

Forgiveness in Work Relationships

Causes and Consequences

Wenrui Cao | 曹文蕊



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Forgiveness in Work Relationships

Causes and Consequences

Vergevingsgezindheid in werkrelaties: Oorzaken en gevolgen

(met een samenvatting in het Nederlands)

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Chapter 1

General Introduction

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Chapter 1

The COVID-19 pandemic of the early 2020's drastically disrupted working life: employees were forced to work from home as offices closed (Kniffin et al., 2021). Although working from home may lead to benefits for some employees, such as reduced commuting time and larger flexibility in terms of balancing work and life (Ipsen et al., 2021), for many employees it caused at least one important issue: employees had fewer social interactions with their colleagues. Some even felt isolated or lonely (Lewis et al., 2022). Indeed, "I do not get to see my colleagues or other people as much as I would like to" was an often-mentioned response in a survey investigating working life during the COVID-19 pandemic in 29 European countries (Ipsen et al., 2021).

Given people's innate and primary drive to form social relationships with others (Baumeister & Leary, 1995; Maslow, 1968), the notion that many employees miss their colleagues when working from home may not be surprising. Also at work, people need good and stable social relationships that are characterized by supportive interactions, a sense of belonging, and effective teamwork (Chiaburu & Harrison, 2008; Dutton & Heaphy, 2003). Evidence shows that the quality of one's relationships at work is the most important determinant of employee job satisfaction, even more so than having an interesting job or a high salary (De Neve et al., 2018). Moreover, good and stable work relationships are strong predictors of employees' performance at work (Banks et al., 2014; Schermuly & Meyer, 2016), and such relationships also protect employees against harmful effects of workplace stress (Olekalns et al., 2020; Viswesvaran et al., 1999).

However, it is not so easy to maintain good and stable work relationships. Employees may have different agendas, values, and priorities about the direction and operation of an organization, the work goals that must be achieved, the tasks that must be conducted, or how these tasks must be conducted. The lack of rich face-to-face communication when working from home may have caused even more misunderstanding (Mortensen & Hinds, 2001). It is thus inevitable that every

now and then workplace conflicts occur. Indeed, from 1978 to 2019, on average 34% of employees experienced mistreatment at least once and 44% of employees witnessed mistreatment, with the precise prevalence rates depending on the observed time frame and type of mistreatment (Dhanani et al., 2021). For example, some colleagues may take credit for the contributions of others, or may spread rumors or gossip about other colleagues based on inaccurate information, poorly researched “facts”, or simply hearsay evidence (Berry et al., 2007). Such workplace conflicts, albeit inevitably taking place, are detrimental for employees’ well-being and productivity (Ayoko, 2016; Dhanani & LaPalme, 2019).

How can workers maintain a happy and healthy working life with good and stable work relationships in the face of workplace conflict? *Forgiveness* might be a way to address this challenge. This dissertation aims to get a better understanding on forgiveness as a constructive approach to address workplace conflicts and, hence, to maintain essential work relationships. Specifically, we investigated (a) the outcomes of forgiveness in work relationships, i.e., whether forgiveness is associated with better work outcomes (e.g., job satisfaction, work engagement, performance); (b) how forgiveness develops in work relationships, i.e., whether and what organizational factors influence changes in forgiveness over time; and (c) what facilitates forgiveness in work relationships, i.e., is it important to have a forgiving leader? Before addressing these research questions in more depth, we first discuss what forgiveness actually is.

What is Forgiveness?

The topic of forgiveness has a long history. Forgiveness emerged in religion and theology (e.g., in Judeo-Christian, Islamic, Hindu, and Buddhist streams) as a metaphor for the removal of divine retribution for wrongdoing (e.g., Dorff, 1992; Webb et al., 2012). It has later received attention in different scientific disciplines, such as philosophy and psychology (Enright, 1994;

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McCullough et al., 1997; Worthington, 2013). More recently, forgiveness has received attention also from organizational and managerial science (e.g., Aquino et al., 2001; Brady et al., 2022; Faldetta, 2021; Palanski, 2012).

In light of the emerging research on forgiveness in the work context, it is important to clarify how forgiveness is conceptualized in this dissertation. Although many definitions of forgiveness exist, the most widely accepted definition of interpersonal forgiveness is that it is a process of multiple motivational changes whereby one becomes less motivated to retaliate against an offender, less motivated to keep distance from an offender, and more motivated to act in ways that benefit an offender (Forster et al., 2020; McCullough et al., 1997). This means that when an employee forgives an offending colleague, his or her feelings, thoughts, and behavioral responses toward the offending colleague become less negative and more positive (McCullough et al., 2000). The clarification of this definition across a range of disciplines implies that forgiveness is a basic social and psychological phenomenon with applications to many different forms of social relations (Tsarenko & Tojib, 2011). In line with this definition, this dissertation conceptualizes forgiveness in work relationships as an *intrapersonal* motivational change taking place in an *interpersonal* work context.

The above-mentioned definition of forgiveness also indicates that forgiveness is different from denying (i.e., avoiding facing pain of an injury), condoning (i.e., no longer viewing an act as wrong), overlooking (i.e., choosing to ignore an offense) or forgetting (i.e., passively removing an offense from consciousness) (Bies et al., 2016). Victims who forgive recognize that an offense has occurred and that it was wrong (McCullough et al., 2000). It should also be clarified that forgiveness is not the same as reconciliation, which reflects a behavioral expression of forgiveness defined as “an effort by the victim to extend acts of goodwill toward the offender in the hope of

restoring the relationship” (Aquino et al., 2006, p. 654). Moreover, some recent research suggests that forgiveness can also emerge at higher levels. For example, forgiveness at the organizational level, in so-called “forgiving organizations” or in organizations with a high “forgiveness climate” (Bright & Exline, 2012; Fehr & Gelfand, 2012). Importantly, our main focus in this dissertation is on individual-level (i.e., intrapersonal) forgiveness.

Finally, forgiveness can be seen as a trait or a state. Trait forgiveness (also known as “dispositional forgiveness” and “forgivingness”) is seen as a person’s stable, general disposition or tendency to forgive interpersonal transgressions over time and across situations (Brown, 2003). State forgiveness (also known as “offense-specific forgiveness”, “episodic forgiveness,” and “situational forgiveness”) is an episodic state that occurs in response to a specific offense (Eaton et al., 2006). In this dissertation, we consider both trait and state forgiveness.

Why study forgiveness in work relationships?

Scientific research on forgiveness in work relationships is still in its infancy. Yet, there are at least two reasons why it is important to examine this topic further. First, because forgiveness is a promising beneficial strategy to deal with interpersonal offenses taking place at work (Bobocel, 2013). It reduces negativity that accompanies workplace conflicts and facilitates positivity. To illustrate, when employees are offended their initial and impulsive response is often to respond with aggression and retaliation (Andersson & Pearson, 1999; Baillien et al., 2016; Greco et al., 2019). For example, when an employee takes the credit for an idea of a coworker, the latter may respond by bad-mouthing (i.e., “making the offense public”) about the first to others (Tripp & Bies, 2009). More generally, employees often reciprocate an offender by engaging in a similar type and intensity of aggression (i.e., “an eye for an eye”; Gouldner, 1960; Lyons & Scott, 2012).

Importantly, taking revenge may be functional as it both restores a moral balance by teaching the offender a lesson (McCullough et al., 2001) and provides an immediate sense of reward (e.g., Singer et al., 2006), at least in the short-term (Carlsmith et al., 2008). However, responding with revenge to hurtful offenses is problematic in the long run, as it often results in negative outcomes for individuals, relationships, and even organizations (e.g., Baillien et al., 2016; Bradfield & Aquino, 1999; Greco et al., 2019). For example, when employees keep lingering on a past offense and cannot get rid of their hurtful feelings, this may have a negative impact on themselves as well as the relationship with the offender (e.g., Carlsmith et al., 2008). Indeed, research shows that aggression in the workplace is associated with fewer stable work relationships, as reflected in reduced interpersonal support, relational trust, and work relationship satisfaction (Han et al., 2022). Moreover, revenge can lead to a negative spiral of destructive interactions. In line with this, revengeful responses have been associated with lower productivity and performance in the workplace, and also unexpected absenteeism, and turnover (Greenberg & Barling, 1999; Herscovis et al., 2007; O’Leary-Kelly et al., 1996). If not addressed promptly and effectively, these negative responses may even spiral into more systematic maltreatment, such as workplace bullying (Baillien et al., 2016). Thus, when an employee wants to maintain the work relationship despite the other person’s hurtful act, at some point the employee should forgive; negative emotions and motivations should be reduced and transformed into more positive emotions and motivations toward the offending coworker.

Secondly, although research on forgiveness in the workplace is scarce, many studies of forgiveness in close relationships (i.e., friendships, romantic relationships, and family relationships, e.g., Fincham et al., 2004; McCullough et al., 1997) provide good evidence for the potential importance of forgiveness in work relationships. Specifically, previous research in close

relationships convincingly shows that forgiveness is associated with enhanced intra-personal well-being, such as enhanced psychological and physical well-being (Bono et al., 2008; McCullough, 2001; Seawell et al., 2014), as well as relational well-being, such as enhanced relationship satisfaction, commitment, and relationship stability (Braithwaite et al., 2011; Paleari et al., 2005; Tsang et al., 2006). For example, Bono et al. (2008) found that forgiveness was causally related to more positive mood, fewer negative mood, and fewer physical symptoms. Similarly, not being able to forgive an offending other was associated with declines in physical health three years later (Seawell et al., 2014)). Together, these findings demonstrate that forgiveness can have a host of beneficial outcomes. However, despite these potential benefits in people's working life, little is known about forgiveness in work relationships.

Importantly, given that most existing research on forgiveness has been done in close relationships, such as romantic relationships (e.g., Kato, 2016; McCullough et al., 1998), friendships (e.g., Gabriels & Strelan, 2018; Van der Wal et al., 2016), and family relationships (e.g., Fincham et al., 2004; Hoyt et al., 2005; Paleari et al., 2005), the question is whether these findings generalize to work relationships as well. Put differently, work relationships differ from close relationships in various ways. First, work relationships are often characterized by differences in power and status, with a great deal of power resting with managers who have supervisory responsibility over other employees (Farmer & Aguinis, 2005; Grover et al., 2019). Second, in work relationships individuals often work with others by assignment rather than by choice; so, if an employee is harmed by a coworker or a supervisor, he or she often must continue interacting with the offender as a requirement of the job (Aquino et al., 2003). Thus, repairing damaged workplace relationships may be even more essential in the workplace. Third, some argue that work relationships are more exchange-based relationships (i.e., members benefit each other to incur or

repay obligation, *quid pro quo*) whereas close relationships are more communal-based relationships (i.e., basis of benefit is concern for the other's welfare) (M. S. Clark & Mills, 1979). This latter distinction is a bit problematic, since many colleagues often have friendships in the workplace, which are communal-based relationships. Nevertheless, to what extent forgiveness in work relationships works differently from forgiveness in other types of relationships is an important topic to study and is also considered in this dissertation. That is, in setting up our research questions and hypotheses we draw upon existing literature on forgiveness in close relationships, but also take into account the differences that may play a role, such as status differences and work relationship quality between victim and offender.

What is already known about forgiveness in work relationships?

Forgiveness in work relationships has received increasing attention in the past decade, both conceptually and empirically. These studies have approached the influential factors of forgiveness in the workplace from different angles, using different levels of analyses; intrapersonal, interpersonal, and intergroup/collective (e.g., Brady et al., 2022; Fehr & Gelfand, 2012; Palanski, 2012). Below we highlight several studies looking at correlates of forgiveness in work relationships at each level of analysis.

At the **intrapersonal level**, extant studies focused mostly on social cognitive determinants, such as rumination and empathy, attributions, and transgression severity. Consistent with research in close relationships (McCullough et al., 2007), rumination has been shown to be negatively associated with forgiveness in work relationships, such that repetitive thinking about hurtful offenses generally makes it harder to forgive an offending coworker (Boonyarit et al., 2013; Tarraf et al., 2019). Empathy, including both the cognitive (i.e., understanding others' internal states) and affective dimension (i.e., feeling congruent emotions with others) (e.g., Clark et al., 2019), has

also been positively associated with forgiveness in the workplace (Ran et al., 2021). Moreover, several studies revealed that attributions of blame play a crucial role, such that the more blame victims attributed to offenders, the less often they thought about forgiveness (e.g., Aquino et al., 2001; Bradfield & Aquino, 1999; Wang et al., 2018). When more positive attributions for an offender's behavior are made, the more likely it is that forgiveness takes place. Additionally, employees are less willing to forgive when they perceive the offense as severe (e.g., Beattie & Griffin, 2014; Stackhouse, 2019).

At the **interpersonal level**, research has focused on differences in terms of status and power and how these may affect forgiveness levels. As mentioned, power imbalance is distinctive for work relationships, implying that one's outcomes (e.g., those of the subordinate) often depend on the other (e.g., the supervisor). Studies taking power and hierarchical status into account revealed mixed findings; some studies found that individuals with more power (e.g., supervisors) were more easily forgiven when they mistreated others. This is often explained by the fact that the costs of retaliation toward high-status offenders is too high or unfeasible (Aquino et al., 2001; Epitropaki et al., 2020). However, other studies found that forgiveness was unrelated to hierarchical status (Zdaniuk & Bobocel, 2015). Moreover, consistent with research in close relationships demonstrating that closeness predicts higher levels of forgiveness, pre-transgression quality of a leader-follower relationship was also positively associated with forgiveness in work relationships (Radulovic et al., 2019).

At the **intergroup/collective level**, research has especially focused on factors that are unique to the workplace context, such as the role of organizational climate and the role of leaders. For example, forgiveness climate, defined as a "shared perception that empathic, benevolent responses to conflict from victims and offenders are rewarded, supported, and expected in the

organization” (Fehr & Gelfand, 2012, p. 665), has been shown to be positively associated with employees’ willingness to forgive (Cox, 2011). Additionally, justice climate perceptions shape employees’ reactions to unfair events, thereby facilitating forgiveness among employees (Bobocel, 2013). Aquino et al. (2001, 2006) also showed that procedural justice climate in the organization positively influences individuals’ forgiveness. Leadership is another important factor that is associated with forgiveness. Zdaniuk and Bobocel (2015) revealed that idealized influence (a dimension of transformational leadership), rather than transactional leadership, facilitated forgiveness among employees (see also Kim et al., 2018).

In sum, research on forgiveness in work relationships is rapidly evolving at different levels. These findings provide important insights into the possible causes and consequences of forgiveness in work relationships. Yet, what is still not available is *direct* evidence on whether employees’ forgiveness benefits various work outcomes (e.g., higher job satisfaction and work engagement, less burnout symptoms, et cetera). Moreover, although defined as a process, extant research on forgiveness in work relationships overwhelmingly relies on cross-sectional or experimental/scenario study designs, leaving a misalignment between the conceptualization and the operationalization of forgiveness (Brady et al., 2022). Specifically, how forgiveness in work relationships unfolds over time has yet to be studied. Additionally, although organizational factors are critical for understanding forgiveness in organizational settings, it remains unknown what and how these organizational factors influence forgiveness (Brady et al., 2022). These gaps in the literature provide exciting opportunities and inspired us to examine forgiveness in work relationships more thoroughly.

Overview of the Present Dissertation

The present dissertation seeks to increase our understanding of the causes and consequences of forgiveness in work relationships. Specifically, in the next four chapters we present empirical studies with different methodologies and various samples (as summarized in Table 1). In the final chapter, we discuss the main findings of the earlier chapters and the contributions of this dissertation to the field of forgiveness both theoretically and practically, as well as proposing ideas for future research on forgiveness in work relationships. The present dissertation is built around three central research questions: (1) Is forgiveness in work relationships associated with better work outcomes? (2) How does forgiveness develop in work relationships? And (3) What factors are associated with /predictive forgiveness in work relationships?

