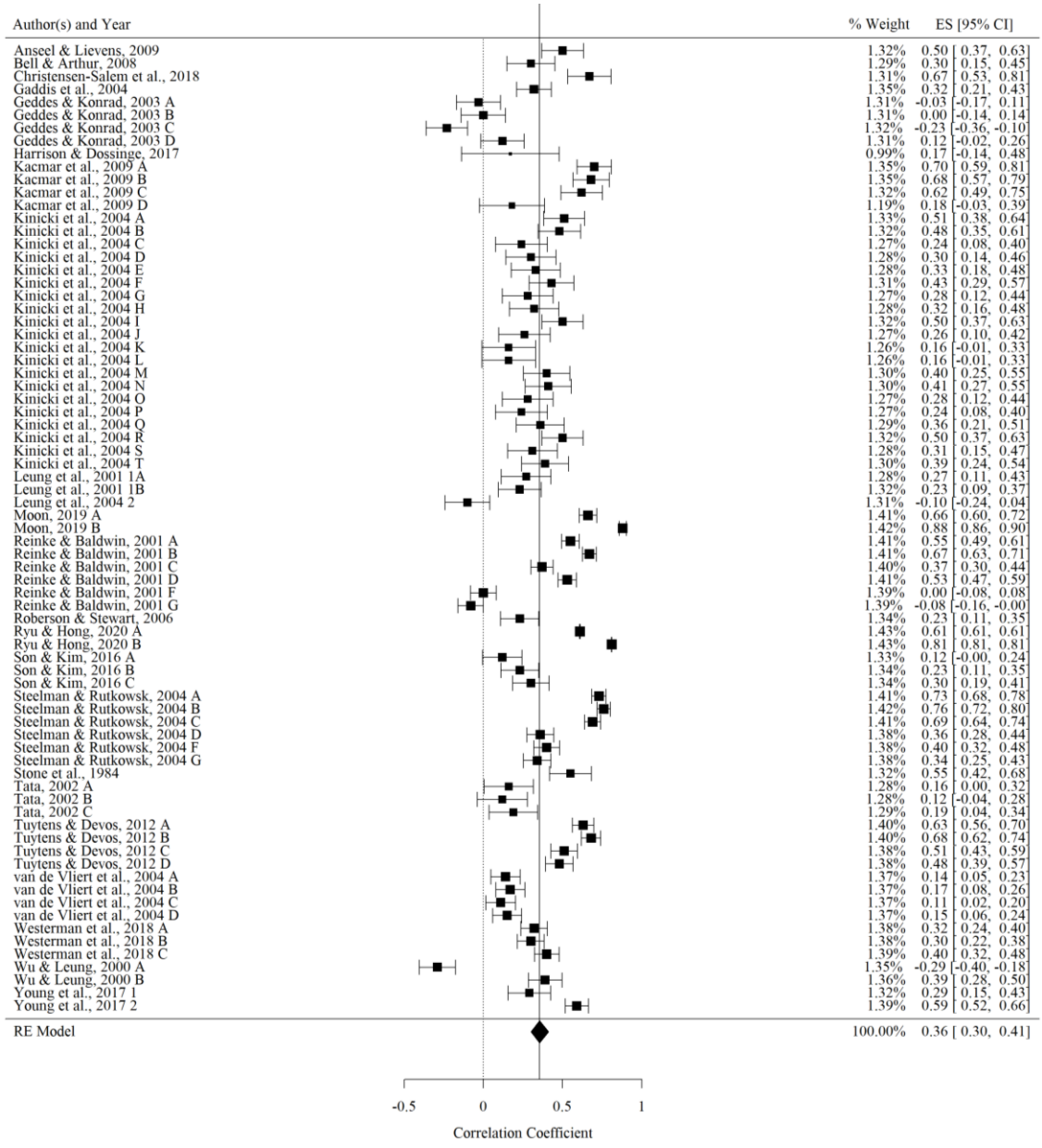
The initial screening of the included studies using the MMAT tool showed nine studies with potential biases (Table 1). Because the quality of this meta-analysis depends upon the quality of the included studies, I further conducted several distributions and sensitivity analyses to check for possible biases in the included studies. First, I conducted a quantile-quantile (Q-Q) test for normality using the *qqplot* function in the *metafor*. In short, a Q-Q plot is a probability plot used as a graphical method to evaluate whether different data sets match normal distribution. Results revealed a relatively normal distribution of the 24 studies, with a small dispersion across the studies (see Figure 3).

Second, I visually inspected the publication biases of the studies using the funnel plot (Figure 4). Although there was a relatively large dispersion of the studies, the number of studies within the plot suggests that possible publication bias might not be a severe issue.

Third, I conducted an I^2 statistic to measure heterogeneity relative to the total variance in the observed effects. Results showed a large heterogeneity ($Q = 58.54$, $I^2 = 95\%$, $p < .001$). Fourth, I conducted two more analyses, including predictor and outcome measures, to check for possible effects of the predictor and outcome variance on heterogeneity. However, heterogeneity remained relatively the same after controlling for these effects, with a small decrease for the predictor measures ($\Delta I^2 = 4\%$). Finally, because the study of Ryu and Hong (2020) had a large sample size, I conducted the meta-analyses excluding it. However, results showed no change in the overall effect size ($\overline{r} = .36$, 95% *CI* [.30, .41], $p < .001$).

Figure 3

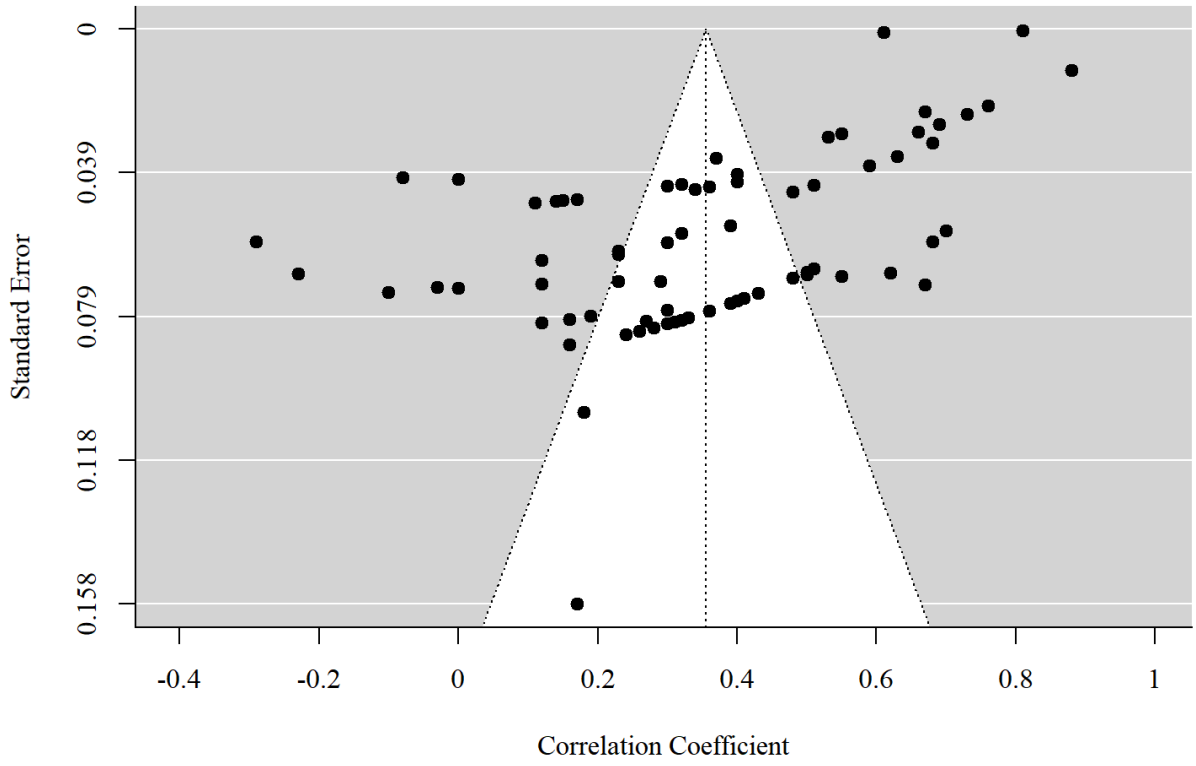
Forest Plot with Summary Measures and Associated Confidence Intervals



Note. Studies with more than one measure (i.e., correlation) have been listed on separate lines and marked with capitalized letters (e.g., A). Studies with more than one study have been numbered and marked with capitalized letters (e.g., 1A). Similarly, studies with more than one study per paper have been numbered (e.g., 1). CI = confidence interval. ES = estimate.

Figure 4

Funnel Plot of Publication



4.6 Discussion

Based on previous research, I suggested that supervisory feedback characteristics, such as credibility, would positively correlate with employees' feedback processing as vital HRM processes. I also investigated feedback valence to replicate findings from the FIT (Kluger & DeNisi, 1996). I conducted a meta-analysis and found medium-sized positive correlations between the supervisory feedback characteristics and employee feedback processing.

I found several supervisory feedback characteristics and used subject-matter experts to categorize them. In line with the hypotheses (H1 and H2), results showed positive relationships between the supervisory feedback valence and employee feedback processing (Kacmar et al., 2009; Westerman et al., 2018). For example, Kacmar et al. (1996) found a strong correlation between feedback valence and intentions ($r = .62$, $p < .001$), with positive feedback having a stronger effect than negative feedback. Similarly, positive feedback was

perceived as more accurate and was accepted better (Westerman et al., 2018). Furthermore, systematic review analysis revealed that employees report higher credibility ratings for supervisors providing positive feedback (Westerman et al., 2018). These results fit the self-verification theory (Swann, 1987), which posits recipients' tendencies to maintain their positive self-views.

Most importantly, in line with H3, the meta-analytic results showed a medium-large positive correlation between certain supervisory feedback characteristics and employee feedback processing. This is the most important finding of the present study and aligns with earlier research (Kluger & DeNisi, 1996). In addition, results revealed positive correlations for most supervisory feedback characteristics. For instance, besides being the most studied characteristic, supervisors' credibility was strongly correlated with employee feedback processing. Recipients perceiving their supervisors as experts and trustworthy showed a higher acceptance of feedback and a higher desire to respond to the supervisory feedback (e.g., Kinicki et al., 2004). I found the strongest correlation between the SF characteristic charisma and feedback acceptance and the desire to respond to feedback.

4.6.1 Theoretical Contribution

In line with the FIT (Kluger & DeNisi, 1996) and the FPM (Ilgen et al., 1979), I found positive correlations between supervisory feedback characteristics and employee feedback processing. In many studies in this review, feedback processing resulted from several supervisory feedback characteristics. For instance, expertise, charisma, and feedback features, such as valence or quality, strongly correlate with feedback acceptance.

Accounting for these findings, I suggest updating the FIT in light of the implications of the characteristics of feedback sources. FIT posits three determining factors of the FIs on performance: cues (e.g., feedback specificity), nature of the task (e.g., complexity or demand), and situational variables (i.e., personality, such as self-efficacy). Although these claims were made about direct performance, I suggest that revising FIT and integrating sources (e.g.,

supervisors) into these factors would further enhance our understanding of FIs and provide a richer feedback theory, thus contributing to HRM research and practice. Supervisory feedback is the most common form of feedback source as a vital HRM intervention and lacks a thorough representation in the FIT.

Relatedly, following the call of FIT to investigate feedback-induced processes, this research reveals that current research lacks an accurate depiction of the cognitive and motivational variables in feedback processing. Except for four studies (Kinicki et al., 2004; Tata, 2002; Westerman et al., 2018; Wu & Leung, 2000), the majority investigated only feedback acceptance. Thus, more research is needed to accurately depict the whole chain of cognitive and motivational processes under FIs and clarify recipients' perceptions of their motivational responses. As Ilgen et al. (1979) noted, feedback acceptance does not guarantee one's subsequent performance (denoting the effectiveness of supervisory feedback). For supervisory feedback to be an effective HRM practice, recipients should express both acceptance and desire to respond to it. In this line, feedback processes should be studied jointly (including cognitive and motivational aspects). Hence, I suggest that a possible future revision of the FIT shall account for the feedback processes postulated by Ilgen et al. (1979). From their meta-analytic findings, Kluger and DeNisi (1996) reported that computerized feedback was more effective for performance than supervisory feedback, claiming that supervisory feedback drove one's attention to meta-task processes (e.g., self-evaluations). However, FIT claims must be viewed in light of these new findings, which reveal a relatively robust effect of the supervisory feedback as an HRM intervention.

4.6.2 Practical Implications

These findings yield recommendations for individuals and organizations during the HRM interventions. First, supervisory feedback is an effective HRM intervention accounting for these substantial meta-analytic results. Thus, organizations must gauge factors that might negatively affect such interventions instead of excluding them from their practices. Current

results point explicitly to the significance of supervisory feedback for feedback processing. Thus, instead of urging employees to accept feedback from their supervisors, organizations should use current findings for HRM practices (e.g., training and development) and target the enhancement of supervisory feedback characteristics shown to yield better acceptance and desire to respond. For example, organizations can increase supervisors' expertise relevant to the employees' jobs (credibility was among the most prominent variables in all the studies and positively correlated with feedback processing).

Meta-analytic results revealed that charisma strongly correlates with feedback processing. Previous research has shown that organizations can teach charisma (Antonakis et al., 2011). Hence, organizations should aim to enhance the charismatic features of their leadership for better HRM and feedback interventions. Furthermore, although it might be best to start with leaders, organizations could also work from the employees' perspective and establish trust in their leaders.

Moreover, this study showed that employees might also use feedback quality (i.e., constructiveness) to gauge supervisor characteristics. Thus, organizations should also increase the quality of supervisory feedback as an HRM practice. For example, organizations can increase chances for better feedback by providing it in a timely and specific manner. Similarly, organizations can use recent recommendations that suggest future-focused feedback and not merely evaluative approaches to employees' past performance (Gnepp et al., 2020; London et al., 2023). Such feedback features increase the chances for feedback to be understood better and taken easily, ensuring better HRM and feedback processing.