Table 1

Overview of the empirical chapters

Research Questions	Chapter	Research design/ Method of Analysis	Samples
Is forgiveness in work relationships associated with better work outcomes?	2	Cross-sectional study	Study 1: $N = 472$ MTurk participants Study 2: $N = 216$ Dutch working employees Study 3: $N = 370$ Prolific participants
	3	Longitudinal study (cross-lagged panel model)	$N = 139$ Chinese working employees
How does forgiveness develop in work relationships?	4	Longitudinal study (latent growth curve model)	$N = 139$ Chinese working employees
What factors determine forgiveness in work relationships?	5	Study 1: Cross-sectional study Study 2: Scenario-based experiment Study 3: Multi-level study	Study 1: $N = 478$ Chinese working employees Study 2: $N = 237$ Chinese working employees Study 3: $N = 186$ Chinese working employees nested in 37 teams

Research question 1: Is forgiveness in work relationships associated with better work outcomes? Although in the social sciences it has widely been recognized that forgiveness can be beneficial, the consequences of forgiveness in work relationships have as yet not received systematic attention. Therefore, in **Chapter 2** we focus on whether and when employees' forgiveness is associated with better work outcomes. In order to address this research question as fully as possible, we take into account both trait and state forgiveness and use various samples of

working employees. Further, relying on principles of Interdependence Theory (Kelley & Thibaut, 1978; Rusbult & Van Lange, 1996), we examine the moderating role of work relationship quality: we expect that forgiveness is associated with better work outcomes when an employee experiences high work relationship quality with the offender, whereas this association is less pronounced or absent when an employee experiences low work relationship quality with the offender.

Chapter 2 adopts a cross-sectional design, leaving the question unaddressed whether forgiveness facilitates better work outcomes and/or vice versa. Therefore, in **Chapter 3** we explore the causal relationships between forgiveness and work outcomes using four-wave cross-lagged panel models (CLPM). Based on longitudinal data from 139 Chinese employees we examine whether forgiving an offending coworker with whom one has a relatively good work relationship predicts better work outcomes (i.e., higher job satisfaction, higher work engagement, and lower burnout) over time, while controlling for perceived severity of the offense. The reverse effect (with work outcomes predicting forgiveness) is also examined.

Research question 2: How does forgiveness develop in work relationships? After exploring the consequences of employees' forgiveness in Chapters 2 and 3, we start exploring the development of forgiveness in work relationships in **Chapter 4**. In Chapter 4, we use latent growth curve models (LGCM) to examine whether and how forgiveness changes over time in response to work conflicts.

Research question 3: What factors determine forgiveness in work relationships? In **Chapter 4**, we also examine the role of organizational factors (i.e., forgiveness climate, social cohesion, Team-member exchange and transformational leadership) in influencing the changes of forgiveness over time. In **Chapter 5**, we turn to the specific role of leaders. Although leadership has been frequently related to individual behaviors such as workplace aggression (Cao et al., 2022)

Chapter 1

and prosocial reactions (e.g., Owens et al., 2019), the association between leader's forgiveness and employee's forgiveness remains unknown. In Chapter 5, we explore whether and how leader's forgiveness is associated with subordinates' willingness to forgive offending coworkers.

Finally, in **Chapter 6** we summarize the overall findings of the studies presented in Chapters 2-5 and discuss how our studies advance the current literature of forgiveness in work relationships both theoretically and practically. Limitations and directions for future research are also discussed in this chapter.

Summarizing, in the next four chapters, a series of studies is presented that examine the causes and consequences of forgiveness in work relationships. It should be noted that these four chapters have previously been submitted to (and published in) scientific journals. Hence, each chapter can be read independently of the other chapters, and the reader may encounter similarities among the introductions of the different empirical chapters.

Chapter 2

When work relationships matter: Interpersonal forgiveness and work outcomes

This chapter is based on: Cao, W., van der Wal, R. C., & Taris, T. W. (2021). When work relationships matter: Interpersonal forgiveness and work outcomes. *International Journal of Stress Management*, 28(4), 266–282.

Author contributions: Wenrui Cao (Conceptualization; Methodology; Software; Data curation; Formal analysis; Investigation; Visualization; Writing-original draft); Reine C. van der Wal (Conceptualization; Supervision; Validation; Writing-review & editing; Project administration); Toon W. Taris (Conceptualization; Supervision; Validation; Writing-review & editing).

Abstract

Although the topic of forgiveness has received abundant attention in research on close relationships, little is known about the benefits of forgiveness in work relationships. This is unfortunate because research suggests that forgiveness is associated with numerous beneficial outcomes, such as improved social relationships and psychological well-being. The present research addresses the question whether and when forgiveness is associated with enhanced work outcomes. It was expected that forgiveness is associated with better work outcomes, especially when perceived work relationship quality between victim and offender is strong rather than weak. Study 1 ($N = 472$ MTurk participants) revealed that trait forgiveness was strongly associated with a broad range of work outcomes. Study 2 ($N = 216$ Dutch working employees) showed that state forgiveness was negatively associated with burnout. Study 3 ($N = 370$ Prolific participants) replicated the positive association between forgiveness (both trait and state) and work outcomes (especially well-being-related work outcomes, i.e., job satisfaction, work engagement and less burnout). Moreover, the associations between state forgiveness and work outcomes were stronger when the quality of work relationships (i.e., exchange quality) was high rather than low. Furthermore, only in cases of high exchange quality, the positive association between trait forgiveness and work outcomes could be explained by higher levels of state forgiveness. These findings suggest that levels of work relationship quality are of great importance to better understand forgiveness in the work context. Implications of these findings for the role of interpersonal forgiveness in the work context are discussed.

Keywords: forgiveness; work; well-being; performance; interpersonal relationships

Introduction

Organizations are not only a place where employees earn money by fulfilling their job. Equally important is the fact that a place of work provides employees with opportunities to engage in social and meaningful interactions with others (Peeters et al., 2014, for an overview). Such interactions often yield desirable outcomes, such as companionship, security, and social support, and are therefore perceived as key elements for the well-functioning of both employees and the organization (e.g., Carmeli et al., 2009). At the same time, it is inevitable for conflicts to arise when the personalities, interests and/or agendas of individual workers, departments or teams within the organization diverge (e.g., Schieman & Reid, 2008). This is in sharp contrast with the notion that social interactions are essential ingredients of a happy and healthy working life. One of the challenges in employees' lives therefore is how they continue to be happy, engaged, and satisfied with their work, in the face of such conflicts (cf. Fincham, 2000).

So far, most attention in organizational psychology has been paid to negative responses to interpersonal conflict at work (e.g., revenge, avoidance). Such studies suggest that initial impulsive responses to retaliate and take revenge likely result in negative outcomes for individuals, relationships, and even organizations (e.g., Bradfield & Aquino, 1999; Greco et al., 2019; Thau & Mitchell, 2010). Without undervaluing the importance of knowing how employees should *not* respond to interpersonal conflicts at work, it is not helpful in addressing the question how employee *should* respond. Inspired by developments in positive psychology (Sheldon & King, 2001), in the past decade researchers started to explore the topic of forgiveness as a way to constructively manage interpersonal conflict at work (see Aquino et al., 2001, 2006; Palanski, 2012). Forgiveness can be defined as prosocial change of motivation toward an offender, despite the hurt that was done (McCullough et al., 1998). Responding in a forgiving manner is generally

Chapter 2

associated with higher relationship satisfaction and stability (e.g. Allemand et al., 2007; Paleari et al., 2005), increased psychological well-being, and even improved physical health (e.g., Green et al., 2012; Karremans et al., 2003; Thompson et al., 2005) (although with some boundaries; Luchies et al., 2010; McNulty, 2011). Thus, forgiveness can be constructive and may have many beneficial outcomes.

However, most of the research on forgiveness is based on studies in close relationships (i.e., romantic relationships, and (childhood) friendships; e.g., Fincham et al., 2004; Hoyt et al., 2005). Given the many potential benefits of forgiveness for both relationships and personal well-being, it is surprising that the topic has received little attention in work relationships (for exceptions, see Cox, 2011; Radulovic et al., 2019; Stackhouse, 2019). Although close relationships may differ from work relationships in terms of their communal versus exchange orientation (Day & Leiter, 2014; Sias, 2005), the processes and outcomes of forgiveness is likely to be similar across relationships (Green et al., 2020). That is, and in line with its conceptual definition, when an employee forgives it means that the employee needs to regulate negative feelings, thoughts, and behaviors he or she may have toward an offender, and transform them into more positive feelings, thoughts, and behaviors. Through forgiveness, employees are able to get rid of negativity following from an offense, and to restore and re-establish those relationships that are so crucial for their satisfaction and engagement at work (e.g., Banks et al., 2014; Schermuly & Meyer, 2016).

The major purpose of the present research therefore is to examine whether and when employees' forgiveness is associated with better work outcomes. In doing so, we rely on principles of interdependence theory (Kelley & Thibaut, 1978; Rusbult & Van Lange, 1996), and predict that forgiveness is associated with better work outcomes when an employee experiences high work relationship quality with the offender, whereas this association is less pronounced or absent when

an employee experiences low relationship quality with the offender.

Forgiveness as a transformation of motivation

Using principles of interdependence theory (Kelley & Thibaut, 1978; for a review, see Rusbult & Van Lange, 1996) and consistent with previous research (Braithwaite et al., 2011; Karremans & Van Lange, 2004), forgiveness can be conceptualized in terms of transformation of motivation (Karremans & Van Lange, 2004). This means that acting in a forgiving manner is a process that requires people to inhibit their initial self-directed impulses, and to respond on the basis of broader considerations, such as the value of the relationship, or one's own well-being (McCullough et al., 1997). In support of this, McCullough et al. (1997) define forgiveness as “a set of motivational changes whereby one becomes decreasingly motivated to retaliate against an offending relationship partner, decreasingly motivated to maintain estrangement from the offender, and increasingly motivated by conciliation and goodwill for the offender, despite the offender's hurtful actions” (McCullough et al., 1997; p. 321-322). Importantly, it should be clear that forgiveness does not simply entail the absence of negative motivations (i.e. avoidance and revenge), but also includes the presence of benevolent motivations, after the offense occurred (Fincham & Beach, 2002; Karremans & Van Lange, 2004; McCullough & Hoyt, 2002). Thus, forgiveness is conceptualized as an intrapersonal motivational change taking place in an interpersonal context.

Furthermore, forgiveness can be seen as a trait and a state (Allemand et al., 2007; Bies et al., 2016; Fernández-capo et al., 2017). Trait forgiveness (also known as “dispositional forgiveness”, and “forgivingness”) is seen as a person's stable, general disposition or tendency to forgive interpersonal transgressions over time and across situations (Brown, 2003). State forgiveness (also known as “offense-specific forgiveness”, “episodic forgiveness”, and

“situational forgiveness”) is an episodic state that occurs in response to a specific offense (Eaton et al., 2006).

Notably, research on trait forgiveness versus state forgiveness has proceeded largely independently, in spite of the fact that they are conceptually related (Allemand et al., 2007). A small but growing number of studies have focused on the relationship between trait forgiveness and state forgiveness. By synthesizing results across 30 studies, Fehr et al., (2010) revealed a positive moderate correlation between trait forgiveness and state forgiveness. Moreover, Stackhouse (2019) revealed that trait forgiveness is a strong predictor of state forgiveness, which is consistent with the argument that trait forgiveness might be a prerequisite for state forgiveness to take place. In the present research, we take into account both trait and state forgiveness in order to be as complete as possible in addressing the basic questions whether and when forgiveness is associated with work outcomes.

Forgiveness and work outcomes

According to the above-mentioned conceptualization of forgiveness as a transformation of motivation, forgiveness reduces negative responses following a conflict, and it increases positive, pro-relationship responses (Fincham, 2000). Based on this, we reasoned that forgiveness might be associated with better work outcomes through on the one hand reducing the negativity accompanied by workplace conflicts, and on the other hand restoring crucial work relationships.

First, facing conflicts at work tends to increase job stress (Cortina, 2008), and negatively affects employees' psychological and even physical health (e.g., Meier et al., 2013). It is well-documented that forgiveness is associated with reduced stress, decreased relationship tension, better psychological well-being and even enhanced physical health (e.g., Karremans et al., 2003; Lawler et al., 2003). Conversely, being unable to forgive an offending other is associated with

increased levels of negative affect, stress, and psychological tension (Cox, 2011; Karremans et al., 2003), which in turn increases the chance of developing a burnout (Maslach et al., 2001). Moreover, both trait and state forgiveness are negatively associated with employee's unproductivity, which is mediated by reducing stress related to workplace offenses (Toussaint et al., 2018). Thus, forgiveness may be associated with enhanced work outcomes because when an employee forgives, he or she is able to down-regulate negative feelings, thoughts, and behaviors that follow from the offense.

Secondly, forgiveness as a transformation of motivation also means an increase in benevolent motivations toward an offender. There is abundant evidence showing that forgiveness is an essential aspect of well-functioning and lasting social relationships (e.g., Karremans et al., 2003; McCullough et al., 1998). Relatedly, employees' willingness to forgive is associated with enhanced pro-relationship behavior, such as organizational citizenship behavior (OCB) (Cox, 2011) and interpersonal citizenship behavior (Thompson & Simkins, 2017). In turn, good work relationships are vital to the lives of employees and the effectiveness of the organization (e.g., Aquino et al., 2003; Chiaburu & Harrison, 2008). For instance, when employees are more satisfied with their coworkers, this positively affects their job and even life satisfaction (Simon et al., 2010). Additionally, being socially well-connected with coworkers is negatively associated with employees' intention to leave the organization (e.g., Regts & Molleman, 2013). In contrast, damaged work relationships and the resulting feelings of anger may interfere with individual and organizational performance (Dutton et al., 1997; Fitness, 2000). Thus, forgiveness may be associated with enhanced work outcomes because forgiveness rebuilds relationships that are vital to employees and organizations.

In sum, although initial evidence described above suggests that forgiveness and various

work outcomes may be positively associated, this notion has as yet not been tested systematically. To obtain a broad and varied impression of the associations between forgiveness and outcomes, we included six different work outcomes in this research; three outcomes related to employee well-being (job satisfaction, work engagement, and burnout), and two outcomes related to employee performance (in-role performance and OCB). In addition, we took into account turnover intention, as one of the factors directly affecting organizations. As mentioned above, we considered both trait and state levels of forgiveness. We predicted that:

H1: Trait forgiveness is positively associated with positive work outcomes (i.e., (a) job satisfaction; (b) work engagement; (c) in-role performance; and (d) OCB; and negatively associated with negative work outcomes: (i.e., (e) burnout and (f) turnover intention).

H2: State forgiveness is positively associated with positive work outcomes (i.e., (a) job satisfaction; (b) work engagement; (c) in-role performance; and (d) OCB); and negatively associated with negative work outcomes: (i.e., (e) burnout and (f) turnover intention).

Forgiveness and the relationship context

Forgiveness is not by definition associated with better work outcomes. Based on principles from interdependence theory, relationship-relevant features, such as perceived levels of closeness or commitment to the offender, are crucial in determining the degree to which a victim is inclined toward forgiveness as well as influencing the associations between state forgiveness and work outcomes. In line with this, numerous studies have demonstrated that people are more forgiving toward close others (such as friends or romantic partners), than toward distant others (e.g., Karremans & Aarts, 2007; McCullough et al., 1998). Such findings support the notion that forgiveness is an important mechanism by which people maintain good relationships with others, despite the inevitable offenses that occur among them.