Moreover, feedback valence was also shown to play a significant role in the effectiveness of supervisory feedback. Because feedback provision likely elicits some emotional reactions (Johnson & Connelly, 2014), leaders should heed feedback valence and aim to reduce possible adverse reactions to unfavorable feedback. Previous research has shown that when providing negative and positive feedback, sometimes starting with the latter

might reduce employees' adverse reactions to negative feedback (Prochazka et al., 2020). Others recommend various steps to reduce adverse reactions, such as planning the discussion (Von Bergen et al., 2014). Nevertheless, supervisors should also account for other HRM interventions and factors, such as employee characteristics (Kinicki et al., 2004) or context (Gregory & Levy, 2015) during feedback.

Finally, supervisors should be fair and caring (e.g., empathic) during feedback provision. For instance, transformational leaders are reported to be effective during feedback (Wang et al., 2016). In line with these findings, one of the core traits of transformational leaders is their ability to listen tentatively and considerately. Training leadership for such an approach should increase employee trust and reduce the chances of adverse reactions to supervisory feedback.

4.6.3 Recommendation for HRM-Focused Research on Supervisory Feedback

Future research can expand on the following specific research recommendations to extend the scope of this research and deepen its relevance for HRM.

First, future research should undertake cross-cultural comparative studies to explore how cultural dimensions, such as individualism vs. collectivism and power distance, influence the perception and effectiveness of supervisory feedback. This will enhance our understanding of feedback processing in diverse cultural settings and contribute to developing culturally adaptive HRM practices. Investigating how these cultural factors affect feedback dynamics can help organizations design feedback mechanisms that respect cultural nuances, leading to improved employee engagement and performance globally.

Second, exploring the relationship between supervisory feedback characteristics and employee feedback processing in multinational corporations with diverse workforces is crucial. This research could examine how global HRM practices are adapted to meet the varying feedback expectations and preferences across different cultures, providing insights into best practices for formulating international HRM strategies. Understanding these

dynamics is key to fostering a feedback culture that supports global talent management and organizational development.

Third, the impact of language and communication styles on the reception and processing of supervisory feedback in multilingual and multicultural environments warrants further study. Research should delve into how direct vs. indirect feedback and the role of non-verbal cues influence feedback effectiveness, enhancing communication training within HRM programs. This exploration is vital for improving managerial communication skills in increasingly diverse workplace settings.

Fourth, with the evolving context and technological advancements, there is a significant opportunity to investigate the potential of technology-enhanced feedback systems (e.g., digital platforms, AI-driven feedback tools) in bridging cultural and geographical divides within international corporations. Assessing how to leverage these technologies for personalized, culturally sensitive feedback could revolutionize HRM practices, promoting a more inclusive and effective feedback environment.

Finally, given the critical role of supervisory feedback in shaping employee performance, future research should focus on designing and evaluating training programs aimed at refining leaders' feedback-giving skills in international contexts. This includes developing competencies such as active listening (Kluger et al., 2023; London et al., 2023), coaching (Lee et al., 2019; Rai & Singh, 2013) or emotional and impression management (Hsieh & Huang, 2018; Nesbit, 2012). Assessing the impact of such training on employee feedback acceptance and performance improvement can offer valuable insights for global HRM initiatives.

4.6.4 Contribution to FIT and HRM

The integration of FIT within HRM practices is crucial for enhancing organizational effectiveness, particularly in the domain of performance feedback. This study notes the significant impact of supervisory feedback characteristics on employee feedback processing

and, ultimately, on performance outcomes. Through the lens of FIT, the study illuminates the nuanced mechanisms through which various characteristics of supervisory feedback—including credibility, charisma, feedback valence, and quality—affect the cognitive and motivational processes involved in feedback reception.

First, FIT posits that feedback's effectiveness largely hinges on the focus of attention it engenders, suggesting that feedback leading employees to concentrate on the task rather than themselves is more likely to foster improvement. This research extends FIT by providing empirical evidence on how specific supervisory feedback characteristics can align with or detract from this optimal focus of attention. For example, findings that charisma and credibility in feedback provision strongly correlate with positive feedback processing outcomes reinforce the idea that the source of feedback significantly influences utility of feedback. This aligns with FIT's emphasis on the contextual and source-related aspects of feedback interventions.

Second, this study revealed the critical role of feedback valence and quality, pointing to the nuanced ways in which positive versus negative feedback, as well as the clarity and specificity of feedback, impact employee reactions. This nuanced understanding enriches FIT by highlighting the importance of considering the qualitative aspects of feedback, not just its directional focus.

Third, results suggest that training and development initiatives aimed at improving supervisory feedback practices should not only focus on crafting feedback that directs attention to task-related learning but also on enhancing the supervisors' feedback delivery characteristics. Leadership development programs should incorporate modules on developing credibility and charisma, as well as on understanding and applying the principles of effective feedback valence and quality. Additionally, HRM strategies should recognize the interplay between employee characteristics, such as growth mindset, and feedback effectiveness. Aligning with FIT's call for research into feedback-induced processes, HRM practices can

benefit from fostering an organizational culture that emphasizes growth, learning, and constructive feedback reception.

In sum, this research contributes to FIT by empirically validating the significance of supervisory feedback characteristics and by offering practical HRM implications for leveraging these characteristics to enhance feedback effectiveness. Future HRM-focused research should continue to explore the multi-level interactions between feedback characteristics, employee dispositions, and organizational context to further refine and extend feedback intervention theory for organizational benefit.

4.6.5 Limitations

Despite robust methodologies and analyses on biases and robustness of the studies included, I note some limitations. First, because I employed strict criteria in including the papers (e.g., only peer-reviewed), this might have limited access to more studies and posed a threat to validity. Therefore, future research might include other research, such as grey literature or unpublished work. For example, unindexed studies might affect the current summary effect size of the supervisory feedback on employees' feedback processing. Thus, with slightly different exclusion criteria, a future validation study would enhance and strengthen these conclusions.

Second, although several studies I included utilized experimental manipulation in their research, increasing the usage of experimental designs enhances the robustness of the findings. Present findings depend on the strength of the studies included. Hence, although I had many theoretical claims on the relationships between supervisory feedback and employee feedback processing, I was still limited in drawing conclusive claims due to the nature of research designs employed in the included studies. It would be crucial that future research increases ways to reduce common biases and use designs that allow for more casual assumptions.

Third, the studies included showed a relatively high level of heterogeneity. I conducted several statistical analyses and tried explaining it. However, these measures might have produced a different level of heterogeneity and other publication biases had I had a more significant number of research papers. Therefore, the methodologies of the included studies might have influenced the current results. Because I cannot do much about heterogeneity, future research can consider other recommended steps, such as including possible moderators between study variables.

Fourth, future research can consider incorporating moderators into the research model to enhance the relevance and applicability of the study to HRM within diverse and international contexts. Moderators such as feedback-specific components (e.g., timing, specificity, manner of delivery) and cultural dimensions (e.g., power distance or individualism) play a critical role in understanding how supervisory feedback characteristics influence employee reactions across different organizational and national cultures. By examining such moderators, researchers can provide deeper insights into tailoring feedback interventions that are culturally sensitive and effective in enhancing employee performance and development on a global scale. These approaches contribute to the HRM field by offering a more nuanced understanding of feedback processes and ensuring that HRM practices can be adapted to meet the diverse needs of an increasingly international workforce, improving the efficacy of feedback interventions across different cultural settings.

Finally, although meta-analysis is a robust research design, future research could add the investigated relationship in other research designs. One direction would be exploring supervisory feedback characteristics through qualitative research designs in a more culturally-varied context. These approaches can uncover the nuanced, culturally embedded practices and perceptions that quantitative methods might overlook. Moreover, mixed-method research designs offer a rich, multidimensional perspective, combining the depth of qualitative insights with the breadth of quantitative data. This could be particularly enlightening in examining

how cultural norms and values serve as moderators or mediators in the feedback process. For example, investigating the role of cultural humility as a moderator in the effectiveness of feedback could unveil how supervisors and employees from varying cultural backgrounds can engage in more meaningful feedback exchanges. Additionally, integrating specific psychological or organizational mediators, such as psychological safety or organizational justice, could provide deeper theoretical contributions by clarifying the pathways through which supervisory feedback characteristics impact employee feedback processing and subsequent outcomes.

4.7 Conclusion

The present study revealed that supervisory feedback represents a promising tool for organizations and HRM practices. In addition, the findings point to several supervisory feedback characteristics that can increase the chances that employees (a) take supervisory feedback and (b) use it for their work. For example, HRM practitioners can use leadership characteristics such as charisma and credibility to improve employee feedback processing. Furthermore, supervisory feedback features, such as quality or valence, must be accounted for to enhance feedback intervention outcomes. Our findings suggest that supervisory feedback characteristics are crucial for HRM and feedback interventions and shed light on factors enhancing and/or diminishing employee feedback processing as important HRM outcomes. I hope this study encourages further HRM research on the significance of feedback processing and the enhancement of the current research models.

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5. Chapter IV: Study 3 – Not One, Two, or Three, It Takes Several Supervisory Feedback Characteristics for Effective Feedback: A Latent Profile Analysis and Experimental Vignette

Abstract

This study examined the impact of supervisory feedback and employee characteristics on feedback effectiveness. First, utilizing a person-centered approach, I conducted latent profile analysis to check for the number of supervisory feedback latent profiles within the sample. Second, I used a within-subjects experimental vignette to check for the effects of supervisory feedback profiles on employee feedback processing. I also employed feedback sign as a moderator and employee task processes and meta-processes as mediating variables. These relationships were investigated in a mixed-population sample (N = 452; M_{age}= 34.75 years, SD_{age} = 10.35). For instance, the relative indirect effects of medium-quality SF (compared to low-quality SF) on perceived accuracy through task processes and meta-processes were significant (*ab* = 0.50, 95% *CI* [.24, .75] and *ab* = 0.44, 95% *CI* [.17, .71], respectively). No moderating effect was found for the feedback sign. Findings suggest supervisors and employees can benefit from training focused on improving feedback quality and processing.

Keywords: Supervisory feedback, feedback processing, feedback sign, latent profile analysis, experimental vignette

5.1 Introduction

After almost one hundred years since the early claims of Thorndike (1931) on feedback effects being dependent upon feedback sign (i.e., positive and negative), findings on boundary conditions regarding feedback effectiveness are still inconclusive. In 1996, Kluger and DeNisi investigated over 600 effect sizes and demonstrated that feedback interventions are not only positive but end up with detrimental effects up to one third of the time. Recently, two studies investigated negative feedback and showed contradictory results. Eskreis-Winkler and Fishbach (2019) found that negative feedback undermines learning by driving recipients toward self and ego concerns. However, a replication study by Keith et al. (2022) revealed that framing format (e.g., in terms of losses rather than gains) and corrective feedback (e.g., introducing correct solutions) mitigated the effects of negative feedback.

I contribute to this line of research by suggesting that the effectiveness of feedback interventions depends on the characteristics of the feedback provider (i.e., supervisor). In addition, similar to the studies of Eskreis-Winkler and Fishbach (2019) as well as Keith et al. (2022), I proposed that recipients' focus (e.g., ego concerns or solutions) would mediate the provider's effects via the task processes and meta-processes (Kluger & DeNisi, 1996). Finally, I used negative feedback (x neutral) and investigated its moderating role in these relationships. Unlike the studies mentioned, I focus in the present study on feedback processing (e.g., feedback acceptance) as an outcome, not direct performance. Kluger and DeNisi (1996) criticized the direct-performance approaches, stating the need for more research on "processes induced by FIs [feedback interventions] and not on the general question of whether FIs improve performance" (p. 278). Hence, I aim to add to the significance of feedback processing.

Building on these inconsistent findings, I aimed to provide further insights into the role of various supervisory feedback characteristics in feedback processing. I suggest that

supervisory feedback characteristics (defined in terms of attributes or qualities, such as trust and feedback quality) might best predict employee feedback processing. Feedback effectiveness often depends upon the characteristics of the feedback sources, such as their credibility or power (Ilgen et al., 1979; Kinicki et al., 2004; Lechermeier & Fassnacht, 2018). For instance, feedback from credible sources is perceived and accepted better (Ilgen et al., 1979).

In addition, I investigate the effects of supervisor feedback sign (i.e., positive or negative), noted as a critical feedback feature (Audia & Locke, 2003; Ilgen et al., 1979; Kim & Kim, 2020). While positive feedback denotes good performance, negative feedback implies a gap in performance and a need for improvements (Belschak & Den Hartog, 2009). Generally, people tend to accept positive feedback more easily than negative feedback because it aligns with their self-views (Swann, 1987). Hence, explaining why and when negative feedback works remains a crucial question for researchers.

Furthermore, whether feedback fails or succeeds often depends on the recipients' attributes. Hence, I employ feedback recipients' task processes and meta-processes as mediators between supervisory feedback and employee feedback processing (Kim & Kim, 2020; Kluger & DeNisi, 1996). Task processes imply recipients' focus on the task and generation of better strategies for work, while meta-processes signify recipients' psychological state in which they feel threatened by negative feedback and focus on the self (Kim & Kim, 2020; Kluger & DeNisi, 1996). According to the feedback intervention theory (FIT; Kluger & DeNisi, 1996), feedback drives recipients toward task processes or meta-processes. In turn, they determine recipients' subsequent performance.

Finally, I propose that employees benefit from supervisory feedback when they are willing to *accept* feedback and *use* it for their tasks (Anseel & Lievens, 2009; Ilgen et al., 1979). I refer to these mechanisms as *feedback processing.* According to one of the first theoretical models of feedback, the feedback process model (FPM; Ilgen et al., 1979),

feedback processing is a derivation of both cognitive (i.e., perceptions and acceptance) and motivational and behavioral (i.e., desire and intentions to respond to feedback) processes. Therefore, for supervisory feedback to work, employees must express positive perceptions and acceptance of feedback and their desire and intentions to respond to it (Anseel & Lievens, 2009; Christensen-Salem et al., 2018; Fulham et al., 2022; Ilgen et al., 1979).

I employed a two-step approach to investigate relationships between supervisory feedback characteristics and employee feedback processing through feedback sign and task processes and meta-processes. In the first step, I used a person-centered approach, namely the latent profile analysis (LPA), and designed supervisory feedback profiles based on several supervisory feedback characteristics. For this purpose, I employed the results of a meta-analytic study by Zyberaj (2022). In the second step, I ran an experimental vignette. In this step, I examined the effects of the supervisory feedback profiles on employee feedback processing through employee task processes and meta-processes and introduced feedback sign as a moderator in these relationships.

With this study, I contribute to research on feedback in two important ways. First, I am one of the few researchers to employ a person-centered methodology to study the implications of supervisory feedback (Dahling et al., 2017; Qian et al., 2016). This approach differs from variable-centered approaches, which focus on variables and how they influence outcomes separately. Person-centered approaches allow for constructs to be studied conjointly and within individuals (Dai et al., 2013; Spurk et al., 2020). Dahling et al.'s (2017) study investigated supervisory feedback environment profiles using a person-centered approach. However, Dahling et al. (2017) (a) used a different scale of feedback environment and (b) focused on direct outcomes such as motivation. Following the FPM (Ilgen et al., 1979), I use a scale that accounts only for supervisory feedback characteristics relevant to feedback processing. Through LPA, I employ a pattern and multivariate analysis and add to the literature on supervisory feedback by investigating their significance for employee feedback

processing conjointly. This approach enables examining whether some characteristics are more important than others. Leadership skills can be complementary, such as one skill influencing or compensating for the other (Dai et al., 2013; Kaiser, 2011). Second, I provide further empirical insights concerning the role that both supervisory feedback and recipients' characteristics play in employee feedback processing. Traditionally, research has focused on direct performance, such as job performance. By studying employee reactions to supervisory feedback, I provide insights into the intermediate psychological processes between supervisory feedback and subsequent employee performance (Anseel & Lievens, 2009). The theory of planned behavior (Ajzen, 1985) notes employee reactions (i.e., intentions) as the best predictor of recipients' actual response to feedback.

5.2 Theoretical Background and Hypotheses Development

To explain the role of supervisory feedback characteristics, I draw on FIT (Kluger & DeNisi, 1996) and the FPM (Ilgen et al., 1979) as theoretical frameworks. FIT states that feedback might influence recipients through "the salience of the feedback provider" (Kluger & DeNisi, 1996, p. 271) and by driving their attention toward task processes or meta-processes. Feedback works if recipients are kept within task processes and fail when driven to meta-processes. Similarly, the FPM (Ilgen et al., 1979) alludes that sources must be viewed as credible and powerful. In addition, the model stipulates the critical role of feedback processing, noting four main variables (known as the elements of the feedback process): (1) *perceived feedback* (the extent to which the recipient accurately perceives the feedback from the sources); (2) *acceptance of feedback* (recipient's belief about the accuracy of the feedback), (3) the *desire to respond to feedback* (increasing intentions), and (4) the *intended response* (or goals), representing intentions of the recipients to respond to feedback. According to FPM (Ilgen et al., 1979), all these feedback processes should be present for

supervisory feedback to work. While perceptions and acceptance denote feedback acceptance, desire and intentions reveal recipients' willingness to use the feedback.

5.2.1 Supervisory Feedback Characteristics: Derivation of Supervisory Feedback Profiles

Traditionally, feedback research uses variable-centered approaches to predict how different variables affect outcomes of interest separately and across people (Wang & Hanges, 2011). Although helpful, this approach can be complex since each variable has to be tested for main effects and eventually for multiple interactions across variables and outcomes. However, one can avoid these complexities by using a person-centered approach. Person-centered approaches enable researchers to combine variables of interest within one individual and derive unique profiles (Spurk et al., 2020; Wang & Hanges, 2011). One renowned method is the LPA, a statistical method that identifies latent profiles within a specific population based on various variables (Spurk et al., 2020). Each profile can then be scrutinized for its constellations based on the variables used. In this study, I employed LPA and used the supervisory feedback categories that Zyberaj (2022) derived to design supervisory feedback profiles.

Zyberaj (2022) derived eight categories of supervisory feedback characteristics (Table 1). The author used a systematic review and analyzed over 600 papers to extract these categories. As a result, the author found 26 supervisory feedback characteristics and classified them into eight categories. The author notes that they employed a subject-matter expert methodology for the categorization. I used these categories and aimed to design supervisory feedback profiles using LPA as a person-centered approach. Because there is a relatively large number of categories, I expected several profiles with different constellations (e.g., high and low) and aimed to answer the following research question:

*Research question 1***:** Will there be qualitatively and quantitatively distinct latent profiles of supervisory feedback characteristics?

Table 1

Predictors and Their Frequencies from the Studies on Supervisory Feedback

Number of characteristics	Predictor	Frequency [a]	SME categorization	Total of predictors [c]
		Number of studies		
1	Trust	5	Credibility	1 (Credibility)
2	Credibility	4	Credibility	
3	Expertise	2	Credibility	
4	Feedback valence	4	FI valence	2 (FI Valence)
5	Just treatment	2	Fairness	3 (FI Fairness)
6	Feedback specificity	2	FI quality	4 (FI Quality)
7	Empathy	2	Support	5 (Support)
8	Feedback quality	9	FI quality	
9	Goodwill	1	Support	
10	Supervisor developmental feedback	1	FI quality	
11	Positive affect	1	Support	
12	Gender	1	Similarity	6 (Similarity)
13	Race	1	Similarity	
14	Ambivalence	1	FI quality	
15	Impression management	1	Fairness	
16	Feedback-rich environment	1	FI quality	
17	Similarity	1	Similarity	
18	Constructive feedback	1	FI quality	
19	Learning-goal orientation	1	Learning-goal orientation	7 (Learning-goal orientation)
20	Consideration	1	Fairness	
21	Adequacy of account	1	Fairness	
22	Sincerity of account	1	Credibility	
23	Charisma	1	Charisma	8 (Charisma)
24	Procedural justice	1	Fairness	
25	Supervisors' cultural orientation [c]	1	Similarity	
26	Perceived supervisory intentions	1	Fairness	

Note. SME = Subject-matter experts, FI = Feedback.

[a] Number of studies represents the number of single studies that studied the respective characteristic (i.e., one or more studies per paper; two or more variables were studied by a single study).[b] For categorization, the numbering was done according to the frequency level.

[c] Collectivist vs. individualist orientation.

5.2.2 Supervisory Feedback Profiles as Predictors of Feedback Processing

A large body of research has reported the many effects feedback sources and their characteristics yield on the effectiveness of feedback. Kinicki et al. (2004) stated that sources and their characteristics could determine the effectiveness of feedback, claiming that "source credibility has both direct and indirect effects on employees' desire to respond to feedback" (p. 1067). Ilgen et al. (1979) stated that the power and credibility of a source (which they define in terms of expertise and trust) are among the essential source characteristics that can determine feedback effectiveness.

Gregory and Levy (2015) noted that feedback is more likely to be effective (i.e., to result in behavior change) if the feedback recipient believes that the feedback provider is trustworthy and a topic expert. Credibility is shown to positively affect recipients' feedback-seeking behaviors (Fedor et al., 1992), as well as satisfaction (Bannister, 1986) and creativity (Son & Kim, 2016). Moreover, sources' status and expertise (i.e., executing power, such as bonuses) are also essential characteristics (Gregory & Levy, 2015), positively affecting acceptance of feedback (Collins & Stukas, 2006) as well as intrinsic motivation of the recipient (Cusella, 1982).

In their meta-analytical study, Zyberaj (2022) found charisma (i.e., charismatic leadership) to be the best predictor of feedback processing (ρ = .65). Similarly, credibility and feedback valence (ρ = .43), feedback quality, and support (ρ = .40) were also good predictors. However, they found that learning-goal orientation (ρ = .12) and similarity (ρ = .05) were the least effective predictors for feedback processing. Following these findings, I excluded learning-goal orientation and similarity characteristics. In addition, because similarity is measured based on gender and race, retrieving supervisory profiles would be difficult. Based on these findings, I hypothesized the following:

Hypothesis 1 (H1): The effects of the supervisory feedback profiles on employee processing will depend on supervisory feedback characteristics. Thus, supervisory

profiles scoring high on supervisory feedback characteristics will yield better employee feedback processing, such as better feedback acceptance, than those scoring low.

5.2.3 The Mediating Role of Task Processes and Meta-Processes

FIT notes that "FIs effects on performance are attenuated by cues [e.g., feedback that provides specific information about the task and goals to be achieved] that direct attention to meta-task processes" (Kluger & DeNisi, 1996, p. 267). Thus, feedback affects recipients primarily through their attention in two ways. First, feedback affects performance by diverting the recipients' attention towards lower-order processes, namely task-learning processes. Secondly, feedback can affect recipients through higher-order processes, namely meta-processes.

According to FIT, meta-task processes can potentially control the focal task processes, which might hinder one's performance by diverting their attention away from the task and to the self. Thus, while meta-processes hinder the effectiveness of feedback, task processes facilitate it by keeping the recipient focused on the task (Atwater & Brett, 2006; Kim & Kim, 2020; Kluger & DeNisi, 1996). For instance, a study by Kim and Kim (2020) found that negative feedback heightened recipients' task processes, increasing their strategy usage and focus and positively affecting their creativity. However, a study by Eskreis-Winkler and Fishbach (2019) found that, because of its ego-threatening features, negative feedback undermined learning and made recipients tuned out, which aligns with the FIT (Kluger & DeNisi, 1996) assumptions on meta-processes. Hence, I proposed the following:

Hypothesis 2 (H2): Task processes and meta-processes will mediate the relationship between supervisory profiles and employee feedback processing.

5.2.4 Does Feedback Sign Moderate the Effects of Supervisory Feedback Profiles via Task Processes and Meta-Processes?

Concerning the feedback sign (i.e., positive vs. neutral feedback), I was interested in investigating whether the effects of the supervisory feedback profiles on employee feedback processing through task processes and meta-processes would depend upon the valence of the feedback. Previous research has shown that feedback sign (e.g., negative feedback) can have major implications on the effects of supervisory feedback (Audia & Locke, 2003; Ilgen et al., 1979; Kim & Kim, 2020). Thus, I investigated whether negative feedback would differ from the neutral condition (Belschak & Den Hartog, 2009).

Generally, people tend to accept positive feedback more easily than negative because it aligns with and reaffirms their personal views (Swann, 1987). The self-enhancement theory (Shrauger, 1975) claims that individuals prefer favorable feedback more than negative. Negative feedback is often viewed as less accurate and, therefore, less accepted by employees than positive feedback (Ilgen et al., 1979; London, 2015).

Similarly, recipients are less willing to accept negative feedback because it evokes feelings of defensiveness and dissatisfaction (Ilgen et al., 1981; London, 2015; London & Smither, 2002), which could lead to self-concerns and might distract one's attention away from the task processes (Kluger & DeNisi, 1996). Hence, in line with these findings, feedback sign could mitigate the relationship between the supervisory feedback and the subsequent employee reactions (i.e., task processes and meta-processes). While employees might be willing to accept positive feedback, negative feedback might be perceived as a threat and evoke negative feelings, resulting in rejection. Thus, I posed the following research question and hypothesis:

> Research question 2: Does the indirect effect of supervisory feedback profiles on employee feedback processing through task processes and meta-processes depend upon feedback sign?

Hypothesis 3 (H3): The indirect effect of SF Profiles on feedback processing through task processes and meta-processes will depend on the feedback sign. Specifically, these indirect effects will be significant and stronger for negative than neutral feedback.

5.3 Method

5.3.1 Research Design and Procedure

I employed a two-step approach (see Figure 1). First, I conducted LPA to design supervisory feedback profiles. Second, in a within-subject design, I tested the profiles derived from the first step in a vignette experiment for their effects on employee feedback processing. In this step, I used employee task processes and meta-processes as mediators between supervisory feedback profiles and employee feedback processing.

Furthermore, I tested whether feedback sign would moderate the effects of supervisory feedback characteristics on employee task processes and meta-processes. Research and experimental materials followed criteria stated in the Declaration of Helsinki 1964 and its later addendum. Vignettes and study procedures used in this study were approved by the ethics committee of the University of Bamberg in the original research by Zyberaj 2022 (dossier number: 2021-04/17). In addition, because the experiment was conducted online, online informed consent was obtained from all study participants before commencing the experiment.

5.3.2 First Step: Latent Profile Analyses

In the first step, I conducted LPA to derive supervisory feedback profiles. LPA is a probabilistic or model-based technique superior to traditional cluster analyses for detecting latent taxonomy (Tein et al., 2013). The primary aim is to identify types or groups of people based on specific profiles of attributes, such as personal attributes. Another essential feature of the LPA is distinguishing profiles quantitatively and qualitatively (Bakaç et al., 2021;

Spurk et al., 2020; Wang & Hanges, 2011; Woo et al., 2018). Quantitatively distinct profiles vary in the absolute *level* of the profile indicators, such as being high or low on constructs (Spurk et al., 2020). Qualitatively distinct profiles vary in *shape* because of differences in relative standing on the profile indicators (Bennett et al., 2016).