How then does the relationship context affect the association between state forgiveness and work outcomes? Previous studies reveal that the benefits of forgiveness only appear in relationships one wishes to continue in the future (e.g., Van der Wal et al., 2016). Specifically, Karremans et al. (2003) demonstrated that forgiveness facilitated psychological well-being only when victims feel strongly committed to their offending others. Similarly, forgiveness in children is associated with better psychological well-being, but only when it concerned forgiveness toward a friend (Van der Wal et al., 2016). One way to explain these findings is that forgiving a close other helps to restore and maintain positive relationships; in turn, good and stable relationships are essential for individual well-being (Baumeister & Leary, 1995). Furthermore, not forgiving close others challenges the stability of the relationship and increases the uncertainty of the future of the relationship, which may cause psychological tension, thus negatively influencing a victim's well-being (e.g., Karremans et al., 2003; Van der Wal et al., 2016).

Taking these findings to the organizational context, this may imply that work relationship quality with an offending colleague may affect the association between forgiveness and work outcomes, such that forgiving a colleague with whom one tends to have a good work relationship (as opposed to a colleague with whom one is not so much involved) should be associated with better work outcomes. Therefore, the second aim of this paper is to examine whether work relationship quality affect the associations between forgiveness and work outcomes. Specifically, we predict that:

H3: The associations between state forgiveness and (a) job satisfaction; (b) work engagement; (c) in-role performance; (d) OCB; (e) burnout; and (f) turnover intention are moderated by work relationship quality: the associations are stronger when work relationship

quality between victim and offender is high (versus low).¹

Finally, we take into account the link between trait and state forgiveness in our model. It is likely that trait forgiveness predicts state forgiveness, which in turn affects work outcomes (cf. Stackhouse, 2019). Thus, we propose that the trait forgiveness-work outcomes association is mediated by state forgiveness, and the state forgiveness-work outcomes association is moderated by relationship quality between victim and offender. Taken them together, we predict that:

H4: State forgiveness mediates the association between trait forgiveness and (a) job satisfaction; (b) work engagement; (c) in-role performance; (d) OCB; (e) burnout; and (f) turnover intention.

H5: The associations between trait forgiveness and (a) job satisfaction; (b) work engagement; (c) in-role performance; (d) OCB; (e) burnout; and (f) turnover intention through state forgiveness, are stronger when work relationship quality between victim and offender is high (versus low).

Overview of the Present Research

We conducted three studies to address our research questions in various samples of working employees. The research model and hypotheses tested are presented in Figure 1. Specifically, in Study 1 we examined the association between trait forgiveness and five work outcomes (H1a, H1b, H1c, H1d, H1f) except for burnout (H1e). In Study 2, we examined the association between state forgiveness and burnout (H2e), as well as the moderating role of work relationship quality (indicated by relationship closeness) on the association between state forgiveness and work

¹ We did not consider the moderating role of work relationship quality on the association between trait forgiveness and work outcomes. Since trait forgiveness does not vary depending on the relationship context, the association between trait forgiveness and work outcomes is likely to remain stable.

outcomes (H3e). In Study 3 we examined the association between trait forgiveness (H1), state forgiveness (H2) and various work outcomes (a-f). This study again examined the moderating role of work relationship quality (indicated by (i) relationship closeness and (ii) exchange quality; H3a-f). Moreover, we examined the mediating effect of state forgiveness on associations between trait forgiveness and work outcomes (H4a-f). Finally, we examined the moderated mediation hypotheses (H5a-f). All materials and data can be viewed at the Open Science Framework: <https://osf.io/d9zxs>, and all studies were approved by the Ethics Committee of our institution (FETC19-004).

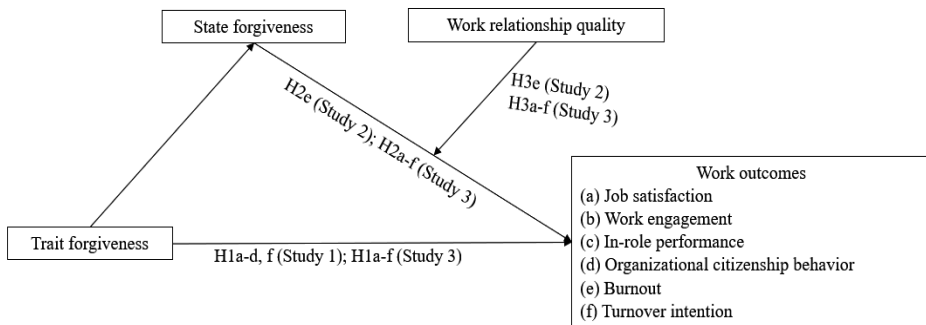


Figure 1. Research model

Study 1

As an initial starting point for our line of research on forgiveness in the workplace, in Study 1 we examined whether trait forgiveness is associated with better work outcomes (i.e., job satisfaction, work engagement, in-role performance, OCB and turnover intention; *Hypotheses 1a-d, f*; except for burnout).

Method

Participants

A convenience sample of 494 individuals participated through Amazon's Mechanical Turk (MTurk) in exchange for \$1.00. MTurk is an online survey program which enables researchers to efficiently obtain quality data from a diverse and representative sample (over 50 different countries and all 50 U.S. states) (Buhrmester et al., 2011). Twenty-two participants were excluded from further analysis because they failed an instructional manipulation check (Oppenheimer et al., 2009), or indicated that they actually worked less than 20 hours per week. The final sample consisted of 472 participants (206 females, 43.6%) between the ages of 19 and 71 years old ($M = 35$, $SD = 10.50$), who were mostly of white ethnicity ($n = 401$, 85%).² One participant had not completed high school; 45 others had completed high school; the remaining participants had attended (but not completed) college ($n = 156$), held a fully or partly completed bachelor's degree ($n = 202$), or held a higher degree (masters or PhD; $n = 68$). A third of the participants ($n = 158$) held a management position. The participants worked in various occupational sectors: accountancy/finance, $n = 48$; business/consulting, $n = 22$; engineering, $n = 26$; healthcare, $n = 39$; information technology, $n = 63$; retail, $n = 29$; sales, $n = 26$; education, $n = 35$; and other (e.g., energy, agriculture), $n = 184$. On average, participants worked about $M = 6.52$ years for the organization ($SD = 5.90$; ranging from 3 months to 40 years).

Procedure

The data were collected using Qualtrics software. After giving informed consent, participants were instructed that they would receive several questionnaires tapping into trait

² A post-hoc power analysis of Study 1 was conducted to ensure that sample size was adequate. Based on a sample size of 472, an effect size of 0.26 (the absolute average value for the results in Study 1), and an alpha level of 0.05, revealed that post-hoc 99.99% power was achieved.

forgiveness and work outcomes. The study was part of a larger project in which we also collected data on bullying, conflict type, forgiveness motivation, and procedural justice. Items within scales were presented randomly. Participants were allowed to quit the survey at any point, but could not return to previous screens to change earlier responses. After completing the survey, participants were provided with opportunities to write comments and the author's contact information was provided for questions (if any). Moreover, they were thoroughly thanked and debriefed in written information at the end of the survey, by reading the rationale and purpose of this study.

Measures

Trait forgiveness. The Tendency to Forgive scale (TTF; Brown, 2003) was used to measure participants' trait forgiveness. Participants were asked to rate their agreement with four statements ranging from 1 = strongly disagree to 7 = strongly agree. An example item is "I tend to get over it quickly when someone hurts my feelings".

Job satisfaction. Job satisfaction was measured using a three-item subscale of the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979). An example item is "Usually, I really enjoy my work" (1 = totally disagree, 5 = totally agree).

Work engagement. The short version of the Utrecht Work Engagement Scale (UWES-short; Schaufeli et al., 2006) was used to assess the two core dimensions of work engagement, namely Vigor (3 items; e.g., "When I get up in the morning, I feel like going to work") and Dedication (3 items; e.g., "I am enthusiastic about my job"). Response alternatives were given on a scale from 0 = never to 6 = always/every day.

In-role performance. To measure participants' in-role performance, participants received four statements, including "I complete my work by the time specified" (Bartram & Casimir, 2007) (0 = strongly disagree, 4 = strongly agree).

Organizational citizenship behavior (OCB). We assessed OCB with Smith et al., (1983) 16-item scale. It consists of two subscales: Altruism (7 items, e.g., “I help others who have heavy workloads”) and Generalized Compliance (9 items, e.g., “I do not take extra breaks”) (1 = not at all, 5 = very much). Consistent with Organ and Konovsky (1989), three reversed-scored items were excluded from the analysis.

Turn-over intention. Participants’ turn-over intention was measured using three items (Mitchell et al., 2001). An example item is “Do you intend to leave the organization in the next 12 months?” (1 = not at all, 5 = to a great extent).

Data Analysis Strategy

Structural equation modeling (SEM) with latent variables was used in Mplus 8.3 (Muthén & Muthén, 2017). All models except for moderations (i.e., latent variable interactions) were evaluated using the chi-square test, the Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), The Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). As there is no consensus on cut-off values for adequate fit (e.g., Lance et al., 2006), conservative guidelines were followed with fit considered to be acceptable if TLI and CFI are .90 or higher, RMSEA is lower than .08, and SRMR is .08 or lower. The latent variable interactions were examined using the latent moderated structural equations (LMS) method (A. Klein & Moosbrugger, 2000), which uses the XWITH command in Mplus syntax, together with the numerical integration technique (Sardeshmukh & Vandenberg, 2017). As the LMS method does not report any related fit statistics mentioned above, our analyses used the log-likelihood ratio test (i.e., -2LL) to determine significance of the latent variable interaction (Maslowsky et al., 2015).

To evaluate the convergent and discriminant validity of our measures, a measurement

model using confirmatory factor analysis (CFA) was examined. According to Fornell and Larcker (1981), convergent validity can be established when the factor loading from an item to its latent dimension (average variance extracted; AVE) is greater than 0.5. Cronbach's alpha and construct reliability (also called composite reliability, CR) was examined to evaluate internal consistency. Values for Cronbach's alpha and composite reliability that exceed 0.70 provide evidence of adequate reliability.

As with all self-report data, there is the potential for the occurrence of common method variance. Thus, two tests were conducted to determine the extent of method variance in the current data. First, a Harman one-factor test was conducted (Podsakoff et al., 2003), with all items from all constructs loading on a single factor to check whether one factor emerges or whether this single general factor accounts for a major part of the covariance among the measures (with a commonly accepted threshold of 50%). Second, a single-common-method-factor approach (Podsakoff et al., 2003) was conducted as an additional way to examine the presence of common method bias in this study, by adding a common method factor with all items loading on this factor in the analysis to check whether model fit improved significantly.

Results

We first conducted confirmatory factor analysis to test the construct validity of the studied variables. The results indicated that the 6-factor model (trait forgiveness, job satisfaction, work engagement, in-role performance and turnover intention) provided good model fit ($\chi^2 = 1291.74$, $df = 478$; TLI = .92; CFI = .92; RMSEA = .06; SRMR = .06). Then the composite reliability (CR) and average variance extracted (AVE) were evaluated, focusing on the standardized factor loadings. As Table 1 shows, all CRs were greater than 0.70 and all AVEs exceeded 0.50, except for OCB (AVE = 0.42). Fornell and Larcker (1981) state that if AVE is lower than 0.5 but the

composite reliability is higher than 0.6, the convergent validity of the construct is still adequate, thus the 6- factor structure was retained. Further, Table 1 shows that higher levels of trait forgiveness were associated with more positive work outcomes, e.g., higher levels of job satisfaction ($r = .27, p < .01$), work engagement ($r = .28, p < .01$), in-role performance ($r = .23, p < .01$), and OCB ($r = .32, p < .01$), and lower levels of turnover intention ($r = -.21, p < .01$).

Table 1

Descriptive Statistics and Correlations for Main Study Variables (Study 1)

Variable	1	2	3	4	5	6
1. Trait forgiveness	(.84)					
2. Job satisfaction	.27**	(.94)				
3. Work engagement	.28**	.83**	(.95)			
4. In-role performance	.23**	.29**	.30**	(.81)		
5. OCB	.30**	.40**	.41**	.54**	(.83)	
6. Turnover intention	-.21**	-.65**	-.57**	-.20**	-.26**	(.96)
CR	.84	.94	.95	.82	.90	.96
AVE	.57	.85	.78	.53	.42	.90
<i>M</i>	4.40	3.67	4.99	4.48	3.79	2.28
<i>SD</i>	1.42	1.05	1.55	0.57	0.62	1.36

Note. $N = 472$; alphas are reported on the diagonal. OCB = Organizational citizenship behavior; CR = composite reliability; AVE = average variance extracted.

** $p < .01$ (two-tailed).

To examine the common method variance issue, we first conducted Harman's one-factor test. The results showed that 28.45% (<50%) of the total variance was accounted for by this factor, indicating that common method bias was not a major concern in this study. To confirm these results, additional analyses were performed by adding a single-common-method-factor to the 6-factor model tested earlier on. This showed that model fit improved significantly, $\Delta\chi^2 (df = 1) = 6.07$, suggesting that common method variance could affect the results of further analyses.

SEM was used to test the study hypotheses. On the basis of the findings reported earlier

on, a common method factor with all items loading on this factor was included in our analyses to reduce concerns about common method variance (Podsakoff et al., 2003). Results showed that trait forgiveness was positively related to job satisfaction ($\beta = .27, SE = .05, p < .01$; *Hypothesis 1a*), work engagement ($\beta = .29, SE = .05, p < .01$; *Hypothesis 1b*), in-role performance ($\beta = .25, SE = .06, p < .01$; *Hypothesis 1c*), and OCB ($\beta = .42, SE = .07, p < .01$; *Hypothesis 1d*); and negatively related to turnover intention ($\beta = -.27, SE = .05, p < .01$; *Hypothesis 1f*). These results did not change substantially after excluding this common method factor. In sum, all hypotheses were supported for Study 1, and these results provide initial support for our reasoning that forgiveness is associated with better work outcomes.

Study 2

Study 2 extends the findings of Study 1 in two important aspects. That is, while in Study 1 we focused on the relationship between *trait* forgiveness and work outcomes, in Study 2 we examined the association between *state* forgiveness and work outcomes, and in particular burnout. We expected that state forgiveness is negatively associated with burnout (H2e). Moreover, we tested whether work relationship quality between victim and offender affected the negative association between state forgiveness and burnout, such that the association would be more pronounced when work relationship quality (indicated by levels of perceived relationship closeness) between victim and offender is high rather than low (Hypothesis 3e). We controlled for perceived severity of the incident, how long ago the incident took place, and whether the offender was the victim's supervisor, as these factors have been shown to influence state levels of forgiveness (Aquino et al., 2006; Fincham et al., 2005; Tsang et al., 2006).

Method

Participants

A total of 228 Dutch workers were recruited in Study 2 using a snowballing technique. Assuming an alpha level of 0.05 and 80% power, at least 90 participants were required to detect a medium effect size of $r = .26$ for the association between forgiveness and burnout (based on Study 1). As we also aimed to explore the interaction effect of relationship closeness and state forgiveness, we transferred $r = .26$ into $f = .27$ (Lenhard & Lenhard, 2016), thus to detect an effect size of $f^2 = .07$ with an alpha level of 0.05 and 80% power, at least 155 participants were required. We therefore decided to combine the data of two existing cohorts (Cohort 1 collected in 2017, $n = 115$; and Cohort 2 collected in 2019, $n = 113$). Ten participants were excluded from further analysis because they were younger than 18 years old or actually worked less than 20 hours per week, and two participants were excluded because they worked more than an obviously impossible 300 hours per week. Independent sample t-tests revealed no differences on state forgiveness and burnout between the two cohorts. In the total sample ($N = 216$), 139 were female (64.4%). The age of the employees ranged from 18 to 65 years ($M = 38$, $SD = 13.05$). Seventeen participants (7.9%) had completed high school; the remaining participants had completed secondary vocational education ($n = 12$, 5.6%), higher professional education ($n = 64$, 29.6%), or had completed college ($n = 122$, 56.5%) or other ($n = 1$, 0.5%). More than half of the participants held a temporary contract ($n = 130$, 60.2%). The average number of working years in their current positions was 5.96 years ($SD = 8.25$).

Procedure

Data were collected using Qualtrics software. After giving informed consent, participants were instructed to answer several questionnaires relating to state forgiveness and burnout, and the

items within scales were presented randomly. This study was part of a larger project in which we also collected data on rumination, justice climate, and social cohesion. A recall method was used, asking participants to recall and describe an incident in which they felt hurt by a coworker or supervisor (e.g., Van der Wal et al., 2014)). An example of a description provided by a participant was, “My colleagues excluded me from joint meals”. Participants then received several questions about the incident. Next, state forgiveness and burnout were measured. Participants were allowed to quit the survey at any point, but could not return to previous screens to change earlier responses. After completing the survey, participants were provided with opportunities to write comments and the author’s contact information was provided for questions (if any). Moreover, they were thoroughly thanked and debriefed in written information at the end of the survey, by reading the rationale and purpose of this study.

Measures

Incident-related questions. After recalling the incident, participants were asked to indicate (1) relationship closeness; a single-item measure was selected in line with previous research (cf. Brown & Phillips, 2005; Strelan et al., 2013; Van der Wal et al., 2014), specifically, “how good was the relationship with the person who hurt you at the moment of the incident”, on a scale from 1 (not good at all) to 7 (very good); (2) perceived severity; how severe they thought the incident was, using three items e.g., “The incident was severe”, from 1 (strongly disagree) to 7 (strongly agree) (Van der Wal et al., 2014); (3) time; “how long ago did the incident take place (in months)”; and (4) offender; whether it was their supervisor who had offended them (offended by supervisor; 44%).

State forgiveness. The Dutch version of the Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough et al., 1998) was used to measure state forgiveness.

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This 12 item-scale consists of 3 dimensions: benevolence toward the offender (e.g., “Despite the incident, I want to have a positive relationship”), revenge (e.g., “When I think about the incident, I wish that something bad would happen to him/her”) and avoidance (e.g., “When I think about the incident, I would rather avoid him/her”) , with answering categories ranging from 1 (strongly disagree) to 7 (strongly agree). After reversing the revenge and avoidance items, we used the average of all items as a measure of state forgiveness, such that a higher score indicated more state forgiveness.

Burnout. Burnout was assessed using the 5-item emotional exhaustion subscale of the Maslach Burnout Inventory-General Survey (Maslach et al., 1986). An example is “I feel used up at the end of the work day” (0 = never, 6 = always/every day).

Data Analysis Strategy

The data analysis strategy was consistent with Study 1.

Results

Firstly, confirmatory factor analysis was conducted to test the construct validity of the studied variables. The results indicated that the expected two-factor model (state forgiveness and burnout) had the best fit to the data ($\chi^2 = 152.32$, $df = 115$; TLI = .98; CFI = .98; RMSEA = .04; SRMR = .04). As all study variables were self-reported by the participants, the observed relationships could be biased by common method variance effects. Similar to Study 1, we tested common method bias in two ways: (1) Harman’s one-factor test showed that 34.24% (<50%) of the total variance was explained by this overall factor; (2) we then specified a second model in which all indicators loaded on a latent method factor, yielding a small and insignificant increase of fit, $\Delta\chi^2(df = 1) = 2.15$. This indicates that the model that included the common method factor did not significantly improve upon the model without this factor. Thus, common method variance

is unlikely to be of serious concern here.

Table 2 presents descriptive information for the study variables. The convergent validity and construct reliability were confirmed in Table 2 (Fornell & Larcker, 1981). In line with previous studies (Fehr et al., 2010; McCullough et al., 1998), state forgiveness was significantly positively associated with relationship closeness ($r = .35, p < .01$), and significantly negatively associated with perceived offense severity ($r = -.41, p < .01$) and time since the incident took place ($r = -.26, p < .01$), but not to whether the offender was one’s supervisor or not. Most importantly, higher levels of state forgiveness were associated with lower levels of burnout ($r = -.19, p < .01$).

Table 2

Descriptive Statistics and Correlations for Main Study Variables (Study 2)

Variable	1	2	3	4	5	6
1. Relationship closeness						
2. Severity	.09	(.88)				
3. Time	.02	.30**				
4. Offender	-.01	-.10	.10			
5. State forgiveness	.35**	-.41**	-.26**	-.01	(.90)	
6. Burnout	-.16*	.05	-.07	-.04	-.19**	(.91)
<i>CR</i>			.89		.87	.91
<i>AVE</i>			.73		.69	.66
<i>M</i>	4.61	4.24	5.40		4.89	3.14
<i>SD</i>	1.29	1.44	9.15		1.17	1.27

Note. $N = 216$; alphas are reported on the diagonal. Offender: Offended by supervisor = 1, offended by coworker = 2; CR = composite reliability; AVE = average variance extracted.

* $p < .05$. ** $p < .01$ (two-tailed).

Hypotheses testing. A latent moderated SEM analysis was run in Mplus 8.3 (Muthén & Muthén, 2017) in which burnout was regressed on the centered measure of state forgiveness, relationship closeness and the interaction between state forgiveness and relationship closeness,

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while controlling for perceived severity, time and being offended by supervisor or not. The analysis revealed that none of the three control variables displayed a significant effect on burnout. The main effect of state forgiveness on burnout was significant, $\beta = -.24$, $SE = .10$, $p < .05$, indicating that higher levels of state forgiveness were associated with lower levels of burnout, thus hypothesis 3e was supported. There was no significant effect of relationship closeness ($p = .473$), nor a significant interaction effect between state forgiveness and relationship closeness ($p = .361$) on burnout (hypothesis 5e not supported).

In sum, Study 2 revealed that state forgiveness is negatively associated with levels of burnout. Contrary to our expectation, this association did not depend on work relationship quality (as indicated by relationship closeness) between victim and offender.

Study 3

In Study 3, we sought to replicate and extend Studies 1 and 2 in several respects. First, we examined the relationship between forgiveness (both trait forgiveness and state forgiveness) and six separate work outcomes (H1a-f; H2a-f). Second, we again examined the moderating role of work relationship quality between state forgiveness and work outcomes, as indicated by relationship closeness. Yet, this time we additionally measured work relationship quality by means of exchange quality (Graen & Uhl-bien, 1995). One reason for the non-significant moderation effect of work relationship quality in Study 2, might be that relationship closeness is mostly an indicator of relationship quality of communal-based relationships (Clark & Mills, 1979). Yet, work relationships are often more exchange-based, and are usually defined in terms of mutual respect, trust, and obligation between a supervisor and a coworker (known as leader-member-exchange, Graen & Uhl-Bien, 1995), or between two coworkers (known as coworker exchange or member-member exchange, Sherony & Green, 2002). Thus, when addressing the role of work relationship

quality in the association between forgiveness and work outcomes, one should perhaps better look at perceived levels of exchange quality. We thus examined both moderating roles of relationship closeness and exchange quality as indicators of work relationship quality:

H3: The associations between state forgiveness and (a) job satisfaction; (b) work engagement; (c) in-role performance; (d) OCB; (e) burnout; and (f) turnover intention are moderated by work relationship quality (indicated by (i) relationship closeness; (ii) exchange quality): the associations are stronger when work relationship quality between victim and offender is high (versus low).

Furthermore, we examined the mediating role of state forgiveness on the association between trait forgiveness and work outcomes (H4a-f). Finally, we examined the moderated mediation hypothesis that the positive association between trait forgiveness and work outcomes via state forgiveness would be more pronounced for higher levels of work relationship quality (indicated by (i) relationship closeness; (ii) exchange quality). That is:

H5: The associations between trait forgiveness and (a) job satisfaction; (b) work engagement; (c) in-role performance; (d) OCB; (e) burnout; and (f) turnover intention through state forgiveness, are stronger when work relationship quality (indicated by (i) relationship closeness; (ii) exchange quality) between victim and offender is high (versus low).

Method

Participants

To detect associations between our variables at least 296 participants were required (based on an effect size of $f^2 = .04$ (cf. Study 2, by transforming $r = -.19$ into $f = -.19$), an alpha level of 0.05, and 80% power). For other purposes, we manipulated whether participants recalled a hurtful incident by their supervisor or coworker in this study, and controlled for this factor in our design.

Finally, 389 participants who actually worked at least 20 hours per week were recruited through Prolific Academic (an online platform for subject recruitment which explicitly caters to researchers; Palan & Schitter, 2018). Nineteen participants were excluded from further analyses because they indicated that they could not recall any hurtful incident. Analyses were conducted on the remaining 370 participants (186 female, 50.30%) working in various industries. Participants were on average 33 years old ($SD = 9.30$) and working 41.86 hours per week ($SD = 20.17$). Most participants held a college or higher degree ($n = 274$, 74.1%) and were of Caucasian/European descent ($n = 301$, 81.4%). When asked to indicate at which level they were working in the organization (1 = the lowest level, 10 = the highest level), 48.1% participants indicated to be working in a higher position (higher than 5) in the current organization. Participants received £2.26 for their participation.

Procedure

After giving informed consent, participants completed a survey consisting of several parts, which were presented to participants in random order and the items within their scales were also randomized. Part 1 consisted of incident-related questions: participants were asked to recall and describe a hurtful incident by their supervisor (offended-by-supervisor; $n = 185$) or coworker (offended-by-coworker; $n = 185$). The instructions were as follows: “*Imperfect interactions are part and parcel of our working life. Indeed, every now and then, it is inevitable that people feel offended or hurt in the workplace. For instance, you may have been excluded, gossiped about, or even bullied. Also other forms of undesirable social behavior, such as name-calling, false allegations, or work interferences often take place. Now, please think about the most recent incident by your supervisor (vs. coworker) - you felt, or still feel, hurt by him/her (with supervisor we mean your immediate supervisor, leader or manager who is responsible for your functioning*

in the workplace)". Examples of descriptions given by the participants were: "My supervisor accused me of doing something that was the duty of another employee." (offended-by-supervisor example) and "My coworker made a joke about something that I told him that made me feel sad" (offended-by-coworker example). Then participants received questions about the incident, after which state forgiveness and corresponding exchange quality were measured. Part 2 consisted of trait forgiveness. Part 3 consisted of work outcomes (job satisfaction, work engagement, burnout, in-role performance, OCB, and turnover intention). The study was part of a larger project in which we also collected data on leadership style, forgiveness motivation, and team-member exchange. Participants were allowed to quit the survey at any point, but could not return to previous screens to change earlier responses. After completing the survey, participants were provided with opportunities to write comments and the author's contact information was provided for questions (if any). Moreover, they were thoroughly thanked and debriefed in written information at the end of the survey, by reading the rationale and purpose of this study.

Measures

Trait forgiveness. We measured trait forgiveness using the same four-item TTF scale as in Study 1 (TTF; Brown, 2003).

Incident-related questions. After recalling and describing the incident, participants received a series of questions related to the incident as in Study 2. They were asked about (1) relationship closeness; to what extent did they like the supervisor/coworker before the incident (1 = not at all, 7 = very much); (2) perceived severity; how severe they thought the incident was (three items, e.g., "The incident was severe"; 1 = strongly disagree, 7 = strongly agree); and (3) time; how long ago did the incident take place (in months).

State forgiveness. We assessed state forgiveness using the same 12-item TRIM scale as in

Study 2 (TRIM; McCullough et al., 1998).

Exchange quality. Exchange quality specifically targeted the relationship between victim and offender (thus supervisor-coworker exchange when participants recalled a hurtful incident by a supervisor, and coworker-coworker exchange when participants recalled a hurtful incident by a coworker). Perceived exchange quality was measured with a modified version of Graen and Uhl-Bien's (1995) 7-item leader-member exchange questionnaire. A typical item is "My working relationship with my supervisor/coworker is effective" (1 = strongly disagree, 7 = strongly agree).

Work outcomes. Six work outcomes (i.e., (a) job satisfaction, (b) work engagement, (c) in-role performance, (d) OCB, (e) burnout, and (f) turnover intention) were assessed, using the same scales as in the first two studies.

Data Analysis Strategy

The data analysis strategy was consistent with Study 1 and Study 2.

Results

Before testing hypotheses, the factor structure of a theoretical nine-factor structure (trait forgiveness, state forgiveness, exchange quality, job satisfaction, work engagement, burnout, in-role performance, OCB and turnover) was examined using confirmatory factor analysis (CFA) within Mplus 8.3. Results of the proposed model demonstrate the best fit with the data ($\chi^2 = 2647.37$, $df = 1498$; TLI = .92; CFI = .91; RMSEA = .05; SRMR = .06), which was better than alternative models.

Table 3 reports descriptive statistics, correlations, Cronbach's alpha, AVE and CR, which confirmed the scale validity and reliability for all variables. Replicating the findings of Study 1, trait forgiveness was significantly positively correlated with job satisfaction ($r = .29$, $p < .01$), work engagement ($r = .26$, $p < .01$), and significantly negatively with burnout ($r = -.31$, $p < .01$).

However, this time trait forgiveness was unrelated to in-role performance, OCB or turnover intention ($ps > .05$). Similar to the results of Study 2, state forgiveness was significantly positively correlated with job satisfaction ($r = .31, p < .01$), work engagement ($r = .20, p < .01$), and significantly negatively with burnout ($r = -.27, p < .01$) and turnover intention ($r = -.19, p < .01$). State forgiveness was unrelated to in-role performance or OCB ($ps > .05$). Again, state forgiveness was significantly associated with incident-related factors, with relationship closeness: $r = .42, p < .01$, severity: $r = -.51, p < .01$, and time: $r = -.10, p < .05$. State forgiveness was unrelated to being offended-by-supervisor or offended-by-coworker ($p > .05$). Moreover, there was a positive association between trait forgiveness and state forgiveness, $r = .35, p < .01$.

Consistent with Study 1 and Study 2, we tested common method bias in two ways. First, Harman's one-factor test showed that 32.46% (<50%) of the total variance was explained by a single common factor. Second, adding a single-common-method-factor to the model did not improve model fit significantly, $\Delta\chi^2(df = 1) = 0.43, p > 0.05$. Thus, common method bias is unlikely to be a serious concern in this study.

Hypotheses testing. Firstly, we examined the main effects of *trait forgiveness* on six work outcomes (*Hypotheses 1a-f*) by regressing the six separate work outcome on trait forgiveness, using SEM in Mplus 8.3. Results revealed that trait forgiveness was significantly positively correlated with job satisfaction ($\beta = .36, p < .01$; *Hypotheses 1a* supported), work engagement ($\beta = .31, p < .01$; *Hypotheses 1b* supported), and significantly negatively with burnout ($\beta = -.34, p < .01$; *Hypotheses 1e* supported). Interestingly, trait forgiveness was unrelated to in-role performance, OCB, and turnover intention ($ps > .05$, *Hypotheses 11c-d, f* not supported).