To design these distinct profiles, LPA uses some patterns of variables, where profiles that share similar patterns are combined and compared with other profiles (Bouckenooghe et al., 2019; Spurk et al., 2020; Woo et al., 2018). Then, specific fit indices are used to derive the profiles sharing similar patterns (i.e., the best-fitting profile solution; Nylund-Gibson & Choi, 2018; Peugh & Fan, 2013; Spurk et al., 2020). Some of these fit indices include the Bayesian Information Criterion (BIC), Akaike Information Criterion (AIC), consistent AIC (CAIC), the Bootstrapped Likelihood Ratio Test or BLRT (Bouckenooghe et al., 2019; Nylund et al., 2007; Spurk et al., 2020; Wang & Hanges, 2011). Model fit is usually based on lower BIC and AIC values, a higher BLRT, and other criteria, such as the elbow plot (Nylund-Gibson & Choi, 2018; Zyberaj et al., 2022).

5.3.3 Second Step: Experimental Vignette

In the second step, I conducted an Experimental Vignette (EV). The EV methodology contains "carefully constructed and realistic scenarios to assess dependent variables including intentions, attitudes, and behaviors" (Aguinis & Bradley, 2014, p. 352). Vignettes are well-suited because they do not require in-depth knowledge about the topic and can be easily used to elicit meaning from participants (Hughes & Huby, 2002). They are also good if one needs to exercise control of independent variables and draw causation (Aguinis & Bradley, 2014). Vignettes can be displayed via images, videos, or written format (Hughes & Huby, 2002). Organizational research mainly uses written vignettes, also called paper people studies (Burt et al., 2016; Murphy et al., 1986). The paper people studies are especially appropriate when the research aims to assess explicit processes and outcomes (Aguinis & Bradley, 2014; Heim et al., 2018).

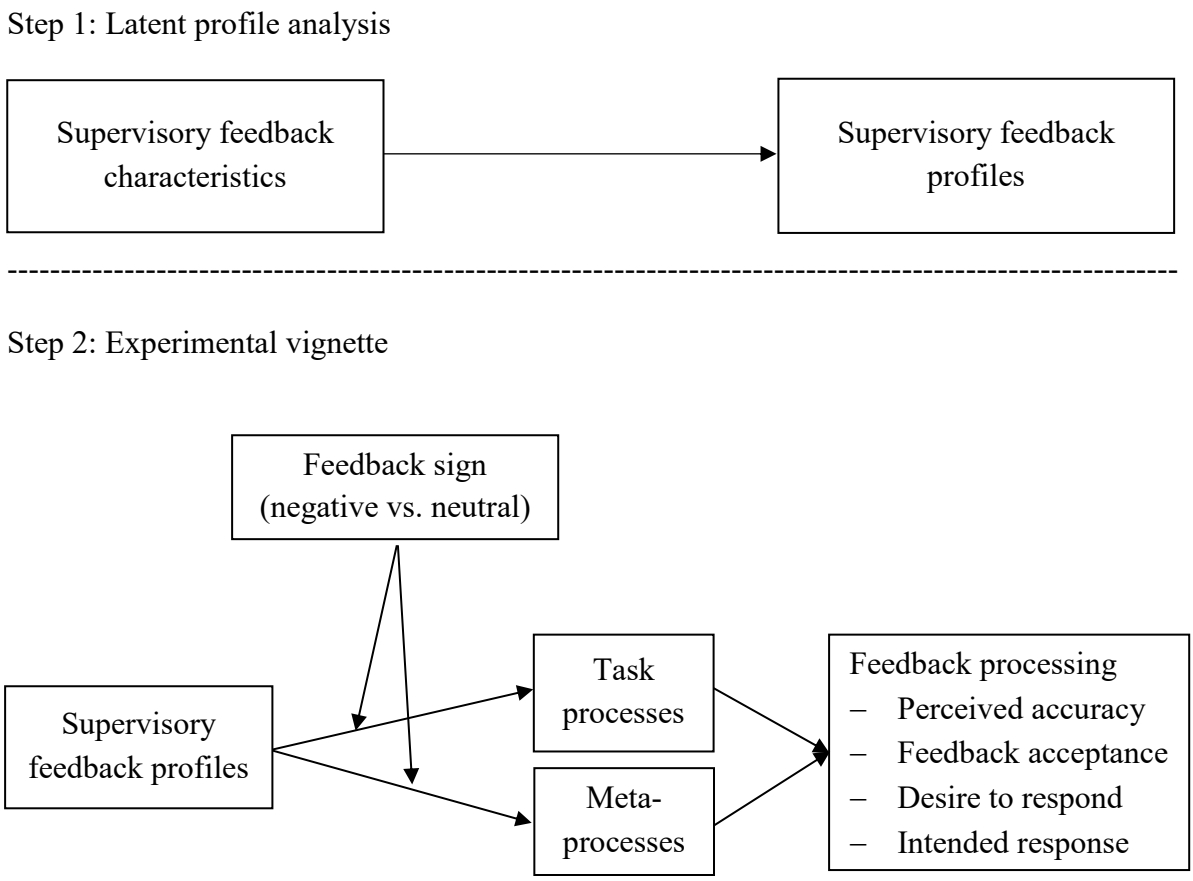
In this study, I used two written vignettes developed by Zyberaj and Volmer (2021). I conducted a within-subject design experiment and used one vignette for each condition. Participants were randomly assigned to the conditions. Feedback in these vignettes was provided as a numerical evaluation (e.g., "you scored below average and worse than 70% of your peers") and in a written format (e.g., "your current answers do not describe the product optimally and accurately"). This feedback format has previously been widely used in similar research (Belschak & Den Hartog, 2009; Burt et al., 2016; Kim & Kim, 2020). In addition, vignettes developed by Zyberaj and Volmer (2021) contain text and images that align with previous recommendations. Each vignette contains one text, one figure about the text, and five questions that recipients must answer.

To contextualize the intervention, I told participants that they were working in "a Science and Technology company called "TOYA" and asked them to envision it as if they were working in this company. In addition, I told them that they are part of the "Research and Development Department", currently assigned to learn about some new products. Finally, they were told they would be monitored by their supervisor, who would provide their performance results at the end of their learning process (see supplementary material for vignette details).

An overview of research steps, study variables, and their relationships are shown in Figure 1.

Figure 1

Research Steps and the Hypothesized Moderated-Mediation Model



5.3.4 Sample

I decided on the sample size based on the recommendations for robust LPA (Nylund-Gibson & Choi, 2018; Spurk et al., 2020). According to Spurk et al. (2020), "a sample size of about 500 should lead to enough accuracy in identifying a correct number of latent profiles" (p. 6). However, because of the exclusion criteria (i.e., excluding participants who performed well) and for an assurance of possible participant attrition or outliers, I aimed for 50 more participants. Thus, I targeted a sample size of around 550 participants.

I designed the experiment using the SoSci Survey (https://www.soscisurvey.de/) and recruited the participants via Amazon Mechanical Turk (MTurk). Respondents were invited to participate in a leadership study in exchange for €0.60 and were asked to consent to participate before commencing the experiment. To be eligible, participants had to be

employees and proficient in English. I further followed the best-practice recommendations by Aguinis et al. (2020) for robust data from MTurk. For example, I used CAPTCHA for approving valid users and invited only experienced users of MTurk (known as "Master Workers") and those with Human Intelligence Task (HIT) approval rates of < 95. Finally, I set a code of conduct to exclude those who did not follow the criteria (e.g., wrong answers to the attention check questions).

I was able to collect data from 566 participants. I excluded 46 participants from this sample due to their inconsistent answers in three of the attention check questions. For instance, I asked participants to name the vignette they did or select the right number of answer options for that vignette. In addition, I excluded 68 participants due to their good performance in the task (i.e., scoring all five answers correct, which disqualified them from receiving negative feedback; see supplementary material). Thus, the final sample in the analyses comprised 452 participants (59.5% male; M_{age}= 34.75 years, SD_{age} = 10.35). Most participants were from the United States (90%) and India (4.9%), followed by several other countries, such as the United Kingdom, Australia, Denmark, and Italy. Furthermore, most participants had Bachelor's (52.2%) and Master's (38.8%) degrees. The majority reported having five years of work experience (23%), followed by ten (13.1%) and four years (16.4%); the rest had less than five years of work experience.

5.3.5 Instruments

Vignettes. I adopted two vignettes (experimental vs. neutral condition) from Zyberaj and Volmer (2021). The authors noted that vignettes were standardized in two pilot studies. First, they tested the vignettes for their power (e.g., whether conditions affected recipients) and included five questions with five answer options for each. Vignettes tested recipients' performance in a cognitive task. Afterward, participants would get feedback (i.e., negative and neutral). Participants were randomized for each feedback condition.

Supervisory Feedback Characteristics. I used the measures of the original studies by Zyberaj (2022) for the SF characteristics. To measure *credibility,* I used the measure of Steelman et al. (2004) with five items. A sample item was "I can trust what my supervisor says", measured on a Likert-type scale with responses ranging from 1 (*strongly disagree*) and 7 (*strongly agree*). Cronbach's α was .84. I used the 17-item measure of charismatic leadership for *charisma* by Bycio et al. (1995). A sample item was "I have confidence in the feedback my supervisor gives me", measured on a Likert-type scale ranging from 1 (*not at all*) and 5 (*frequently*). Cronbach's α was .85.

For *feedback sign*, I asked participants about the proportion of positive to negative feedback they received, using a scale ranging from 1 (*100% positive*) to 11 (*100% negative*), which were reverse coded (Kinicki et al., 2004). For *feedback quality,* I used the five-item scale of Kinicki et al. (2004). A sample item was "My supervisor gives me useful feedback about my job performance", measured on a Likert-type scale with responses ranging from 1 (*strongly disagree*) and 7 (*strongly agree*). Cronbach's α was .85. For *support,* I used the 20-item PANAS scale of Watson (1988), representing positive and negative affect, and a six-item scale of McCroskey and Teven (1999), representing goodwill. PANAS uses a Likert-type scale ranging from 1 (*not at all*) to 5 (*extremely*), while goodwill scale ranging from 1 (*strongly disagree*) and 7 (*strongly agree*), where participants indicated impressions about their supervisors (e.g., "My supervisor...cares about me"). Cronbach's α for support was .93. Finally, I used the five-item measure by Leung et al. (2001) for fairness. A sample item was "My supervisor...is kind to me", measured on a Likert-type scale ranging from 1 (*disagree*) and 5 (*agree*). Cronbach's α was .73.

Task Processes and Meta-Processes. For task processes (4 items) and meta-processes (5 items), I utilized the measure by Kim and Kim (2020). A sample item was "This feedback helped me pay more attention to how I conduct my tasks" (task processes) or "This feedback made me care about how I present myself to my supervisor" (meta-processes). The measure

uses a Likert-type scale with responses ranging from 1 (*not at all*) to 7 (*very much*) and was introduced after participants' exposure to vignettes and feedback received. Cronbach's α was .86 for task processes and .91 for meta-processes.

Feedback Processing. To measure recipients' processing of feedback, I used several measures. First, I used a five-item measure developed by Kinicki et al. (2004) for *perceived accuracy*. A sample item was "The information discussed at the appraisal session was accurate". Cronbach's α was .74. Second, for the *acceptance of feedback*, I used four items from Anseel and Lievens (2009). A sample item was 'The feedback I received was an accurate evaluation of my performance". Cronbach's α was .87. Third, the *desire to respond* was measured using four items from Kinicki et al. (2004). A sample item was "I have no intention of using the feedback to guide my performance on the next task." Cronbach's α was .71. Finally, I used one item from Anseel and Lievens (2009) for the *intended response*. The item was: "Because of my most recent performance appraisal session, I intend to put forth a great deal of additional effort towards doing my job". Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) for the desire to respond, and 1 (*strongly disagree*) to 7 (*strongly agree*) for perceived accuracy and acceptance of feedback.

Negative vs. Neutral Feedback. I employed negative and neutral feedback to measure the effects of the feedback sign. I manipulated feedback sign and investigated the effects on feedback processing. For negative feedback, I used both numerical and normative (e.g., "You scored below average and worse than 80% of your peers") and written ("Unfortunately, your current score does not meet the requirements that our experts have set for your performance"). For the neutral condition, participants were told they "scored in a percentile between 30 and 60". Feedback would show up after around 40 seconds (i.e., while the supervisor prepares it).

5.3.6 Statistical Analyses

For research synthesis, I employed several steps. First, for the LPA, I applied the recommended criteria, such as deciding about the number of profiles (i.e., fit indices or model

fit values), types of the estimator (i.e., Maximum Likelihood), and similar criteria (Spurk et al., 2020). Second, for the experimental results, I looked at the direct effects and mediating role of task processes and meta-processes (i.e., mediation analyses) and the moderating role of feedback sign (i.e., moderated mediation analyses). I used SPSS, R, and Mplus software to conduct the analyses.

5.4 Results

5.4.1 Descriptive Statistics and Confirmatory Factor Analysis

I conducted confirmatory factor analysis (CFA) to see the fit of the different measurement models of the latent constructs within the assumed models. For the tasks processes and meta-processes (mediator), I conducted a one- and two-factor model and one and four models for the feedback processing variables (outcome). Results confirmed the theoretically assumed models for both mediators and outcome variables. Compared to the one-factor model, the two-factor model for mediators showed a better fit ($\chi^2 = 206.08$, $df = 26$, CFI = .94, TLI = .91, RMSEA = .12, 95% CI [.11 to .14], SRMR = .039).

Table 3 shows descriptive statistics of the main study variables. There were medium-high positive correlations between different facets of SF characteristics and employee feedback processing. For example, a positive correlation was shown between charisma and feedback acceptance ($r = .64$, $p < .001$) and desire to respond ($r = .72$, $p < .001$). Similarly, medium-large correlations were between different facets of predictors and outcomes with mediating variables. For instance, charisma ($r = .89$, $p < .001$) and credibility ($r = .85$, $p < .001$) positively correlated with employee task processes.