Table 3
Descriptive Statistics and Correlations for Main Study Variables (Study 3)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Trait forgiveness	(.77)												
2. Relationship closeness	.03												
3. Severity	-.18**	-.09 (.79)											
4. Time	-.06	-.03	.17**										
5. Offender	.03	-.09	-.01	-.02									
6. Exchange quality	.22**	.49**	-.29**	-.10*	-.14*	(.92)							
7. State forgiveness	.35**	.42**	-.51**	-.10*	-.06	.65**	(.93)						
8. Job satisfaction	.29**	.26**	-.12*	-.14*	.03	.33**	.31**	(.92)					
9. Work engagement	.26**	.17**	.00	-.01	.01	.27**	.20**	.78**	(.92)				
10. Burnout	-.31**	-.15**	.14**	.07	-.13*	-.17**	-.27**	-.62**	-.60**	(.88)			
11. In-role performance	.08	.10	.14**	.07	.02	.02	-.00	.14**	.31**	-.15**	(.82)		
12. OCB	.08	.11*	.07	.08	.00	.10	.09	.26**	.41**	-.22**	.59**	(.76)	
13. Turnover intention	-.08	-.19**	.03	.05	-.03	-.22**	-.19**	-.62**	-.49**	.44**	-.10*	-.22**	(.97)
CR	.78					.92	.89	.92	.92	.89	.82	.60	.97
AVE	.47					.58	.73	.79	.67	.61	.54	.43	.91
M	3.73	4.82	4.35	7.82		4.16	4.63	4.88	3.32	2.84	5.78	5.06	3.70
SD	1.13	1.60	1.39	16.65		1.37	1.27	1.51	1.29	1.38	0.85	0.73	2.10

Note. $N = 370$; alphas are reported on the diagonal. Offender: Offended by supervisor = 1, offended by coworker = 2; OCB = Organizational citizenship behavior; CR = composite reliability; AVE = average variance extracted.
 * $p < .05$, ** $p < .01$ (two-tailed).

Then we tested the main effects of *state forgiveness* on six work outcomes (*Hypotheses 2a-f*). A regression analysis was run in which the six work outcomes were regressed on state forgiveness, controlling for perceived severity of the incident (severity), time since the incident took place (time), and whether the victim was offended by their supervisor or coworker (offender). The results suggested that state forgiveness was significantly positively correlated with job satisfaction ($\beta = .43, p < .01$; *Hypotheses 2a* supported), work engagement ($\beta = .36, p < .01$; *Hypotheses 2b* supported), and significantly negatively with burnout ($\beta = -.34, p < .01$; *Hypotheses 2e* supported) and turnover intention ($\beta = -.30, p < .01$; *Hypotheses 2f* supported). State forgiveness was unrelated to in-role performance and OCB ($ps > .05$). Thus, *Hypotheses 2c-d* were not supported.

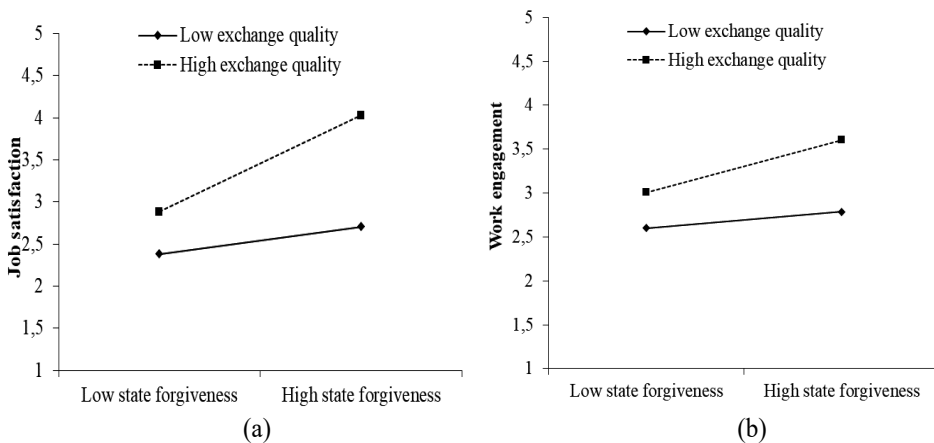
Moderation analyses. We then tested the moderating role of work relationship quality, measured by (i) relationship closeness and (ii) exchange quality; *Hypotheses 3a-f*. Latent moderated SEM analyses were run in which six work outcomes were regressed on the centered measures of state forgiveness, relationship closeness/exchange quality and the interaction between state forgiveness and relationship closeness/ exchange quality, controlling for perceived severity of the incident (severity), time since the incident took place (time), and whether the victim was offended by their supervisor or coworker (offender).

Table 4*Moderation path analyses (Study 3)*

Predictors	a) Job satisfaction			b) Work engagement			c) In-role performance		
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
Severity	.13	.07	.06	.19	.07	.01	.18	.08	.02
Time	-.11	.04	.01	-.01	.04	.81	.06	.04	.19
Offender	.08	.05	.11	.06	.05	.24	.04	.06	.49
State forgiveness	.26	.10	.01	.19	.10	.06	.03	.12	.79
Exchange quality	.27	.09	.00	.24	.08	.00	.07	.10	.43
State forgiveness \times Exchange quality	.12	.06	.03	.08	.06	.16	.11	.06	.06
	d) OCB			e) Burnout			f) Turnover intention		
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
Severity	.17	.11	.13	-.07	.08	.36	-.13	.07	.06
Time	.11	.05	.03	.08	.04	.04	.04	.04	.40
Offender	.04	.08	.59	-.14	.05	.01	-.08	.05	.13
State forgiveness	.15	.16	.32	-.37	.09	.00	-.16	.09	.08
Exchange quality	.12	.13	.36	.01	.09	.94	-.21	.08	.01
State forgiveness \times Exchange quality	.23	.09	.01	-.11	.06	.06	-.12	.05	.01

Note. OCB = Organizational citizenship behavior.

As in Study 2, when measured work relationship quality in term of relationship closeness, the interaction effects between work relationship quality and state forgiveness were not significant on work outcomes (i.e., (a) job satisfaction, (b) work engagement; (c) in-role performance; (e) burnout; (f) turnover intention), except for OCB ($\beta = -.20$, $SE = .07$, $p < .05$) after controlling for severity, time and offender. However, when measured in term of exchange quality, the interactions of state forgiveness and work relationship quality were significant for job satisfaction ($\beta = .12$, $SE = .06$, $p < .05$); OCB ($\beta = .23$, $SE = .09$, $p < .01$); and turnover intention ($\beta = -.12$, $SE = .05$, $p < .01$) (see Table 4). These interactions were marginally significant for burnout ($\beta = -.11$, $SE = .06$, $p = .06$) and in-role performance ($\beta = .11$, $SE = .06$, $p = .06$). However, this interaction effect was not significant for work engagement ($\beta = .08$, $SE = .06$, $p = .16$). Results of this proposed model provided significantly better fit to the null model, which did not contain the latent interaction effect ($\Delta-2LL(6) = 14.05$, $p < .05$). We plotted the significant moderation effects in Figure 2. These plots show that when exchange quality between the victim and offender is high, the positive effects of state forgiveness on job satisfaction, in-role performance, OCB and the negative effects on burnout and turnover intention were stronger.



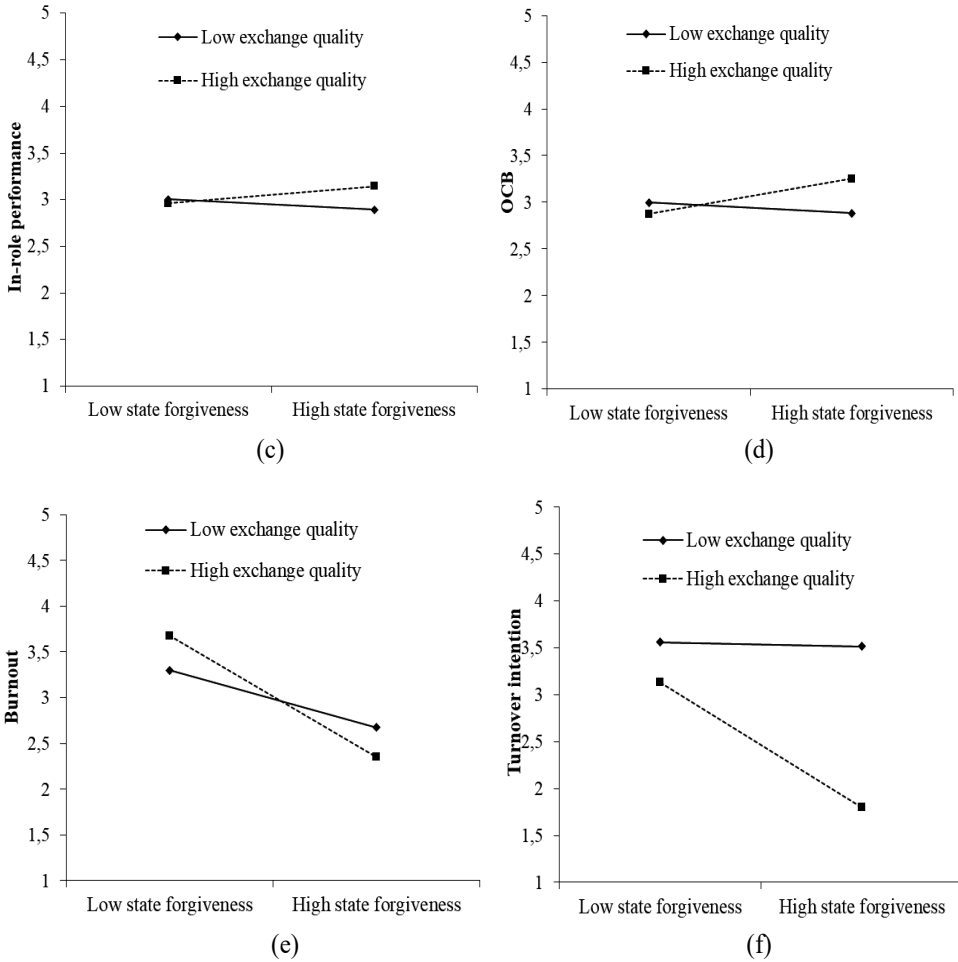


Figure 2. The Interaction Effect Between Exchange Quality and State Forgiveness on (a) Job Satisfaction; (b) Work Engagement; (c) in-Role Performance; (d) OCB; (e) Burnout and (f) Turnover Intention (Study 3)

Note. OCB = organizational citizenship behavior.

Mediation analyses. Using a SEM analysis with a bootstrapping procedure (1,000 bootstraps), we then examined the mediating effect of state forgiveness on the association between trait forgiveness and different work outcomes while controlling for severity, time and offender on work outcomes (*Hypotheses 4a-f*). The results (see Table 5) revealed significant indirect effects of trait forgiveness on job satisfaction ($\beta = .14, SE = .04, p < .01$) and work engagement

Table 5

Mediation path analyses (Study 3)

Predictors	State Forgiveness		
	β	<i>SE</i>	<i>p</i>
Trait forgiveness	.48	.06	.00

	a) Job satisfaction			b) Work engagement			c) In-role performance		
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
Trait Forgiveness	.24	.07	.00	.25	.07	.00	.11	.08	.16
Severity	.11	.06	.05	.18	.06	.00	.19	.07	.00
Time	-.11	.07	.12	-.01	.05	.82	.06	.04	.17
Offender	.04	.05	.38	.03	.05	.62	.03	.06	.61
State forgiveness	.29	.07	.00	.20	.07	.00	.02	.08	.83
Indirect effects	.14	.04	.00	.10	.04	.01	.01	.04	.83

	d) OCB			e) Burnout			f) Turnover intention		
	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>	β	<i>SE</i>	<i>p</i>
Trait forgiveness	.04	.11	.68	-.26	.08	.00	-.02	.07	.77
Severity	.15	.10	.13	-.02	.06	.74	-.11	.06	.07
Time	.12	.06	.03	.07	.04	.08	.04	.06	.51
Offender	.03	.08	.73	-.13	.05	.02	-.06	.05	.29
State forgiveness	.16	.10	.11	-.18	.08	.03	-.25	.07	.00
Indirect effects	.08	.05	.13	-.09	.04	.04	-.12	.04	.00

Note. OCB = Organizational citizenship behavior.

($\beta = .10$, $SE = .04$, $p < .01$) through state forgiveness, with the 95% CI excluding zero. Similar findings were also found for burnout ($\beta = -.09$, $SE = .04$, $p < .05$) and turnover intention ($\beta = -.12$, $SE = .04$, $p < .01$). These findings indicate that state forgiveness mediated the association between trait forgiveness and a) job satisfaction; b) work engagement; e) burnout and f) turnover intention. However, the indirect effects of state forgiveness on the association between trait forgiveness and c) in-role performance and d) OCB were not significant ($ps > .05$). Thus, *Hypotheses 4a-b, e-f* were supported, while *Hypotheses 4c-d* were not supported.

Moderated-mediation analyses. Finally, we used SEM to test whether the associations between trait forgiveness and six work outcomes through state forgiveness were moderated by work relationship quality (indicated by exchange quality³) while controlling for severity, time, and offender (*Hypotheses 5a-f*). As can be seen in Table 6, the analysis revealed a significant interaction between state forgiveness and exchange quality on OCB ($\beta = .21$, $SE = .09$, $p < .05$), and turnover intention ($\beta = -.12$, $SE = .05$, $p < .05$). Specifically, the conditional indirect effect of trait forgiveness on OCB via state forgiveness was only significant when exchange quality was relatively high ($B = .07$, $SE = .04$, $p < .05$), but not when it was relatively low ($B = -.02$, $SE = .03$, $p > .05$). The indirect effect of trait forgiveness on turnover intention via state forgiveness was only significant when exchange quality was relatively high ($B = -.24$, $SE = .10$, $p < .05$), but not when it was relatively low ($B = .01$, $SE = .09$, $p > .05$). Similarly, marginally significant interaction effects between state forgiveness and exchange quality were found for job satisfaction ($\beta = .10$, $SE = .05$, $p = .06$) and burnout ($\beta = -.10$, $SE = .06$, $p = .07$). The indirect effect of trait forgiveness on job satisfaction via state forgiveness was only significant when exchange quality was relatively high ($B = .14$, $SE = .05$, $p < .05$), but not when it was relatively low ($B = -.00$, $SE = .07$, $p > .05$).

³ We did not examine the moderated-mediation hypotheses for work relationship quality indicated by relationship closeness (H5i), because we did not find support for the moderation hypothesis (H3i).

Further, the indirect effect between trait forgiveness and burnout through state forgiveness was only significant when exchange quality was relatively high ($B = -.18, SE = .07, p < .05$), but not when it was relatively low ($B = -.05, SE = .07, p > .05$). Finally, for work engagement and in-role performance, the conditional indirect effect was non-significant.

Table 6

Moderated mediation path analyses (Study 3)

Predictors	State forgiveness								
	β			SE			p		
Trait forgiveness	.48			.06			.00		
	a) Job satisfaction			b) Work engagement			c) In-role performance		
	β	SE	p	β	SE	p	β	SE	p
Trait forgiveness	.26	.07	.00	.26	.07	.00	.11	.08	.17
Severity	.11	.06	.06	.17	.06	.00	.19	.07	.00
Time	-.11	.04	.01	-.01	.04	.89	.06	.05	.20
Offender	.07	.05	.15	.05	.05	.31	.04	.06	.53
State forgiveness	.12	.10	.22	.04	.10	.67	.00	.12	1.00
Exchange quality	.26	.09	.00	.24	.09	.01	.06	.09	.55
State forgiveness \times Exchange quality	.10	.05	.06	.07	.05	.18	.10	.05	.07
Conditional indirect effect at Exchange quality = $M \pm 1 SD$									
	B	SE	p	B	SE	p	B	SE	p
-1 SD (-1.37)	-.00	.07	.99	-.02	.05	.71	-.03	.03	.38
M (0)	.07	.06	.22	.02	.04	.66	.00	.03	1.00
+1 SD (1.37)	.14	.07	.03	.06	.05	.24	.03	.03	.38
	d) OCB			e) Burnout			f) Turnover intention		
	β	SE	p	β	SE	p	β	SE	p
Trait forgiveness	.03	.10	.76	-.24	.08	.00	-.03	.07	.72
Severity	.16	.10	.10	-.03	.06	.67	-.11	.06	.08
Time	.11	.05	.03	.07	.04	.04	.04	.04	.40
Offender	.04	.08	.60	-.13	.05	.02	-.08	.05	.13
State forgiveness	.16	.14	.27	-.21	.10	.04	-.13	.09	.17
Exchange quality	.09	.13	.46	-.02	.09	.93	-.21	.08	.01
State forgiveness \times Exchange quality	.21	.09	.01	-.10	.06	.07	-.12	.05	.02
Conditional indirect effect at Exchange quality = $M \pm 1 SD$									
	B	SE	p	B	SE	p	B	SE	p
-1 SD (-1.37)	-.02	.03	.54	-.05	.07	.53	.01	.09	.90
M (0)	.03	.03	.31	-.12	.06	.06	-.11	.08	.17
+1 SD (1.37)	.07	.04	.04	-.18	.07	.01	-.24	.10	.02

Note. OCB = Organizational citizenship behavior.

General Discussion

The purpose of the present research was to address the basic but important question whether and when responding forgivingly toward interpersonal offenses is related to enhanced work outcomes. Using principles of interdependence theory, we argued that forgiveness, which we conceptualized as a transformation of motivation, is associated with better work outcomes. Three studies revealed consistent evidence in support of the hypothesis that both trait and state levels of forgiveness are positively associated with work outcomes, and in particular better well-being-related work outcomes (i.e., job satisfaction, work engagement, and (less) burnout). Moreover, Study 3 revealed that state levels of forgiveness were mostly associated with better work outcomes when work relationship quality (in terms of exchange quality) between victim and offender was high rather than low. Finally, we found that the positive association between trait forgiveness and work outcomes could be explained by higher levels of state forgiveness, but only in cases of high exchange quality. We summarized the results in Table 7. Taken together, these findings illuminate the ways in which employees constructively manage interpersonal conflict at work, and provide initial empirical evidence in support of the idea that forgiveness in high quality work relationships is associated with better work outcomes.

Table 7

Summary of hypothesis testing results

Hypothesis	Study 1		Study 2		Study 3				
	H1	H2	H3(i)	H1	H2	H3(i)	H3(ii)	H4	H5(ii)
(i) Job satisfaction	√	-	-	√	√	<i>ns</i>	√	√	√
(ii) Work engagement	√	-	-	√	√	<i>ns</i>	<i>ns</i>	√	<i>ns</i>
(iii) In-role performance	√	-	-	<i>ns</i>	<i>ns</i>	<i>ns</i>	√	<i>ns</i>	<i>ns</i>
(iv) OCB	√	-	-	<i>ns</i>	<i>ns</i>	√	√	<i>ns</i>	√
(v) Burnout	-	√	<i>ns</i>	√	√	<i>ns</i>	√	√	√
(vi) Turnover intention	√	-	-	<i>ns</i>	√	<i>ns</i>	√	√	√

Note. √ means *Supported*; *ns* means *Not supported*; - means *Not applicable*; (i) Relationship closeness; (ii) Exchange quality.

First of all, our findings revealed that forgiveness is positively associated with beneficial outcomes (e.g., job satisfaction) and negatively with adverse outcomes (e.g., burnout). This is in line with our conceptualization of forgiveness as a transformation of motivation, which means not only getting rid of negativity following from an offense, but also restoring and re-establishing good work relationships that are crucial for employees' wellbeing. Directly testing such underlying mechanisms in which forgiveness increases psychological well-being (or reduces psychological distress) as well as increases interpersonal well-being, which in turn promote work outcomes, would help to better understand why forgiveness is a constructive response to workplace offenses.

Importantly, the findings of Studies 2 and 3 revealed that the association between state forgiveness and work outcomes did not depend on levels of relationship closeness (as was the case in previous studies by Karremans et al., 2003, and Van der Wal et al., 2016), but it did depend for most associations on exchange quality. As noted before, an explanation for this might be that exchange quality better reflects the relationship context in which forgiveness is taking place at work than relationship closeness, in terms of mutual respect, trust, and obligation between a supervisor and a coworker (Graen & Uhl-bien, 1995). As such, the present research underscores the importance of not only considering relationship-related features when addressing the outcomes of forgiveness in the workplace, but also paying attention to the appropriate indicators of these relationship-related features, in this case exchange quality.

Relatedly, the present research makes an important contribution to emerging literature on forgiveness at work. So far, research on forgiveness has focused mainly on romantic relationships (e.g., Fincham et al., 2004, 2005), family relationships (e.g., Hoyt et al., 2005; McNulty, 2008) or childhood peer relationships (e.g., Denham et al., 2005; Van der Wal et al., 2016), whereas forgiveness in work relationships has received little empirical attention in the scientific literature

(but see Cox, 2011; Stackhouse, 2009). Although the nature of transgressions differs across contexts, the current research reveals that similar underlying processes may influence employees' forgiveness toward the offender. Specifically, previous studies among graduate students, heterosexual couples and childhood peer relations found comparable patterns of results for the moderating role of relationship context on the association between forgiveness and several aspects of general well-being (e.g., Karremans et al., 2003; Van der Wal et al., 2016). Nevertheless, what is general or unique regarding forgiveness in work relationships is an important direction for future research.

Finally, we found consistent and positive associations between forgiveness and well-being-related work outcomes (i.e., job satisfaction and burnout), and less consistent associations between forgiveness and performance-related work outcomes (i.e., in-role performance and OCB) and turnover intention (which were significantly associated with trait forgiveness in Study 1, but not with state forgiveness in Study 3). In other words, forgiveness seems to be more strongly associated with how employees feel about their work than the actual work they are doing. A likely explanation for this is that forgiveness might be more indirectly associated with performance-related work outcomes through enhanced well-being (e.g., Taris & Schaufeli, 2015). Another explanation is that the association between forgiveness and outcomes depends on one's occupation and level of job complexity. Indeed, job satisfaction and performance are found to be moderately related in sectors like salespersons, managers, and clerical workers-secretaries, but are relatively weakly correlated among nurse practitioners and sometimes even uncorrelated in sectors like accountancy (Judge et al., 2001). More research is needed to further clarify the associations between forgiveness and various work outcomes.

Strengths, Limitations and Future Research Directions

To our knowledge, the present research is among the first that examined associations between forgiveness and various work outcomes, both well-being-related and performance-related, while taking into account the relationship context. Another strength of this research is the use of multiple samples from various sampling strategies (the international participants from MTurk (Study 1) and Prolific (Study 3), and Dutch participants (Study 2), making our findings more representative. Moreover, we included gender-balanced samples with a large age range, working at least 20 hours per week. Last, we asked participants to recall a hurtful incident that actually occurred in the workplace, thereby increasing the ecological validity of the studies.

At the same time, we must acknowledge several limitations of the present research. First, all three studies employed a cross-sectional design and do not allow for causal inferences. For instance, forgiveness toward an offending colleague may maintain and restore good work relationships, but in turn, good work relationships characterized by high exchange quality (e.g., with high levels of mutual respect, trust and obligation) may also make it easier to forgive (e.g., Bono et al., 2008; Radulovic et al., 2019). In addition, not only may a stronger forgiving response be related to better work outcomes, but it may very well be that, with better work outcomes, employees may be more capable of forgiving offending others. Indeed, Bono and colleagues (2008) found that earlier well-being was associated with later increases in forgiveness. Clearly, future longitudinal studies are needed to investigate these bidirectional associations.

Moreover, in spite of its strengths, a recall method has also several disadvantages. First, recall methodologies may lead to enhanced effects for affect (Fehr et al., 2010), such that when participants recalled a hurtful incident from the past, they may have recalled particularly severe events (although we obtained similar findings when we controlled for perceived severity of the

incident, or when we did not control for perceived severity of the incident in our analyses). Second, employees' responses to conflicts may be influenced by earlier interactions and experiences. Specifically, employees were asked to recall a hurtful incident by their supervisor or coworker, and had to indicate levels of general relationship closeness and exchange quality *after* they described the incident. Obviously, the incident itself may have (negatively) affected feelings of perceived relationship closeness or exchange quality. Hence, in future work such possible feedback loops between relationship closeness, exchange quality, forgiveness, and work outcomes should be addressed in prospective studies.

An additional limitation is that, as mentioned earlier, we exclusively relied on self-reports, which may raise concerns for common method variance. We attempted to reduce the potential effect of method bias through several means (cf. Podsakoff et al., 2003). Despite the intrapersonal attribution of forgiveness, self-reported responses might also introduce informant bias, particularly social desirability bias. Future research should collect data from other sources, for example, perpetrator report and observer report to replicate the findings. Objective measures (e.g., behavioral or implicit measures of forgiveness) might also be helpful for future research to better understand individuals' responses to transgressions (e.g., forgiveness IAT, Goldring & Strelan, 2017). Thus, to gain a more complete and objective understanding of forgiveness in the workplace, it is important for future work to employ an alternative to self-report questionnaires, or combine it with other objective measures.

Finally, given that the work context is a complex environment, an employee's forgiveness level is likely to be related to personal, interpersonal, intergroup, and even organizational factors (Cox, 2008). This raises several interesting future research directions. For example, is there any other work relationship-related feature (e.g., power and status) that influences forgiveness as well

as its association with work outcomes? Whether and how does the positive association between forgiveness and work outcomes vary across different occupational sector? Can a supervisor's behavior affect employees' level of forgiveness as well as influence the associations between forgiveness and work outcomes? Hence, to better understand forgiveness in the workplace, future research should take into account factors from all these levels.

Practical Implications

The present findings illustrate the power of both trait and state forgiveness to potentially improve work outcomes, providing a way to manage workplace conflicts. From a practical standpoint, our findings offer advice for individuals on how to constructively manage experienced work conflicts as well as for organizations and managers on how to improve forgiveness and achieve the beneficial effects of forgiveness.

First, at the individual level, our findings imply that it is often in the employee's best interests to act forgivingly, at least toward others with whom they experience high exchange quality. Yet, conflicts and disagreement may also arise in work relationships of lower exchange quality, illustrated by less respect or trust. Although speculative at this point, acting forgivingly to such a low exchange quality offender might indirectly also be beneficial. In these cases, forgiveness is not necessary to improve the relationship, but it may at least reduce stress and stop the relationship from getting worse by avoiding escalation of conflict. Indeed, in some experimental contexts, expressing forgiveness protect victims from future offenses (Wallace et al., 2008). Hence, although this remains speculation, forgiving a colleague with low exchange quality may in the end also be beneficial.

Second, given the benefits of forgiveness for work outcomes, it is probably worthwhile to improve an individual's level of forgiveness. One way to do this is by fostering empathy

(particularly perspective taking) (McCullough et al., 1997). Forgiveness might also be increased by writing about the benefits of forgiveness (McCullough et al., 2006), and this might also be effective in the organizational context. More recently, there is some research showing that practicing mindfulness benefits forgiveness (e.g., Karremans et al., 2020). Future research can test such interventions in the work context, and see whether it promotes forgiveness in work relationships.

Finally, our findings underscore the importance of having good and stable work relationships in achieving the benefits of forgiveness at work. Organizations and managers should therefore focus on training and interventions that improve employees' capacity to build and maintain good work relationships. For example, by using relational meeting practices to cultivate high-quality relationships (Baker & Dutton, 2006). Moreover, transformational leadership might also be effective in building and sustaining high quality relationships (Carter et al., 2013). Taken together, there are several important practical paths to be taken based on our findings.

Conclusion

Research on forgiveness has increased enormously in the past decades, revealing that the ability to forgive is an essential aspect of well-functioning and the maintenance of social relationships (e.g., Karremans & Van Lange, 2008). Although it has often been suggested that the ability to forgive may also be crucial in the workplace, the associations between forgiveness and work outcomes have received little empirical attention. Our findings highlight that a forgiving response toward interpersonal offenses by colleagues one has a good work relationship with is associated with better work outcomes and, as such, may be fruitful in cultivating essential work relationships.

Chapter 3

The benefits of forgiveness at work: A longitudinal investigation of the time-lagged relations between forgiveness and work outcomes

This chapter is based on: Cao, W., van der Wal, R. C., & Taris, T. W. (2021). The Benefits of Forgiveness at Work: A Longitudinal Investigation of the Time-Lagged Relations Between Forgiveness and Work Outcomes. *Frontiers in Psychology, 12*:710984.

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Abstract

Forgiveness has received increasing attention in the work context. Although recent cross-sectional studies have found a positive link between forgiveness and work outcomes, further research examining the temporal dynamics between these variables is needed to establish causality. This preregistered panel study investigated the time-lagged relations between forgiveness and work outcomes, and specifically addressed the question whether forgiving a coworker benefits work outcomes. Longitudinal survey data were collected at four time points among 139 Chinese employees working at least 20 hours per week. Results from cross-lagged panel models revealed that forgiving an offending coworker with whom one has a relatively good work relationship predicted better work outcomes (i.e., higher job satisfaction, higher work engagement, and lower burnout) over time, while controlling for perceived severity of the offense. Evidence for the reverse effect (with work outcomes predicting forgiveness) was not found. Our findings thus suggest that forgiveness facilitates well-being-related work outcomes. Implications for a better understanding of forgiveness in work relationships are discussed.

Keywords: forgiveness, work outcomes, cross-lagged panel model, interpersonal relationships, well-being

Introduction

Interpersonal mistreatment is a common issue experienced by employees around the globe (Schilpzand et al., 2016). To illustrate, in South Korea, 70% of the employees indicated to have been bullied by their work superiors and colleagues in their working life, with around 12% enduring bullying on a daily basis (National Human Rights Commission, 2019). These offenses can be harmful to both employees and organizations, and may result in reduced performance, increased deviant behaviors, and impaired mental and physical health (e.g., Bowling & Beehr, 2006). How to deal with these offenses properly and hence mitigate their harmful consequences for employees, organizations and even society is a major concern for all parties involved.

Social scientists have recognized the potential beneficial role of forgiveness in dealing with the offenses that inevitably take place in interpersonal relationships (c.f., Fincham, 2000). Defined as a prosocial change toward the offender despite the offender's hurtful actions (e.g., McCullough, 2001; McCullough et al., 1998), forgiveness has been conceptualized both as a general tendency (i.e., trait forgiveness) and following a specific transgression (i.e., state forgiveness). In this study we focused on forgiveness as a response to a specific transgression (i.e., state forgiveness; hereafter referred to as *forgiveness*). It has been shown that forgiveness is associated with better psychological and physical well-being (Karremans et al., 2003), and increased relationship satisfaction (e.g., Karremans & Van Lange, 2008; McCullough et al., 1998). Importantly, recent research suggests that forgiveness might also be associated with better work outcomes, such as higher job satisfaction (e.g., Cox, 2011; Stackhouse, 2019). Yet, existing evidence on the association between forgiveness and outcomes in the workplace is exclusively based on cross-sectional studies, leaving the question unaddressed whether forgiveness facilitates better work outcomes, and/or vice versa. Given the many ways in which forgiveness may potentially benefit both individual and organizational outcomes (e.g., Lundahl et al., 2008; Wade et al., 2014), it is

important to address the causality question. Therefore, using a longitudinal design, this research examined the causal relationship between interpersonal forgiveness among employees and their work outcomes.

Forgiveness and work outcomes

Why would forgiveness among employees be associated with better individual work outcomes? To address this question, it is important to consider the relationship context in which forgiveness (or the lack thereof) is taking place. Despite the findings that higher-quality work relationships (i.e., relationships defined in terms of mutual respect, trust, and obligation between employees; Graen & Uhl-Bien, 1995) promote forgiveness tendencies (Cao et al., 2021b), employees may not always feel capable of responding with forgiveness when offended, even when the offender is someone they respect and trust. In some cases employees may avoid the coworker (e.g., by reducing their collaboration; Hershcovis et al., 2018), but there may also be moments, particularly in stable work relationships, when an employee wants to maintain the relationship despite of what happened (e.g., Radulovic et al., 2019). At some point, employees may thus find themselves in a situation in which they have a good work relationship with a coworker, while simultaneously they are having a hard time forgiving the offending coworker.