Table 2

Confirmatory Factor Analyses with Different Factor Models for the Study Variables

Model	χ^2	*df*	Δdf	$\Delta\chi^2$	CFI	TLI	RMSEA	SRMR	AIC	BIC
Mediators										
One-factor model	215.34	27	-	-	.94	.92	.12	.040	11141.09	11215.14
Two-factors model	206.08	26	1	9.26**	.94	.91	.12	.039	11133.83	11211.99
Outcomes										
One-factor model	980.20	77	-	-	.75	.70	.16	.090	16017.78	16132.96
Four-factors model	796.85	72	5	183.35***	.80	.75	.15	.095	15844.42	15980.17

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; TLI = Tucker-Lewis index.

Table 3

Means, Standard Deviations, and Zero-Order Correlations between Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender [a]	1.40	0.49															
2. Age	34.75	10.35	.08														
3. Condition [b]	0.49	0.50	.03	.09													
4. Credibility	5.73	1.04	.08	-.06	.01	(.84)											
5. Fairness	3.96	0.74	.04	-.07	-.02	.73**	(.73)										
6. Feedback quality	5.79	1.03	.07	-.03	.01	.87**	.69**	(.85)									
7. Support	3.89	0.69	.02	.02	.03	.68**	.73**	.71**	(.93)								
8. Charisma	5.73	1.04	.06	-.03	.04	.87**	.62**	.85**	.73**	(.85)							
9. Feedback sign [c]	7.01	3.56	-.02	-.00	.00	.22**	.31**	.25**	.37**	.23**							
10. Perceived accuracy	4.02	0.63	.04	-.06	.06	.76**	.68**	.72**	.69**	.72**	.21**	(.84)					
11. Feedback acceptance	5.60	1.31	.09	-.06	-.00	.69**	.71**	.66**	.71**	.64**	.28**	.78**	(.87)				
12. Desire to respond	4.02	0.69	.03	-.08	.01	.72**	.62**	.68**	.65**	.72**	.19**	.80**	.71**	(.71)			
13. Intended response	4.17	0.82	.01	-.09*	-.02	.61**	.45**	.57**	.46**	.61**	.10*	.64**	.52**	.71**			
14. Task-processes	5.71	1.09	.05	-.03	.06	.85**	.57**	.82**	.64**	.89**	.18**	.75**	.62**	.71**	.61**	(.86)	
15. Meta-processes	5.70	1.16	.09	-.00	.06	.82**	.65**	.80**	.71**	.83**	.25**	.75**	.72**	.72**	.57**	.84**	(.91)

Note. $N = 452$. Values along the diagonal represent reliability estimates (Cronbach's α).

[a] Gender: Male = 1, female = 0.

[b] Condition: Negative feedback = 1, Neutral feedback = 0. [c] Feedback sign ranged from 1 (*100% positive*) to 11 (*100% negative*).

*$p < .05$. **$p < .01$.

5.4.2 LPA Analyses

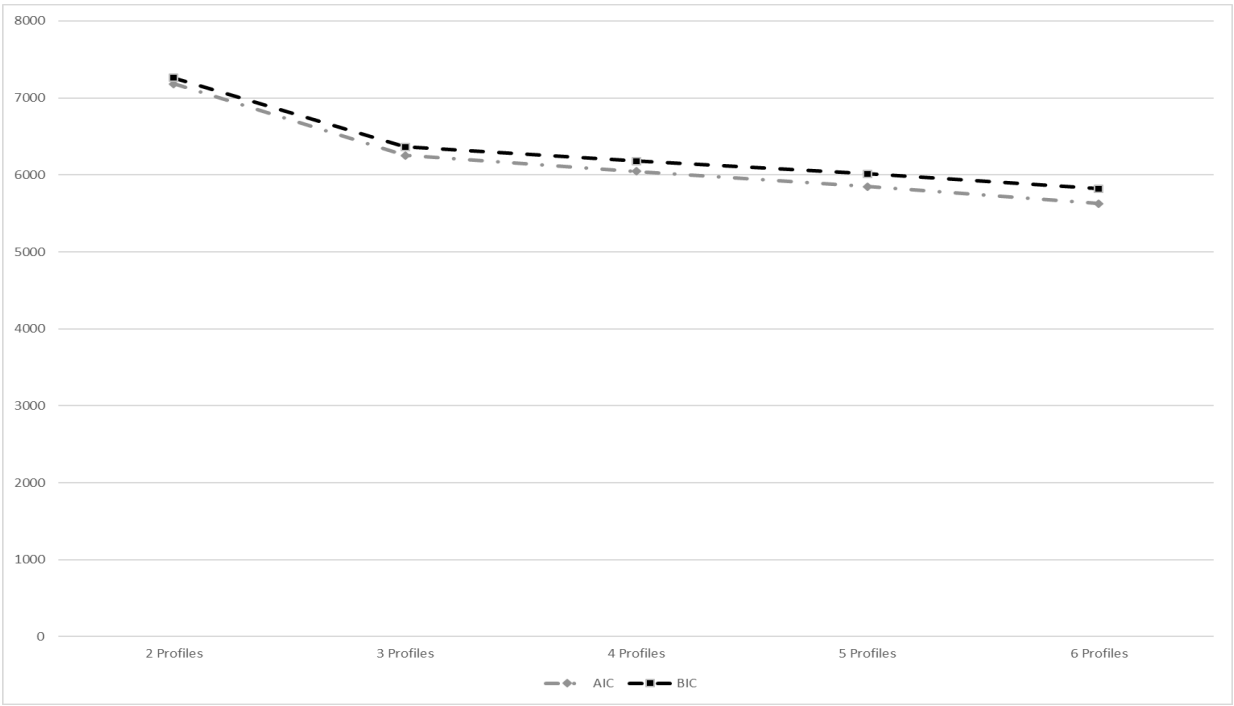
For the SF profiles, I used Mplus (Muthén & Muthén, 2017). To calculate the best profile solution, I used the standardized mean values and the maximum likelihood estimator (MLR), freely estimating one to six profiles in terms of means and variances.

To decide on a profile solution, I looked at several fit indices (Table 4), such as low values of AIC, BIC, and Sample-Size-Adjusted BIC (SABIC), as well as high Entropy and significant Lo-Mendell-Rubin Likelihood Ratio Test (LMR) and Bootstrap Likelihood Ratio Test (BLRT). In addition, I employed the elbow plot. However, fit indices (i.e., BIC and AIC) did not differ much. Hence, I based the final decision on the elbow plot (Figure 2), distinguishing three profiles with a significant LMR.

Furthermore, I looked for group memberships in each profile. I found that the four-profile solution had one group with only 16 people, which violates the LPA assumptions for a minimum of 20 individuals per profile (Spurk et al., 2020).

Figure 2

Elbow Plot For BIC And AIC In Determining Profile Solution



Note. AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion.

Table 4

Fit Indices for Profile Structure and Selection

# of Profile	LL	FP	AIC	BIC	SABIC	LMR(*p*)	Entropy
2	-3572.37	19	7182.75	7260.91	7200.61	< 0.05	0.97
3	-3101.32	26	6254.65	6361.61	6279.09	< 0.05	0.95
4	-2990.15	33	6046.31	6182.06	6077.33	< 0.05	0.95
5	-2884.24	40	5848.48	6013.03	5886.08	< 0.05	0.95
6	-2767.14	47	5628.28	5821.62	5672.46	< 0.05	0.95

Note. $N = 452$. AIC = Akaike information criterion; BIC = Bayesian information criterion; FP = free parameters; SABIC = sample-size adjusted BIC; LL = log-likelihood; LMR(*p*) = p-value for the Lo et al. (2001) test.

Table 5

Quantitative Differences Between Profiles With Means and Standard Deviations

# of Profile	Credibility	Fairness	Feedback quality	Support	Charisma	Feedback sign [a]	Difference	*p*
3	3.05 (0.77)	2.85 (0.49)	3.37 (1.16)	2.82 (0.50)	3.09 (0.81)	5.13 (2.88)	2-1	.001
2	5.37 (0.50)	3.42 (0.60)	5.41 (0.58)	3.42 (0.46)	5.41 (0.59)	6.01 (3.26)	3-1	.001
1	6.37 (0.31)	4.47 (0.29)	6.40 (0.35)	4.34 (0.40)	6.34 (0.36)	7.95 (3.55)	3-2	.001

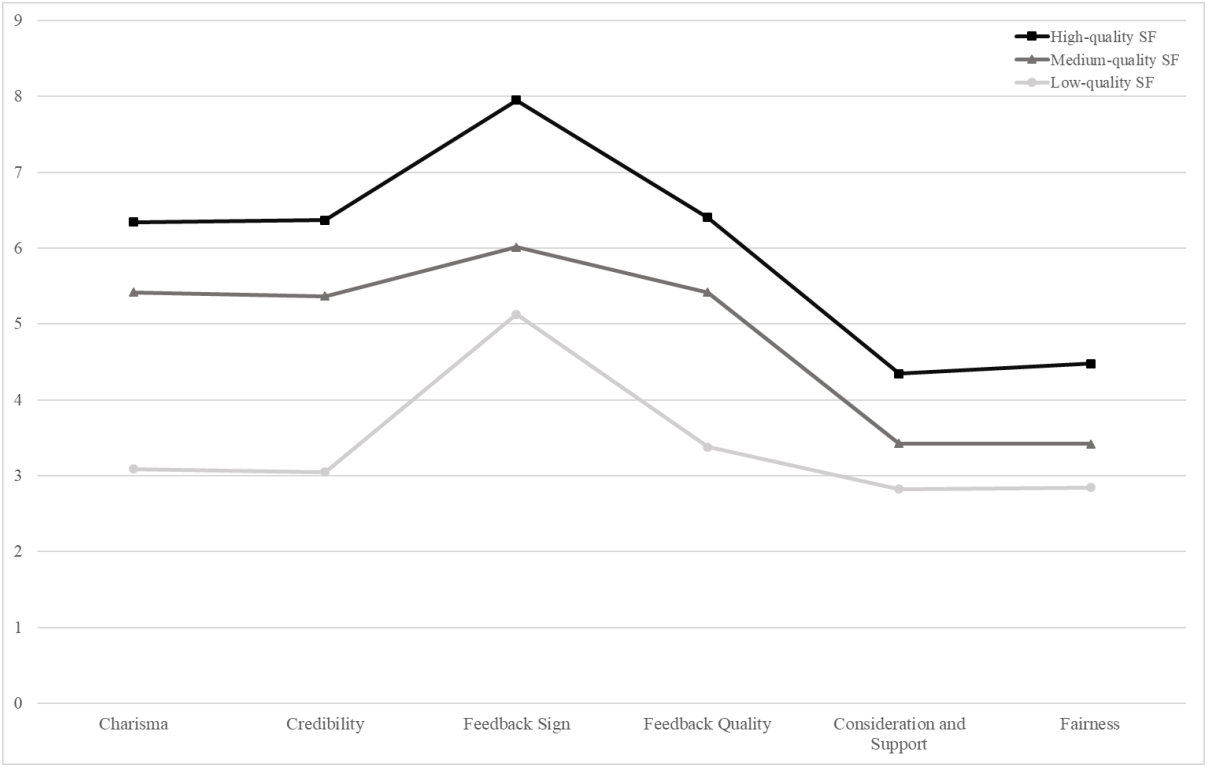
Note. SD is shown next to the *M* (in parentheses).

[a] Feedback sign was measured on a scale ranging between 1 (*100% positive*) to 11 (*100% negative*).

Moreover, I plotted profiles to check for qualitative differences, showing slight differences (Figure 3). Thus, I retained the three-profile solution, which also aligns with the study of Dahling et al. (2017). I named profiles as *high-quality SF* (Profile 1; 55.2%, the largest profile), *medium-quality SF* (Profile 2; 36.3%), and *low-quality SF* (Profile 3; 8.5%).

Figure 3

Latent Profiles of Supervisory Feedback Characteristics and the Profile Percentages



Note. Profile memberships (i.e., percentage of people in each profile): Profile 1 (*high-quality SF*): 55.2%; Profile 2 (*medium-quality SF*): 36.3%; Profile 3 (*low-quality SF*): 8.5%.

Finally, I checked for quantitative differences, and the results showed significant differences between the three profiles (Table 5). These results answer the first research question, revealing distinct qualitative and quantitative SF profiles.

5.4.3 Hypotheses Testing

For the mediation and moderation analyses, I utilized the PROCESS tool (Hayes, 2012) in SPSS, applying bootstrapping with 5000 resamples and 95% confidence intervals.

Regression analysis revealed that, compared to low-quality SF, high-quality SF ($b = 3.37$, $p < .001$) and medium-quality SF ($b = 2.47$, $p < .001$) were significant predictors of the task processes.

Relatively similar results were obtained for the meta-processes (Table 6). Compared with low-quality supervisory feedback (SF), high-quality SF ($b = 3.37$, $p < .001$) and medium-quality SF ($b = 2.47$, $p < .001$) significantly predicted both feedback acceptance ($b = 0.91$, $p = .032$) and desire to respond to feedback ($b = 0.19$, $p = .041$), representing the cognitive and motivational components of feedback processing. However, this profile did not significantly predict intentions to respond to feedback ($b = 0.02$, n.s.). Hence, these results partially support Hypothesis 1.

5.4.4 Mediation

The mediation analyses indicated that task and meta-processes significantly mediated the link between SF profiles and feedback processing. Relative to low-quality SF, medium-quality SF showed a significant indirect effect on perceived accuracy via task processes, $ab = 0.50$, 95% *CI* [0.24, 0.75], and via meta-processes, $ab = 0.44$, 95% *CI* [0.17, 0.71]. These results partially support Hypothesis 2 (see Table 6).

5.4.5 Moderation

The moderation result revealed that the condition (i.e., negative vs. neutral feedback) did not moderate the difference between profiles regarding task- or meta-processes. Specifically, the difference between high-quality SF and low-quality SF in task- and meta-processes did not depend on condition ($b = -0.23$, n.s., and $b = -0.35$, n.s., respectively). The same pattern of results was found for the difference between medium quality SF and low quality SF ($b = -0.18$, n.s., and $b = -0.19$, n.s., respectively). Thus, these results rejected Hypothesis 3 (cf. Table 6).