The lack of forgiveness toward a “good colleague” (having a relatively good relationship quality with) may undermine work outcomes in at least two ways. As suggested in previous research (e.g., Rothmann, 2008), work outcomes can be seen as a broad category of phenomena that includes job satisfaction, work engagement, and burnout. First, a lack of forgiveness may be associated with retaliatory and aggressive responses that may deteriorate the work relationship (Bradfield & Aquino, 1999). Research indicates that employees using hostile and aggressive conflict strategies in responses to workplace offenses have less stable work relationships and are less accepted by their coworkers (e.g., Kim et al., 2008). Unstable work relationships negatively

affect employees' work outcomes, such as leading to reduced work engagement (Liao et al., 2013; Weigl et al., 2010). Hence, given the otherwise beneficial outcomes of good work relationships, employees' inability to forgive may undermine their work outcomes because this inability deteriorates crucial work relationships.

Second, and relatedly, employee's lack of forgiveness toward a coworker may increase stress and tension. Indeed, previous research has demonstrated that the combination of a lack of forgiveness on the one hand, and the motivation to maintain a good relationships (in this case, a romantic relationship) on the other hand, can contribute to a state of psychological tension (Karremans et al., 2003; Kluwer & Karremans, 2009). Increased tension strongly affects individual work outcomes (Cordes & Dougherty, 1993), such as reduced job satisfaction and increased burnout (Volmer & Wolff, 2018), and absenteeism (Hees et al., 2013). Psychological tension created by these competing motives may thus negatively affect work outcomes.

Previous research indeed reveals that a lack of forgiveness is associated with lower job satisfaction (Law, 2013; Radulovic et al., 2019), lower work engagement (Little et al., 2007), less commitment to the organization (Basford et al., 2014), more burnout (Booth et al., 2018; Hershcovis et al., 2018) and higher levels of job stress (Cox, 2011). However, almost all evidence regarding the association between forgiveness and work outcomes relies on cross-sectional designs. As far as we know, only one study by Stackhouse (2019) demonstrated that more forgiveness predicted higher job satisfaction and lower intentions to leave across a two-week interval. Although interesting, this research did not take into account the causal effect of (state) forgiveness and various work outcomes.

Furthermore, given the lack of evidence on the causal role of forgiveness in an organizational context, we draw from studies in close relationships (i.e., friendships, romantic relationships, and family relationships; e.g., Fincham et al., 2004; McCullough et al., 1997) in

understanding the causal role of forgiveness on work outcomes. Specifically, longitudinal and experimental studies in close relationships found forgiveness to be causally related to both intra-personal outcomes, such as enhanced psychological and physical well-being (Bono et al., 2008; McCullough et al., 2001; Seawell et al., 2014), as well as interpersonal outcomes, such as enhanced relationship satisfaction, commitment, and stability (Braithwaite et al., 2011; Paleari et al., 2005; Tsang et al., 2006). For example, Bono et al. (2008) found that forgiveness was causally related to more positive mood, fewer negative mood and fewer physical symptoms. Similarly, not being able to forgive an offending other was prospectively associated with declines in physical health three years later (Seawell et al., 2014). These findings correspond with meta-analytic evidence on forgiveness interventions, revealing that participants who had received a forgiveness intervention displayed fewer depressive and anxiety symptoms as well as greater levels of hope than no-treatment control conditions (Wade et al., 2014). Moreover, Tsang et al. (2006) found that forgiveness predicted more closeness and commitment toward romantic partners and friends two weeks later. Finally, forgiving a romantic partner was associated with increased relationship satisfaction over a two-month interval (Braithwaite et al., 2011). Taken together, we hypothesize that:

H1a: Forgiveness in high-quality work relationships is associated with better work outcomes at a later point in time.

It is also possible that work outcomes causally predict higher levels of forgiveness. Following the reasoning above, better work outcomes (such as job satisfaction and work engagement) may reversely increase an employees' individual well-being as well as their work relationships (e.g., Volmer et al., 2011). However, as compared to the reversed causal pattern (with forgiveness causally predicting work outcomes), only a handful studies found that individual or relational well-being predicted more forgiveness across time. Specifically, Bono et al. (2008) found

that increases in psychological well-being were causally related to increases in forgiveness two weeks later. Moreover, higher relationship quality was associated with more forgiveness several years later (Fincham & Beach, 2007; Paleari et al., 2005). In sum, although the evidence is limited, in this study we also investigated the possibility of a reversed causal association that work outcomes predict more forgiveness. We therefore include the hypothesis that:

H1b: Higher work outcomes are associated with more forgiveness in high-quality work relationships at a later time point.

The Present Research

The present research used a longitudinal design to address the question whether forgiveness in high quality work relationships predicts better work outcomes (i.e., job satisfaction, work engagement and burnout). Measuring these variables over multiple time points enabled us to investigate the direction of potential causal effects between forgiveness and work outcomes. In this study, we considered the following restrictions and control variables. First of all, given the importance of work relationship quality in understanding the association between forgiveness and general work outcomes, we exclusively focused on forgiveness in relatively high-quality work relationships. Moreover, since perceived severity of the offense is generally negatively associated with forgiveness (Fehr et al., 2010), we controlled for perceived severity of the offense in our analyses. Finally, in line with previous research revealing that the relative status between victim and offender influences forgiveness (e.g., Aquino et al., 2001; Bies et al., 2016; Zheng & van Dijke, 2020), we also took into account the status difference between victim and offender (Aquino et al., 2006). All data scripts and materials can be viewed at the Open Science Framework by following this link: <https://osf.io/c8xg9/>.

Method

Participants

Participants were recruited in China⁴ through Credamo, a professional Chinese platform for online data collection. Individuals aged at least 18 years old, working at least 20 hours per week, and working in a team with at least three other members were invited to participate in the longitudinal study. The study consisted of four time points (T1-T4), with a one-week interval between each time point (for a similar procedure, see McCullough et al., 2003). At Time 1, 527 eligible participants took part in the study, three participants indicated that we should not use their data, and another 27 participants failed to follow our instruction to recall a hurtful incident by a coworker. Data were available for 497 employees at Time 1, 139 employees at Time 2, 138 employees at Time 3 and 130 employees at Time 4. As a result, 139 participants with full data on two or more time points were entered in the analyses. To investigate the potential impact of attrition, we tested mean-level differences on our key variables (forgiveness, job satisfaction, work engagement, and burnout) at Time 1 between participants who completed all four time points and participants who dropped out of the study after Time 1 ($N = 358$). Independent t-tests revealed no significant differences for any of the variables (see Appendix A), suggesting that our final sample was generally representative for the larger sample that started the study.

Participants (56.1% female) were 19 to 53 years old ($M = 30.88$, $SD = 6.19$), and mostly held a university degree (77.7%). On average, they worked 47.76 hours per week ($SD = 8.26$) in a broad variety of industries. The average number of working years in their current organizations was 5.25 years ($SD = 5.03$) and average team tenure was 2.23 years ($SD = 1.93$). When asked to indicate at which level they were working in the organization (1 = the lowest level, 10 = the highest

⁴ To minimize potential effects of Covid-19 on our study, we collected data in China from June to July 2020. At that time Covid-19 was under control and working life went back to normal in China (Burki, 2020).

level), 69.8% participants indicated to be working in a higher position (higher than mean level of 5). Participants received 28 yuan (about €3.50) for their participation in all four time points.

Procedure

The study was approved by the Ethics Committee of our institution and preregistered at aspredicted.org (bit.ly/37o9RZW). This study was part of a larger study in which we investigated the developmental trajectory of forgiveness in the workplace. For this specific study we focused on the causal relationship between forgiveness and work outcomes. Given that only 139 of the intended 360 participants completed the entire study, we slightly deviated from our pre-registered plan and did not test for mediations by general health and team-member exchange. Items within scales were presented randomly.

At Time 1 (T1), after providing informed consent and demographic information, participants were asked to recall and describe a hurtful incident by one of their coworkers including the following restrictions: 1) The hurtful incident took place in the workplace; 2) The hurtful incident took place in the past seven days; 3) The offender was someone the participant had a good work relationship with; 4) The participant felt or still feels hurt by the hurtful incident; and 5) It was the other to blame (at least in the perspective of the participant). An example description of a hurtful incident was “It happened the day before yesterday, our company checked the quality of work, a colleague who has a good work relationship with me picked various problems on me. I felt like he was taking shots at me, which made me very faceless and uncomfortable”. Next, they received some questions about the incident. As preregistered, we removed participants who did not follow the instructions (i.e., did not recall a hurtful incident by a close other that took place in the past seven days, $n = 27$). Participants also received questions about their level of forgiveness, and their work outcomes. At the following time points (T2-T4), participants were presented with the same incident (by uploading a screen shot of the description of the incident they recalled at Time

1, and asked to read it carefully again. Next, they completed the same questions regarding the incident, forgiveness, and work outcomes as they did at Time 1. After completing the survey, participants were thanked and debriefed.

Measures

All items were presented in Chinese. Unless reported otherwise, participants responded to items on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). The internal consistency (Cronbach's alpha) of the multi-item measures varied from 0.82 to 0.96 (cf. Table 2), and M_{alpha} was 0.89.

Questions about the hurtful incident. After recalling the incident, participants received questions related to the incident. They were asked: (1) how long ago the hurtful incident took place (in days); (2) how they rated the quality of their work relationship with the offender *before* the hurtful incident took place (1=very low, 7=very high); (3) how severe they thought the incident was (three items, e.g., "The incident was severe"; van der Wal et al., 2014); and (4) whether it was their supervisor ($n = 38$), peer coworker ($n = 87$) or subordinate ($n = 14$) who had offended them.

Forgiveness. Forgiveness was assessed using the Transgression-Related Interpersonal Motivations Inventory (TRIM) developed by McCullough et al. (1998), which consists of 3 dimensions: benevolence toward the offender (4 items; e.g., "Despite the incident, I want to have a positive relationship"), revenge (4 items; e.g., "When I think about the incident, I wish that something bad would happen to him/her") and avoidance (4 items; e.g., "When I think about the incident, I would rather avoid him/her"). We reverse-scored the revenge and avoidance subscales, so that a higher score indicated more forgiveness.

Work outcomes. Three work outcomes (job satisfaction, work engagement, and burnout) were assessed. *Job satisfaction* was measured using a subscale of the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979). Participants were asked to indicate their

agreement with three items, including: “Usually, I really enjoy my work”. *Work engagement* was measured with the short version of the Utrecht Work Engagement Scale (UWES-3; Schaufeli et al., 2019) that taps the three core dimensions of work engagement (vigor, dedication and absorption) with one item for each dimension, e.g., “This week, I felt like going to work when I got up in the morning”. *Burnout* was captured using the 5-item emotional exhaustion subscale of the Maslach Burnout Inventory-General Survey (Maslach et al., 1986). An example is “I feel used up at the end of a work day”.

Statistical analysis

Correlational analyses were conducted to obtain basic insight into the data. Structural equation modeling (SEM) was used in Mplus v8.3 (Muthén & Muthén, 2017). All models were evaluated using the chi-square test, the Root Mean Square Error of Approximation (RMSEA) (Browne & Cudeck, 1992), the Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973), the Comparative Fit Index (CFI) (Bentler, 1980), and the Standardized Root Mean Square Residual (SMRM). As there is no consensus on cut-off values for adequate fit (e.g., Lance et al., 2006), conservative guidelines were followed, with fit considered to be acceptable if RMSEA is lower than .08, TLI and CFI are .90 or higher, and SMRM is .08 or lower (Bentler, 1980; Hu and Bentler, 1999).

Construct validity

Consistent with previous research (e.g., Forster et al., 2020), forgiveness was taken as a second-order factor. Confirmatory factor analysis (CFA) of the TRIM scale confirmed the existence of three first-order factors: benevolence, revenge, and avoidance. As suggested by previous research (e.g., Rothmann, 2008) and following our pre-registration, we then checked whether the three work outcomes could be combined into a second-order factor to reflect general work outcomes. We assessed the fit of our data to a measurement model of three work outcome

indicators (i.e., job satisfaction, work engagement and burnout). The second-order factor model of work outcomes provided good fit (for Time 1, $\chi^2 = 67.73$, $df = 41$; CFI = .98; TLI = .97; RMSEA = .07; SMRM = .04; for Time 2, $\chi^2 = 63.98$, $df = 41$; CFI = .98; TLI = .97; RMSEA = .06; SMRM = .05; for Time 3, $\chi^2 = 85.56$, $df = 41$; CFI = .96; TLI = .95; RMSEA = .09; SMRM = .05; for Time 4, $\chi^2 = 73.61$, $df = 41$; CFI = .97; TLI = .96; RMSEA = .08; SMRM = .05). We therefore proceeded our analyses using the second-order factor to reflect general work outcomes.

We then conducted four separate CFAs to ensure each survey item was loading appropriately on its respective factor (i.e., second-order factor of forgiveness and second-order factor of work outcomes). The results of these analyses revealed that the hypothesized two-factor second-order factor model provided adequate fit to the data at each time point (for Time 1, $\chi^2 = 425.30$, $df = 223$; CFI = .92; TLI = .91; RMSEA = .08; SMRM = .08; for Time 2, $\chi^2 = 431.45$, $df = 223$; CFI = .93; TLI = .92; RMSEA = .08; SMRM = .05; for Time 3, $\chi^2 = 426.31$, $df = 223$; CFI = .93; TLI = .92; RMSEA = .08; SMRM = .07; for Time 4, $\chi^2 = 354.91$, $df = 223$; CFI = .96; TLI = .95; RMSEA = .07; SMRM = .06). Moreover, the hypothesized two-factor model fitted the data significantly better than a more parsimonious one-factor model in which all the items loaded on a single factor ($\Delta\chi^2_{[7]}$ ranged from 989.53 to 1205.03, all $ps < .01$). Overall, these results supported the distinctiveness of our constructs within each time point.

Measurement invariance

We then conducted a series of longitudinal CFAs to check the measurement invariance of our constructs across time (Taris et al., 1998). We started with a configural model, in which we applied the same factor structure across time. A well-fitting configural model would demonstrate that the constructs that are assessed across each measurement time point all tap into the same construct. As shown in Table 1, the configural models provided adequate fit to the data, supporting

the assumption that the factor structures of the research variables were consistent across time (Liang et al., 2018; Vandenberg & Lance, 2000).

Table 1

Configural and metric invariance Variables

	Model	χ^2	<i>df</i>	RMSEA	CFI	TLI	SRMR
Forgiveness	Configural model	1549.65	972	.07	.93	.92	.06
	First-order metric model	1573.14	999	.06	.93	.92	.06
	Second-order metric model	1576.89	1005	.06	.93	.92	.06
Work Outcomes	Configural model	1262.16	801	.06	.92	.91	.06
	First-order metric model	1291.24	825	.06	.92	.91	.07
	Second-order metric model	1312.34	831	.07	.92	.91	.07

Next, we tested the metric invariance of the first-order factors (first-order metric model; Rudnev et al., 2018), in which the loadings on the same first-order factors were constrained to be equal across time, and the loadings on the second-order factors were freely estimated. As shown in Table 1, the first-order metric invariance was supported by the data, implying that covariances between the first-order factors were comparable. Therefore, the loadings of the second-order factors can be meaningfully compared across time.

We proceeded by estimating a second-order metric model, in which the loadings were constrained to be equal on the same first-order factors as well as second-order factors across time. As suggested in previous studies (e.g., Brown, 2015), in all measurement models, error variances of the same indicators used across time points were allowed to be correlated to account for their non-independence. The results of the second-order metric model are reported in Table 1, which provided evidence for second-order metric invariance of our constructs over time. However, since the standard errors of the model parameter estimates may not be completely trustworthy due to our

relatively small sample size and also because the subject-to-parameter ratio becomes worse when adding longitudinal effects, we decided to proceed our data analysis by treating the constructs as observable variables. That is, we used mean scores for corresponding constructs (Halbesleben, 2010; Liu et al., 2020).