Table 6

Regression Results Testing the Hypothesized Model

	Mediators		Outcomes			
	Task-processes	Meta-processes	Perceived accuracy	Feedback acceptance	Desire to respond	Intended response
	B (*SE*)	*B* (SE)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Intercept	3.08** (0.17)	2.77** (0.19)	1.71** (0.14)	2.12** (0.32)	1.83** (0.17)	1.92** (0.24)
Profile 2	2.47** (0.15)	2.35** (0.17)	-0.12* (0.12)	0.17 (0.28)	-0.22* (0.15)	0.09 (0.21)
Profile 1	3.37** (0.15)	3.48** (0.16)	0.15* (0.14)	0.91* (0.32)	0.02 (0.15)	0.19** (0.24)
Condition [a]	0.35 (0.20)	0.44 (0.21)	0.15 (0.12)	-0.34 (0.28)	-0.16 (0.14)	0.01 (0.21)
Age	-0.03 (0.03)	-0.01 (0.00)	-0.02 (0.00)	-0.06 (0.00)	-0.04 (0.02)	0.00 (0.00)
Gender [b]	-0.05 (0.05)	-0.04 (0.06)	-0.00 (0.03)	-0.12 (0.08)	-0.04 (0.04)	-0.03 (0.06)
Condition x Profile 2	-0.18 (0.18)	-0.19 (0.24)	-0.17 (0.13)	0.17 (0.30)	0.08 (0.15)	-0.20 (0.23)
Condition x Profile 1	-0.23 (0.23)	-0.35 (0.23)	-0.11 (0.13)	0.38 (0.29)	0.19 (0.15)	-0.01 (0.22)
Task-processes			0.21** (0.03)	-0.06 (0.07)	0.20** (0.03)	0.30** (0.05)
Meta-processes			0.19** (0.03)	0.58** (0.07)	0.21** (0.03)	0.11* (0.05)
R^2	0.67**	0.68**	0.66**	0.58**	0.60**	0.39**

Note. N = 442–444. Unstandardized coefficients are reported; Standard errors are shown in parentheses. Profile 3 is the reference profile.

[a] Condition: Negative feedback = 1, Neutral feedback = 0. [b] Gender: Male = 1, female = 0.

*$p < .05$. **$p < .01$.

5.5 Discussion

Why do some people accept feedback while others reject it? I found that characteristics of providers (e.g., credibility) influence employee feedback processing (e.g., feedback acceptance). In addition, I found a mediating role of the employee characteristics (i.e., focus on task or self) but not of feedback sign (i.e., negative vs. neutral) as a mediating variable. Using a person-centered approach, I designed supervisory feedback latent profiles, and in an online experiment with a within-subject design, I investigated profiles' effects on employee feedback processing. Overall, the results partially supported the hypotheses.

First, the results revealed three latent SF profiles. Profiles were quantitatively and qualitatively distinct, scoring above and below the mean. For example, Profile 1 scored relatively high in almost all SF characteristics (i.e., charisma, credibility, feedback sign, and feedback quality, except support and fairness, with medium-low scores).

In addition, this profile represented the largest sample (55.3%) among all three profiles. Because of its scoring (i.e., above the mean) in most SF characteristics, I named this profile high-quality SF. Similarly, the other two profiles were relatively different, with Profile 2 showing medium-high levels of SF characteristics, which I labeled medium-quality SF, and Profile 3 scored low on SF characteristics and was labeled low-quality SF. Although with slightly different constellations on the supervisory feedback measurement, these results align with the study of Dahling et al. (2017), who also found three different types of SF profiles (i.e., high, medium, and low). For instance, similar to Dahling et al. (2017), Profile 1 (high-quality SF) was distinguished by high scores on the feedback sign.

Second, regression results showed medium-to-large effects of SF profiles on employee feedback processing. For instance, Profile 1, which scored high in crucial SF characteristics, was a good predictor of employee feedback processing. These results align with the study of Zyberaj (2022), where charisma and credibility predicted employee feedback processing. Similar results were found by Dahling et al. (2017), where a high-quality supervisory

feedback environment positively predicted several outcomes, such as intrinsic motivation and affective commitment. Ilgen et al. (1979) noted motivation as representing one's desire to respond to feedback.

Third, in addition to leadership qualities, I investigated whether employee characteristics mediate the effects of SF profiles on the way they process SF feedback. Results partially supported the second hypothesis, showing that both task processes and meta-processes mediate the effects of SF profiles on employee feedback processing. However, while task processes mediate the relationships positively, meta-processes reveal different results from expectations and hypotheses.

According to the FIT (Kluger & DeNisi, 1996), task processes facilitate employee performance by keeping the recipient focused on the task and away from the self and ego concerns. However, meta-processes have the opposite effect. Driving the recipient's attention toward meta-processes increases focus on the self and depletes cognitive and affective processes, hindering one's performance. Nevertheless, according to the FIT, there is one scenario when meta-processes might not affect recipients as strongly: when the task is simple or "if the recipient diverts attention back down to the task-motivation or -learning level" (Kluger & DeNisi, 1996, p. 267). Hence, this could be one explanation for these results – recipients might have been able to grasp vignettes well and move easily between task processes and meta-processes.

Finally, I investigated whether feedback sign (negative vs. neutral) moderates the effects of SF profiles on employee task processes and meta-processes. I found no significant effects, which various mechanisms can explain. Research has found that the effects of feedback sign can be mitigated by the type of task (van Dijk & Kluger, 2011; Vancouver & Tischner, 2004), which aligns with the FIT assumptions (Kluger & DeNisi, 1996). For instance, Vancouver and Tischner (2004) found that the intensity of the task played a significant role in the effects of negative feedback on performance. This could mean that

variance in the level of the negative feedback intensity (i.e., high or low) might also affect its power concerning behavior and performance. Hence, vignettes' power (i.e., intensity) could be one factor for not finding an effect of feedback sign on feedback processing through task processes and meta-processes.

In addition, feedback sign focused solely on losses (i.e., negative feedback). Keith et al. (2022) reported that focusing on losses rather than gains might explain these effects of feedback sign. For example, Keith et al. (2022) found that earning money after each correct answer (gains) had better effects on learning compared to the incentives framed as losing money for each wrong answer (losses). Hence, although the feedback was correct (i.e., honest feedback based on participants' performance), focusing only on the losses (negative feedback only) might be vague and useless for the recipient (Fulham et al., 2022; Keith et al., 2022). Fulham et al. (2022) noted that "feedback-recipients are unlikely to learn from or use feedback when the feedback provided is vague… or does not relate to the feedback-recipient's goals" (p. 2).

5.5.1 Implications, Limitations, and Future Directions

Practically, this study showed that SF characteristics could be a relatively robust intervention for organizations. With a person-centered approach, I found that different constellations of the SF characteristics might play a significant role in the effects of their feedback for employee feedback processing. This could signify that organizations pay attention to the various features and attributes of the supervisory feedback. For instance, findings showed that Profile 1 (i.e., high-quality SF) could significantly affect how employees react to SF, even though this profile scored relatively low in fairness and support. Hence, although supervisors must act fairly (Sparr & Sonnentag, 2008), showing credibility and feedback quality is often more critical (Kinicki et al., 2004) for successful feedback interventions.

According to the FPM (Ilgen et al., 1979), trust is a core foundation of a supervisor's credibility. This way, building trust might be critical and complement other (lacking) skills.

The person-centered approach showed that mutual characteristics could make up for each other. Leadership research has noted leaders might benefit from person-centered approaches since the lack of some characteristics can be compensated by other skills (Dai et al., 2013; Kaiser, 2011). For instance, Dai et al. (2013) reported that managers must adopt a holistic approach and utilize various skills and competencies. Therefore, enhancing SF qualities mutually (e.g., conjointly, through training; London, 2015) could be vital for organizations (i.e., leadership).

Furthermore, with non-significant results for the sign of the feedback, the findings of this study could imply that supervisors pay attention to how they construct their feedback. Much research calls for more future- and behaviorally-focused feedback than corrective feedback only (Fulham et al., 2022; Gnepp et al., 2020; Gregory & Levy, 2015; Murphy, 2020). Hence, for supervisory negative feedback to work, supervisors should strive to be honest with their feedback and provide ways for improvements through specific and future-focused feedback. According to the FIT (Kluger & DeNisi, 1996), feedback cues (i.e., particular components of the task) "are likely to direct attention to learning processes and generate working hypotheses, or at least cause their reevaluation" (p. 263).

Kluger and DeNisi (1996) noted that cues might also divert attention away from the task and to the self. Hence, supervisors can provide more future-focused and task-related feedback to mitigate the negative effects of cues (Fulham et al., 2022; Gnepp et al., 2020; London et al., 2023). This, in turn, increases recipients' focus on the task and learning processes and keeps them away from self-evaluations and ego concerns. For instance, coaching and feedforward could be helpful to interventions because they focus on the future and what works rather than on evaluations only (Fulham et al., 2020; Kluger & Nir, 2010).

Finally, I focused solely on negative feedback and neglected positive feedback. Hence, future research might need to investigate the role of other feedback formats, such as positive or future-focused feedback (van Dijk & Kluger, 2011) or more listening-supported formats

(Kluger et al., 2023). Researchers have recommended coaching and feedforward sessions in which feedback providers focus on "what works, instead of focusing on fixing what's wrong" (Kluger & Nir, 2010, p. 236).

Theoretically, this study provides hints concerning leadership structure and adds to research on its implications about feedback through the person-centered approach. Traditionally, research focuses on variable-centered approaches in investigating leadership structure (Brickley et al., 1997; Dai et al., 2013). However, the study showed that the person-centered approach could be another promising intervention, which yields significantly better ways for interventions by merging different constellations of SF characteristics. Drawing on the concept of leadership pipeline (Kaiser, 2011), Dai et al. (2013) noted that because person-centered approaches identify patterns rather than single variables, a multivariate analysis of the impact of leadership skills could be a better approach in studying configurations of leadership competencies.

According to Dai et al. (2013), this approach provides a better possibility for leaders because of its complementary nature, noting that "the lack of one leadership competencies may be compensated for by other characteristics" (p. 166). This was indeed shown in this research. For instance, profile 1 (high-quality SF) scored high on feedback sign, credibility, charisma, and feedback quality but medium-low on fairness and support. This could imply that high-quality characteristics can compensate for the medium and low-quality supervisory feedback characteristics (Dai et al., 2013; Kaiser, 2011). Therefore, future research should account for person-centered approaches and investigate ways to provide a better overview of leadership structure by combining various features of SF and not relying on single constructs.

Relatedly, future research should provide more insights concerning the mediating variables affecting feedback effectiveness and not direct performance. This study demonstrates that the several mechanisms of feedback processing, such as acceptance and desire to respond to feedback, could explain a great deal of failing feedback. As Fulham et al.

(2022) noted, “for feedback to promote learning and improvement, feedback-recipients must be receptive to the feedback…” (p. 1). Similarly, feedback processing mechanisms must be studied conjointly and not as separate constructs (Ilgen et al., 1979). I found that most research reports only some (i.e., mainly feedback acceptance) of the four mechanisms noted by Ilgen et al. (1979). While feedback acceptance is crucial, this might not suffice. The FPM (Ilgen et al., 1997) and the theory of planned behavior (Ajzen, 1985) note that intentions might be the most approximate evaluation of feedback effectiveness. Hence, more research is needed to explain the mechanisms and circumstances under which feedback is accepted or rejected.

Finally, this study is not without limitations. First, I collected data from employees only. Hence, it would be important that future research looks for ways to incorporate both employee and supervisor evaluations. This approach can provide more robust results on feedback assessments. Second, I focus solely on feedback processing and neglect job outcomes. Future research shall replicate findings by involving possible job outcomes. This can provide more direct hints on the implications of employee feedback processing. Third, I was only interested in negative feedback. Hence, future research shall replicate findings and investigate whether there would be differences concerning positive feedback.

Moreover, future research could employ other feedback forms, not only normative ones. Fourth, although the sample was quite robust in size and representativeness, future research could look into other contexts since culture and context might have ramifications on SF profiles and their effects on employee feedback processing. Fifth, future research could investigate whether there will be differences in results if there are variations in vignettes (both in terms of power, such as intensity, and in terms of quantity, such as using two or more vignettes). Finally, some correlations are relatively large, which could indicate low divergent validity across scales. However, model results and LPA are not influenced by such results.

5.6 Conclusion

I found three supervisory feedback profiles. All three profiles were distinct from each other both qualitatively and quantitatively. The experimental vignette results revealed that profiles differ in their effects on employee feedback processing. Profiles scoring high on supervisory feedback characteristics (i.e., high-quality SF) yielded better effects than low-scoring profiles. Importantly, results further revealed that employee characteristics play a significant role in supervisory feedback, with both task processes and meta-processes mediating the effects of SF on their feedback processing.

5.7 Publication information

5.7.1 Data Availability

The data that support the findings of this study are available from the corresponding author, [JZ], upon reasonable request.

5.7.2 Funding

No funding was received for this study.

5.7.3 Competing Interest

The author declares that there is no conflict of interest.

5.7.4 Author Contributions

Jetmir Zyberaj was responsible for conceptualization, methodology, software and writing (original draft, review and editing).

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5.9 Appendix A

5.9.1 Supplementary Material

Below we present one vignette and the study procedure employed during the experimental vignette.

Informed consent

Participants read the informed consent and were asked to withdraw from the study if they wished to do so.

Employee context

Participants were told to envision working in a Technology and Science company.

"Please read the description below carefully! This is your employee context for the next sessions of this study.

Envision yourself being part of the company below and try to imagine yourself as if you were working in this company, just as described in the text below.

You are an employee in "TOYA", a Science and Technology company. You have been working here for the past 5 years and your main tasks are examining the new products and generating ideas for their further development. You work with the "Product Evaluation and Development" team, part of the Research and Development (R&D) department. Last month, your supervisor informed your team that 2 new products in your company would require your assistance for their further development. For that, you were told that you would need to learn every detail about the new products by reviewing the materials provided to you and then generate strategies and plans for their improvements. Experts have concluded that you need a minimum of 1 (one) session for the product for you to learn these new products. You will answer some questions to measure your learning progress on these new products. Finally, your performance will be monitored by your supervisor, who will provide you with your performance results.

Important: Your supervisor has a lot of power over you. They could fire or decide to promote you based on your performance. Please imagine this role of your supervisor and think about the consequences of your performance after evaluating your performance during this study.

If your employee context is clear, please proceed to the next part of this study."

Product

"Welcome! In this session, you will learn about our product Radio Telescope. First, please see the picture of the product and then proceed to learn about it.

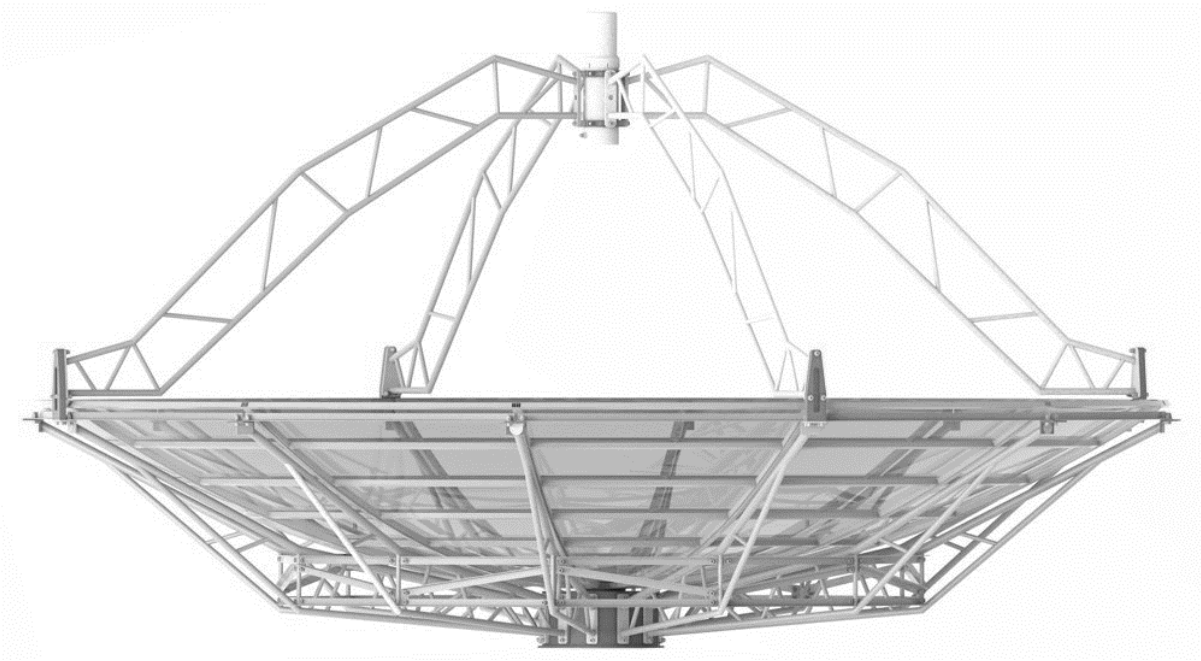

Image: Pixabay

Please read the material carefully and then proceed with answering the questions in the next part. When you are ready, please press the button NEXT to proceed to the questions.

Description of the product

Product name: Radio Telescope

Production date: November 2020

This radio telescope is the world's largest filled-aperture (i.e., full dish) radio telescope with a 500-meter-diameter and an area as large as 30 football fields. For its first trial, we built it into a natural depression in the landscape of Guru Province, and due to its size, we could not move

it around. Relatively similar to our Inspection Mirror, the radio telescope collects light waves, brings them to focus, amplify them, making them available for analysis. The feed antenna of our radio is in a cabin, suspended above the dish on cables. The active dish is composed of 4,450 moveable panels controlled by a computer. By changing the shape of the dish and moving the feed cabin on its cables, the telescope can be steered to point to any region of the sky up to 40 degrees, which is the largest steering position to have ever been offered. Accounting for the size of the device, we also acknowledge a limitation at this stage of development. Thus, although the dish is 1000 meters in diameter, only a 500-meter circular area on the dish is illuminated by the feed antenna at any given time, so the effective aperture is 500 meters.

Nevertheless, we are working on improving our product, and this limitation will be eliminated just next year when our team of scientists finishes the project on which they have been working for the past five years. However, since this will serve large companies with its diameter, we have decided to provide this diameter first. This product has been constructed since 2007 and will be fully completed by the beginning of 2022."

Answer options (performance evaluation)

"In this part, you will answer some questions about the material you have just read. Remember, your main role as an employee is to evaluate the material you have read and suggest ways to develop it further. However, to contribute your ideas, strategies, and plans for further development of this product, your supervisor must first assess your learning progress. Therefore, please answer the following questions. For each question below, please select which answer best and most accurately describes the product. Please select only ONE answer."

Sample question and answer options

1. Why does our company offer this product to large companies only?

a) Because of its aperture size

b) Because of its aperture strength

c) Because of its aperture color

d) Because of its price

e) None of the above

Supervisory feedback

After answering options, we told participants that their supervisor evaluates their performance and will "provide comments if needed". In addition, to make the experience as authentic as possible, we told them, "please read the comments of your supervisor carefully. Your waiting time is ca. 1 minute".

We coded the following text for the negative feedback, following past recommendations (e.g., Kim and Kim, 2020):

"Your current score is [percentile appeared]. Your current answers do not describe the product optimally and accurately. Unfortunately, your current score does not meet our experts' requirements for your performance. You scored below average and worse than [percentile appeared] of your peers. Specifically, you scored only [correct number appeared] answers correctly, but [incorrect number appeared] answers incorrectly. Therefore, your performance was full of errors and did not meet the standards set by our company."

Note: If participants scored all answers correct, they would not get any feedback. Therefore, they were excluded from the final analysis (n = 68).

6. Chapter V – General Discussion

Research has shown that feedback has major implications for employee development and their performance improvement (Anseel et al., 2015; Kim & Kim, 2020). Feedback interventions, when effectively designed and implemented, can significantly influence employee behavior, motivation, and performance outcomes (Cusella, 1982; Kinicki et al., 2004; van Dijk & Kluger, 2011). This dissertation aimed to explore the nuanced roles of key influencing factors for feedback effectiveness, including supervisory feedback, employee characteristics, feedback message, and feedback processing as central components in understanding how feedback influences employee behavior.

Building on the FIT (Kluger & DeNisi, 1996) and the FPM (Ilgen et al., 1979) as main theoretical frameworks, the major hypothesis was that supervisory feedback characteristics, including both the nature of the message (e.g., negative feedback) and supervisory traits (e.g., credibility), interacts with employee characteristics such as mindset to influence employee responses to feedback, which I refer to as the feedback processing.

Feedback processing, which includes both cognitive and motivational responses as outlined by FPM (Ilgen et al., 1979), serves as the critical link between the supervisory feedback characteristics and the subsequent employee behavior. Thus, the fundamental goal of this dissertation was to investigate the interplay between supervisory feedback and employee characteristics in shaping employee feedback processing. This goal was pursued across three empirical studies, each designed to examine specific aspects: the impact of supervisory feedback messages and employee mindset (Study 1), the role of supervisory and employee feedback characteristics (Study 2), and the effects of latent profiles of supervisory feedback and employee feedback characteristics (Study 3) on employee feedback processing.

6.1 Summary of Studies

6.1.1 Study 1: Supervisory Feedback Types, Mindset, and Employee Feedback Processing

The primary objective of Study 1 was to investigate the effects of two types of supervisory feedback, namely negative feedback and employee coaching, on feedback processing outcomes. This study hypothesized that employee coaching, characterized by guidance, facilitation, and inspiration (Heslin et al., 2006) would foster better feedback processing compared to negative feedback alone. This is based on recent calls for more research on future-focused feedback (e.g., Gnepp et al., 2020). Such approaches follow principles of the strength-based performance appraisal (Bouskila-Yam & Kluger, 2011), which focuses on identifying and leveraging employees' strengths rather than merely correcting weaknesses (Dweck, 2006; London, 2015). The study further explored the moderating role of employee mindset, distinguishing between individuals with a growth mindset and those with a fixed mindset, suggesting that those with a growth mindset would respond more positively to the coaching (Heslin et al., 2006; Kluger & Nir, 2010).

The results confirmed the hypothesized effects. Employee coaching was significantly more effective in enhancing employees' acceptance of feedback and their desire to act upon it, positively moderated by employees' growth mindset. Interestingly, negative feedback was also positively associated with increased perceptions of feedback accuracy, particularly among employees with a growth mindset. This suggests that individuals with a growth mindset may not perceive negative feedback as a threat to their self-concept, which leads to a greater willingness to engage constructively with the feedback and learn from it. Thus, the study indicates that the type of supervisory feedback and the employee's mindset jointly influence feedback processing outcomes, emphasizing the importance of adopting more facilitative feedback strategies while also fostering a growth-oriented mindset to mitigate defensiveness and promote positive employee responses.

6.1.2 Study 2: Meta-Analytic Examination of Supervisory Feedback Characteristics

Considering the unexpected effects of negative feedback observed in Study 1, I expanded the scope of my investigation in Study 2 to explore whether additional supervisory feedback characteristics could help elucidate these effects. Building on FPM (Ilgen et al., 1979) and FIT (Kluger & DeNisi, 1996), I conducted a meta-analysis to synthesize existing research on key supervisory traits, such as charisma and credibility, and their impact on feedback processing outcomes. Both FPM and FIT highlight the importance of how feedback characteristics can redirect attention and influence employee reactions. To further explain employee responses, I integrated the reasoned action theory (Fishbein & Ajzen, 1975) and the theory of planned behavior (Ajzen, 1985, 1991), which provide insight into how intentions to act on feedback are shaped by attitudes and perceived behavioral control.

The meta-analytic findings indicated that supervisory feedback characteristics are robust predictors of positive feedback processing. In alignment with the proposed hypothesis, the characteristics associated with supervisory traits, such as credibility and charisma, were the best predictors of feedback processing. Supervisors who showed these traits were more effective in enhancing feedback acceptance. Similarly, supervisors who were perceived as supportive yielded positive reactions to feedback. Furthermore, the analysis revealed the significance of feedback valence and quality, which were identified as positive predictors of employee feedback processing. Furthermore, the results indicated that fairness was a significant factor in eliciting positive employee reactions. However, the influence of learning goal orientation and similarity (i.e., in demographics) on employee reactions was not significant. Overall, Study 2 highlights the pivotal influence of supervisory attributes on feedback processing, offering empirical evidence for integrating credibility, charisma, and supportiveness into supervisory training programs. Furthermore, the findings indicate that consideration should be given to the characteristics of the feedback message itself, such as its valence and quality.

6.1.3 Study 3: Supervisory Feedback Profiles and the Mediating Role of Task Processes and Meta-Processes

The goal of Study 3 was to further explore the interplay between supervisory feedback profiles and feedback processing by examining the mediating roles of task processes and meta-processes. Following the principles of a relatively new person-centered research methodology in organizational behavior, namely latent profile analysis (LPA; for an overview, see Spurk et al., 2020), this study introduced supervisory feedback profiles that simultaneously integrate multiple supervisory feedback characteristics. To design profiles, I used the results of the Study 2 on supervisory feedback characteristics. The hypothesis was that the combination of various characteristics within these profiles would lead to more effective feedback processing, as the synergy and interaction of these traits could enhance the overall impact of supervisory feedback.

The findings of Study 3 revealed three qualitatively and quantitatively distinct supervisory feedback profiles (low-, medium-, and high-quality supervisory feedback), with the high-quality profile scoring high on most characteristics except for fairness and support, which had medium-low scores. Aligning with the hypothesis, this profile, representing the largest sample, was found to be the strongest predictor of positive feedback processing. Moreover, the results showed that task processes positively mediated the relationship between supervisory feedback profiles and feedback processing. The study reveals the significance of supervisory feedback characteristics, demonstrating that high-quality profiles enhance feedback processing by fostering better engagement in task-related activities.

The anticipated moderation effect of feedback sign (negative vs. neutral) on these relationships was not supported, suggesting that other factors, such as the nature of the task or the framing of feedback, may play a more critical role in determining feedback outcomes. These results align with previous research which showed that task type moderates the relationship between feedback and performance (van Dijk & Kluger, 2011). Similarly, recent

studies showed that framing has also an important effect on employee reactions (Keith et al., 2022; Kim et al., 2024). For instance, Kim et al. (2024) found that "the format the performance feedback is presented in—whether it involves numerical ratings, narrative comments, or a combination of the two—can affect how fair the recipients perceive the feedback to be, … and whether the recipients are motivated to improve" (p. 34). Thus, Study 3 highlights the overall importance of considering both the specific characteristics of supervisory feedback and the broader context in which feedback is given to optimize employee reactions.

6.1.4 Theoretical Implications

The findings from this dissertation offer several important theoretical contributions to the fields of organizational behavior and human resources, particularly concerning FIT (Kluger & DeNisi, 1996) and FPM (Ilgen et al., 1979).

First, this research expands upon FIT by demonstrating how different types of supervisory feedback (i.e., negative feedback and employee coaching) interact with employee characteristics, such as mindset, to influence feedback processing. Previous studies have largely focused on the direct effects of feedback valence on performance outcomes, often overlooking the role of individual differences (Kluger & DeNisi, 1996). By incorporating mindset as a moderating variable, this dissertation provides a more refined understanding of how feedback interventions can be tailored to optimize employee outcomes. For example, research supports the notion that individuals with a growth mindset are more likely to perceive negative feedback as an opportunity for development, enhancing the effectiveness of feedback interventions (Dweck, 2000; Heslin & Vandewalle, 2008). This insight notes the importance of considering employee characteristics when designing feedback systems, aligning with and extending the assumptions of FIT.

Second, the meta-analytic findings in Study 2 contribute to the theoretical understanding of supervisory feedback characteristics within the framework of the FPM

(Ilgen et al., 1979). This research highlights the critical role of supervisory traits, such as credibility, in shaping the cognitive and motivational responses of employees to feedback. The results suggest that these characteristics are essential for ensuring that feedback is perceived as accurate and trustworthy, which, in turn, enhances feedback acceptance and facilitates behavioral change (Ilgen et al., 1979; Pichler, 2012). This contribution adds to FPM by emphasizing the importance of the feedback provider's and recipient's attributes in the feedback processing chain, which advances the applicability of the FPM in contemporary organizational settings.

Finally, this dissertation advances theoretical discussions on feedback processing by positioning it as a central mediating mechanism that links supervisory feedback to employee behavior (Kinicki et al., 2004: Steelman et al., 2004). The research illustrates that feedback processing involves an interplay of cognitive evaluations (e.g., perceived accuracy, acceptance) and motivational responses (e.g., desire and intentions to improve), which are crucial for translating feedback into actionable outcomes (Ilgen et al., 1979; Kinicki et al., 2004).

These findings align with the reasoned action theory (Fishbein & Ajzen, 1975) and the theory of planned behavior (Ajzen, 1985, 1991) noting intentions as the most approximate path to employee behavior. Thus, by dissecting these processes, the studies provide empirical support for the idea that feedback processing is not merely a passive reception of information but an active, interpretative process that determines the effectiveness of feedback interventions. This nuanced understanding contributes to the literature by offering a more comprehensive framework for analyzing how feedback influences employee behavior and performance, thus advancing both feedback intervention theory and feedback processing model.

In sum, this dissertation provides a comprehensive exploration of how supervisory feedback interacts with employee characteristics to influence feedback processing, which in

turns effects employee performance. By integrating insights from FIT (Kluger & DeNisi, 1996) and FPM (Ilgen et al., 1979), it highlights the importance of considering both the content and delivery of feedback, as well as the individual differences among employees, in designing effective feedback interventions. The findings note the necessity for organizations to adopt a more personalized approach to feedback, taking into account factors such as employee mindset and the credibility of the feedback provider. This approach not only enhances the accuracy and acceptance of feedback but also fosters a more motivated and engaged workforce. Ultimately, this research contributes to a deeper understanding of the mechanisms underlying feedback effectiveness, offering valuable guidance for improving feedback practices in organizational settings.

6.1.5 Practical Implications

Practically, this dissertation yields implications for advancing human resource management (HRM) practices in the design and implementation of effective feedback interventions (Aguinis, 2013; Kim & Kim, 2020; Kinicki et al., 2004; Steelman et al., 2004). The findings provide actionable recommendations for supervisors and organizations at large.

First, the results highlight the importance of integrating both evaluative and developmental and facilitative components in supervisory feedback (Gnepp et al., 2020; Heslin et al., 2006; Kim & Kim, 2020). Supervisors should be trained to deliver feedback that not only addresses performance deficits but also offers constructive guidance and support aimed at fostering employee development (Heslin et al., 2006). This dual-focus approach is particularly effective when tailored to the employee's mindset, helping to reduce defensive reactions and promote constructive engagement with feedback (Dweck, 2019; Jordan & Audia, 2006). For example, adopting coaching techniques that encourage self-reflection and goal-setting has been shown to enhance feedback acceptance and lead to performance improvements (Dweck, 2000; Heslin & Vandewalle, 2008). Supervisors can leverage these techniques to create a more supportive and growth-oriented feedback environment.

Second, the meta-analytic findings from Study 2 highlight the need to enhance supervisory feedback characteristics to improve feedback processing (Christensen-Salem et al., 2018; Kinicki et al., 2004; Prussia et al., 2004). HRM practices should prioritize the development of supervisory traits through targeted training programs that emphasize the importance of building trust and demonstrating empathy during feedback delivery (Simon et al., 2021; Young et al., 2017). Research has found that leaders who provide negative feedback frequently might face psychological costs that could diminish their overall effectiveness, especially if they do not engage in adequate recovery activities, highlighting the importance of empathy in mitigating these effects (Simon et al., 2021). Supervisors with higher levels of empathy are better equipped to navigate the emotional challenges of delivering negative feedback, which can help maintain their effectiveness and ensure that the feedback is perceived as constructive and supportive (Young et al., 2017). Similarly, supervisors who are perceived as credible (e.g., trustworthy and experts) and supportive are more likely to deliver feedback that is viewed by employees as accurate and trustworthy, which is essential for motivating behavioral change (Ilgen et al., 1979; Pichler, 2012). Hence, organizations should invest in leadership development initiatives that cultivate such key supervisory characteristics, thereby enhancing the overall effectiveness of feedback interventions.

Third, as results from Study 3 showed, it is vital that supervisory characteristics are integrated into feedback interventions simultaneously to create a holistic and effective feedback environment (Dahling et al., 2017; London, 2015). This integration is necessary because different supervisory traits, such as credibility, supportiveness, and feedback quality, act together to enhance feedback processing outcomes. When these characteristics are addressed collectively rather than in isolation, supervisors are better equipped to foster an environment where feedback is both well-received and acted upon by employees (Dahling et al., 2017). Thus, Study 3 highlights the importance of using person-centered approaches to design tailored feedback interventions. By identifying distinct supervisory feedback profiles,

organizations can develop more customized feedback strategies that align with the specific needs and characteristics of their workforce (London, 2015). For example, supervisors who exhibit high levels of credibility and supportiveness, as identified in a high-quality feedback profile, can be more effective with employees who may be more receptive to such feedback styles (Kinicki et al., 2004). Furthermore, it would be important that organizations continually assess and refine these profiles to adapt to evolving organizational dynamics and employee needs, ensuring that feedback interventions remain effective over time (Gregory & Levy, 2015; Kinicki et al., 2004; London, 2015).

Finally, this research stresses the importance of designing feedback systems that prioritize feedback processing outcomes such as acceptance, perceived accuracy, and intentions to respond to feedback (Ilgen et al., 1979; Kinicki et al., 2004). Organizations should create feedback interventions that actively engage employees in the feedback process, encouraging them to perceive feedback as a tool for personal and professional growth rather than merely as a judgment of their abilities (London, 2015). Practical strategies might include incorporating regular feedback sessions focused on developmental feedback, providing employees with the necessary tools to interpret and apply feedback effectively, and fostering a feedback-rich culture that values continuous improvement and learning (London, 2015; Gregory & Levy, 2015).

In summary, the findings this dissertation provide valuable insights for HRM practices, offering a roadmap for creating feedback interventions that are both theoretically sound and practically effective. By focusing on enhancing supervisory feedback and employee feedback processing, organizations can increase the likelihood that feedback will lead to meaningful and sustained improvements in employee performance, ultimately contributing to organizational success.

6.1.6 Limitations

While this dissertation provides valuable insights into the dynamics of supervisory feedback and its impact on employee feedback processing, several limitations should be acknowledged across the three studies.

First, Study 1 and Study 3 relied on self-reported data, which are inherently subject to biases such as social desirability and recall bias. Participants may have reported their feedback experiences in a manner they believed was expected or favorable, potentially skewing the results. Additionally, the vignette-based task used in Study 1, despite being carefully designed and validated, may not fully capture the complexity of real-world tasks, and its specific nature may limit the generalizability of the findings. Moreover, the cross-sectional design of Study 3 limits the ability to draw causal inferences about the relationship between supervisory feedback and feedback processing. A longitudinal design could be a more robust assessment of how these relationships evolve over time.

Another limitation of Study 1 pertains to the sample characteristics, which consisted primarily of students. This context may not be representative of industry or organizational cultures, and the findings may not be generalizable to broader populations, particularly in sectors where feedback practices might differ significantly. Similarly, the demographic homogeneity of the sample, particularly in terms of age and cultural background, further restricts the generalizability of the results, as different demographic groups may respond differently to supervisory feedback. Future research should consider validating these findings with a more diverse and representative sample.

Second, Study 2, which involved a meta-analysis, carries limitations related to the selection of studies included in the analysis. Despite efforts to include a comprehensive range of studies, the potential for publication bias remains present. Studies with significant findings are more likely to be published and included in meta-analyses, potentially overestimating the true effects of supervisory feedback characteristics on feedback processing outcomes.

Additionally, the variability in study designs, measures, and contexts across the included studies introduces heterogeneity, which may affect the reliability of the overall findings. While statistical analyses were conducted to address this heterogeneity, it remains a limitation that could influence the conclusions drawn from the meta-analysis. Furthermore, the generalizability of the meta-analytic findings is constrained by the diversity of the included studies. Although the meta-analysis aimed to aggregate findings across various organizational settings, the applicability of these findings to specific contexts, such as small businesses or non-Western cultures, may be limited. Thus, results should be interpreted with caution when applied to contexts that differ significantly from those represented in the meta-analysis.

Third, Study 3, which examined the impact of supervisory feedback profiles on feedback processing, is limited by its laboratory experimental design. While the controlled environment of the study allowed for the isolation of specific variables, it may not fully capture the complexity of real-world feedback interactions. Hence, future research should replicate these findings in field settings to enhance the generalizability and relevance of the results.

Finally, across studies, the cultural context of the sample may limit the generalizability of the findings to other cultural settings. Future research should explore these relationships in more diverse cultural contexts to determine whether the observed effects hold across different cultural norms and practices. Additionally, variations in vignette design, such as the intensity or quantity of vignettes used, should be explored in future studies to assess their potential impact on feedback processing and related outcomes.

6.1.7 Future Research

The findings of this dissertation add to understanding the dynamics of supervisory feedback and its effects on employee feedback processing and behavior. However, there are several avenues for future research that could further refine and extend the theoretical models utilized and the overall results.

6.1.7.1 Exploring Additional Employee Characteristics

Future research could delve into additional employee characteristics that may influence feedback processing, such as emotional intelligence, resilience, or cognitive load. These characteristics could interact with different types of feedback in ways not captured by the current models. For instance, employees with high emotional intelligence might be better equipped to handle negative feedback constructively, while those with higher cognitive load might struggle to process feedback effectively, regardless of its valence. Investigating these factors could provide a more nuanced understanding of the mechanisms at play in feedback processing and its impact on employee behavior.

6.1.7.2 Expanding Feedback Contexts

Future studies could also examine feedback contexts beyond those addressed in this dissertation. Context is one of the key influencing variables and remains largely unexplored. For instance, exploring feedback in virtual teams, gig economy settings, or remote work environments could yield valuable insights into how feedback processing and employee outcomes differ across various organizational structures and settings. Additionally, incorporating variables such as team dynamics and organizational culture into the models could help elucidate the broader systemic factors that influence feedback effectiveness. For example, understanding how different team dynamics interact with feedback types and employee characteristics could offer deeper insights into optimizing feedback strategies across various organizational contexts. Similarly, exploring the role of organizational culture in shaping feedback reception and processing could help organizations tailor feedback systems to align better with their cultural norms and values.

6.1.7.3 Longitudinal and Cross-Cultural Studies

One of the limitations of the current research is its cross-sectional design, which restricts the ability to draw conclusions about the long-term effects of feedback interventions. To address this, future research should employ longitudinal designs to track changes in feedback

processing, employee behavior, and performance over time. Such studies could reveal whether the positive effects of feedback, particularly facilitative feedback like employee coaching, are sustained over the long term or if they diminish without ongoing reinforcement. Similarly, organizations that employ a daily or weekly feedback culture could be suitable for diary studies that capture the day-to-day fluctuations in feedback processing and its immediate impact on employee behavior and performance. These studies could provide insights into how continuous feedback influences employee engagement, learning, and adaptation over time, and whether frequent feedback helps sustain performance improvements or leads to feedback fatigue. Understanding these dynamics would be crucial for designing feedback systems that are both effective and sustainable in the long run.

In summary, future research should aim to extend the theoretical models used in this dissertation by incorporating additional supervisor and employee characteristics and exploring diverse feedback contexts. Furthermore, conducting longitudinal and cross-cultural studies, will deepen our understanding of feedback processing and its long-term effects on employee behavior and performance. These research avenues will contribute to the development of more effective and culturally sensitive feedback interventions in organizational settings, enhancing both employee and organizational outcomes.

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7. Chapter VI – General Conclusion

Supervisory feedback plays a pivotal role in shaping employee behavior and fostering development within organizations. While much of the feedback research has focused on the immediate effects of feedback, this dissertation expands understanding by highlighting how supervisory feedback characteristics such as credibility and supportiveness interact with employee traits, like mindset, to influence feedback processing. The results emphasize that feedback is not a one-size-fits-all intervention. Feedback interventions must be tailored to both the supervisor's approach (e.g., feedback quality) and the employee's characteristics (e.g., mindset) to effectively enhance feedback acceptance and employee desire to utilize it. Not only should supervisors heed valence (e.g., providing future-focused feedback through facilitation and guidance), they should also provide feedback that is timely, specific, and focused on the task of the recipient. This dissertation provides new insights into how feedback processing serves as a crucial mediator between supervisory feedback and employee subsequent reactions and outcomes. By incorporating both evaluative and developmental components, and by recognizing the significance of high-quality feedback profiles, this research highlights the importance of a balanced, integrative approach to feedback delivery. These findings lay the groundwork for future research and offer practical guidance for HR professionals looking to optimize feedback practices, ultimately contributing to improved employee performance and organizational success.