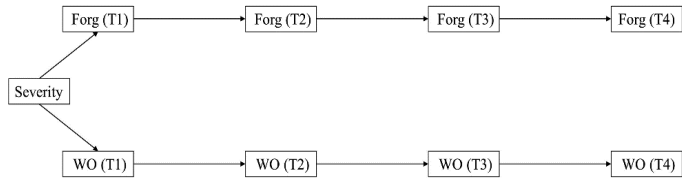
Analysis strategy

After confirming the adequacy of construct validity and measurement invariance, we used a cross-lagged panel model (CLPM) to test the dynamic relations among variables with MPlus 8.3 (Muthén & Muthén, 2017). In this model, there are two primary relations of interest (Mund & Nestler, 2019): (a) the auto-regressive relations among the same constructs across time, and (b) the cross-lagged relations among different constructs across time. We fitted four competing path models to our data (see Figure 1): a stability model (M_1), a forgiveness-to-work outcomes model (M_2), a work outcomes-to-forgiveness model (M_3), and a reciprocal model (M_4). The stability model (M_1) expresses the stability within each variable over time, and estimates the auto-regressive paths of forgiveness and work outcomes separately, that is, forgiveness at Time i was set to predict forgiveness at Time $i + 1$ ($i = 1, 2, 3$), and work outcomes at Time i was set to predict work outcomes at Time $i + 1$ ($i = 1, 2, 3$). The forgiveness-to-work outcomes model (M_2) estimates the lagged-impact of forgiveness on work outcomes after controlling for the stability of forgiveness and work outcomes separately over time. Specifically, based on the stability model (M_1), we specified the cross-lagged paths from forgiveness (as the explanatory variable) at Time i to work outcomes (as the dependent variables) at Time $i + 1$ ($i = 1, 2, 3$). The work outcomes-to-forgiveness model (M_3) was also based on the stability model M_1 , but included reverse cross-lagged paths compared to M_2 . In other words, we specified the cross-lagged paths from work outcomes (as independent variable) at Time i to forgiveness (as dependent variable) at Time $i + 1$ ($i = 1, 2, 3$). Finally, the reciprocal model included cross-lagged paths between Time i forgiveness and Time i

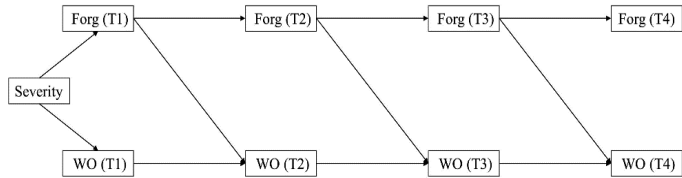
+ 1 ($i = 1, 2, 3$) work outcomes as well as the cross-lagged paths between Time i work outcomes and Time $i + 1$ ($i = 1, 2, 3$) forgiveness. We tested whether models with cross-lagged effects (M₂-M₄) fitted the data significantly better than the stability model (M₁). Furthermore, to determine whether these relationships were consistent across time, we computed additional chi-square difference tests that compared unconstrained models to the models that constrained cross-lagged effects and/or auto-regressive effects being the same within the same relationships. Following our pre-registration, we controlled for perceived severity of the hurtful incident when estimating these models.

Chapter 3

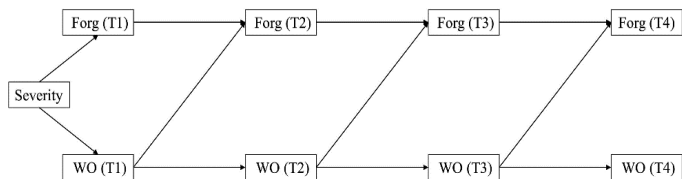
Model 1 (M₁)



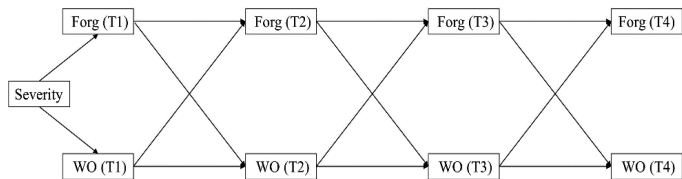
Model 2 (M₂)



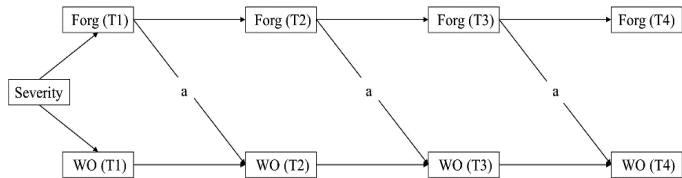
Model 3 (M₃)



Model 4 (M₄)



Model 2a (M_{2a})



Model 2b (M_{2b})

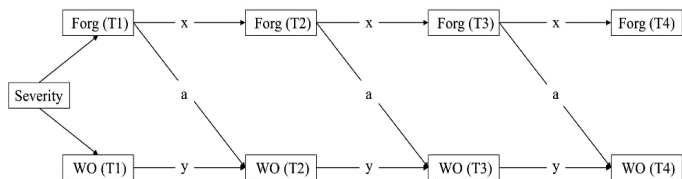


Figure 1. Schematic representation of competing models. Forg= Forgiveness; WO = Work outcomes; T1-T4 refer to Time 1-Time 4, respectively. Paths labeled “x” and “y” estimate stability coefficients. Paths labeled “a” and “b” estimate cross-lagged coefficients.

Results

Preliminary Analyses

Means, standard deviations, and intercorrelations for all variables are displayed in Table 2. The correlation coefficients among the same variable measured at different time points (i.e., test-retest reliability) were substantial and significant for forgiveness (r_s ranging from .79 to .95, all $p_s < .01$); job satisfaction (r_s ranging from .68 to .84, $p_s < .01$); work engagement (r_s ranging from .72 to .85, $p_s < .01$) and burnout (r_s ranging from .76 to .84, $p_s < .01$). In line with previous work (Burnette et al., 2012; McCullough et al., 1998), work relationship quality was significantly positively (r_s ranging from .37 to .42, $p_s < .01$), and perceived severity of the incident was significantly negatively (r_s ranging from -.47 to -.41, $p_s < .01$) associated with forgiveness. Both time since the incident took place (i.e., time) and whether the offender was one's supervisor, peer coworker or subordinate (i.e., offender) were unrelated to forgiveness. Most importantly, consistent with previous cross-sectional work (Author, 2021), across all four time points, forgiveness was associated with higher levels of job satisfaction (r_s ranging from .21 to .43, $p_s < .01$) and work engagement (r_s ranging from .26 to .42, $p_s < .01$) and lower levels of burnout (r_s ranging from -.45 to -.32, $p_s < .01$).

Main Analyses

Table 3 presents the fit indices for the competing models. Except for a relatively high RMSEA, the other fit indices of all models were acceptable ($CFI \geq .90$; $TLI \geq .90$; $SMRM \leq .08$; see Table 3). The chi-squared difference tests in Table 4 showed that except for M_3 , both M_2 and M_4 improved significantly on the stability model M_1 . Moreover, the results revealed no significant difference between M_2 and M_4 ($\Delta\chi^2(3) = 6.44, p = .09$), thus the more parsimonious model (M_2) was retained for further analysis. M_{2a} constrained the cross-lagged effects to be equal over time

Table 2
Descriptive Statistics and Correlations for Main Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. RQ											
2. Severity	-.03	(.86)									
3. Time	-.03	.10									
4. Offender	.21*	.01	-.19*								
5. Forg-T1	.42**	-.47**	.04	.10	(.95)						
6. Forg-T2	.41**	-.42**	.01	.11	.87**	(.96)					
7. Forg-T3	.37**	-.41**	-.05	.08	.79**	.91**	(.96)				
8. Forg-T4	.37**	-.43**	-.01	.07	.81**	.90**	.95**	(.96)			
9. JS-T1	.34**	.02	.05	.12	.30**	.33**	.21*	.24**	(.84)		
10. JS-T2	.30**	-.01	.06	.12	.34**	.38**	.30**	.28**	.68**	(.77)	
11. JS-T3	.38**	.00	.16	.17*	.32**	.40**	.32**	.36**	.72**	.75**	(.82)
12. JS-T4	.41**	-.06	.06	.19*	.41**	.43**	.39**	.41**	.68**	.73**	.84**
13. WE-T1	.36**	.03	.06	.17*	.34**	.36**	.26**	.24**	.74**	.65**	.68**
14. WE-T2	.37**	.05	.15	.17*	.33**	.38**	.28**	.27**	.68**	.71**	.75**
15. WE-T3	.41**	-.06	.14	.22**	.35**	.41**	.31**	.36**	.67**	.61**	.76**
16. WE-T4	.48**	-.07	.14	.17	.39**	.42**	.38**	.39**	.67**	.73**	.87**
17. BO-T1	-.35**	.23**	-.09	-.11	-.43**	-.45**	-.40**	-.34**	-.52**	-.52**	-.54**
18. BO-T2	-.25**	.12	-.16	-.03	-.32**	-.37**	-.35**	-.27**	-.46**	-.59**	-.50**
19. BO-T3	-.33**	.12	-.10	-.03	-.32**	-.39**	-.40**	-.36**	-.46**	-.56**	-.61**
20. BO-T4	-.36**	.14	-.15	-.13	-.38**	-.42**	-.41**	-.39**	-.39**	-.50**	-.57**
<i>M</i>	5.40	5.06	4.82	1.83	4.59	4.51	4.62	4.75	5.56	5.59	5.60
<i>SD</i>	0.93	1.27	1.81	0.59	1.23	1.25	1.28	1.37	0.98	0.89	0.91

Table 2 (continued)

	12	13	14	15	16	17	18	19	20
12. JS-T4	(.89)								
13. WE-T1	.68**	(.84)							
14. WE-T2	.69**	.76**	(.87)						
15. WE-T3	.73**	.75**	.80**	(.88)					
16. WE-T4	.85**	.72**	.77**	.85**	(.88)				
17. BO-T1	-.57**	-.55**	-.55**	-.53**	-.58**	(.90)			
18. BO-T2	-.49**	-.52**	-.61**	-.50**	-.53**	.77**	(.92)		
19. BO-T3	-.60**	-.49**	-.51**	-.57**	-.64**	.76**	.80**	(.92)	
20. BO-T4	-.59**	-.47**	-.53**	-.56**	-.61**	.76**	.79**	.84**	(.91)
<i>M</i>	5.66	5.22	5.18	5.29	5.42	2.91	2.85	2.65	2.58
<i>SD</i>	1.01	1.04	1.08	1.03	0.99	1.30	1.28	1.23	1.19

Note. $N = 130-139$; alphas are reported on the diagonal. * $p < .05$, ** $p < .01$ (two-tailed); RQ = Relationship Quality; Forg = Forgiveness; JS = Job Satisfaction; WE = Work Engagement; BO = Burnout; T1-T4 refer to Time 1-Time 4, respectively.

based on M₂, and M_{2b} constrained auto-regressive effects being equal over time based on M_{2a} (see Figure 1). The difference between the unconstrained model M₂ and its constrained counterpart M_{2a} was non-significant ($\Delta\chi^2_{[2]} = 1.49, p = .47$), while M_{2a} improved significantly on M_{2b} ($\Delta\chi^2_{[4]} = 14.35, p = .01$). Thus, M_{2a} was our final model to test our hypotheses, with the cross-lagged paths from forgiveness to work outcomes constrained to be equal over time and with their corresponding auto-regressive effects varying over time. As mentioned above, considering the complexity of the cross-lagged model and our relatively small sample size, we treated constructs as observable variables instead of latent variables.

Table 3

Fit indices for competing models

Model	χ^2	df	RMSEA	CFI	TLI	SRMR
M ₁ Stability model	93.52	27	.13	.95	.94	.08
M ₂ M1 + Forg → WO (CL)	83.26	24	.13	.96	.94	.05
M ₃ M1 +WO → Forg (reversed CL)	87.08	24	.14	.96	.93	.07
M ₄ reciprocal model	76.82	21	.14	.96	.93	.04
M _{2a} M2 + constrain CL to be equal over time	84.75	26	.13	.96	.94	.05
M _{2b} M2a + constrain AR to be equal over time	99.10	30	.13	.95	.94	.11

Note. Forg = Forgiveness; WO = Work outcomes; CL = Cross-lagged effect; AR = Auto-regressive effect.

Table 4

Chi-square difference tests of competing models

Model	$\Delta\chi^2$	Δdf	<i>p</i>
Comparison with M1			
M ₁ versus M ₂	10.26	3	.02
M ₁ versus M ₃	6.44	3	.09
M ₁ versus M ₄	16.7	6	.01
Equal time lag effects			
M ₂ versus M _{2a}	1.49	2	.48
M _{2a} versus M _{2b}	14.35	4	.01

The results of this final model are displayed in Figure 2. These results revealed that forgiveness predicted an increase in work outcomes from Time 1 to Time 2 ($\beta = .07, SE = .03, p < .01$), from Time 2 to Time 3 ($\beta = .08, SE = .03, p < .01$) and from Time 3 to Time 4 ($\beta = .08, SE = .03, p < .01$). A similar pattern was found when excluding perceived severity as a control variable (see Appendix B). These results provided strong support for our hypothesis that forgiveness facilitates work outcomes.

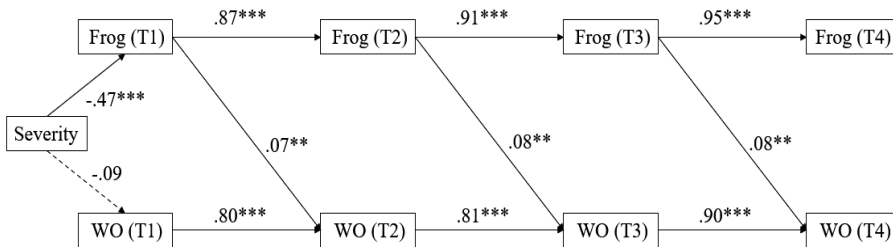


Figure 2. Standardized estimates for significant paths in the forgiveness to work outcomes model. * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed); Forg = Forgiveness; WO = Work outcomes; T1-T4 refer to Time 1-Time 4, respectively ($N = 130$ -139).

Moreover, given that we had no theoretical guidelines specifying the length of time for time-lagged effects to be present, we explored the possibility of different time lag intervals and the presence and absence of wave-skipping paths (Meier & Spector, 2013). In particular, we tested whether the hypothesized forgiveness-work outcomes associations still hold when there were 2 weeks or 3 weeks, rather than 1 week, in the time lag. Using the same procedure as outlined above, we included equal cross-lagged effects from forgiveness at Time i to forgiveness at Time $i+2$ ($i = 1, 2$). The results provided adequate model fit ($\chi^2 = 88.39, df = 26$; CFI = .96; TLI = .94; RMSEA = .13; SMRM = .06). We found similar findings for a 2-week interval compared to a 1-week interval model (M_{2a}). The results revealed that forgiveness predicted an increase in work outcomes from Time 1 to Time 3 ($\beta = .07, SE = .03, p < .05$), and from Time 2 to Time 4 ($\beta = .07, SE = .03, p < .05$). Moreover, we estimated a model whereby forgiveness at Time 1 was set to predict work outcomes at Time 4. The model fit results were acceptable ($\chi^2 = 91.18, df = 26$; CFI = .96; TLI = .94; RMSEA = .13; SMRM = .08), while the results showed no

significant associations between forgiveness (T1) and work outcomes (T4) ($\beta = .06, SE = .04, p = .13$). Overall, these results indicate that the hypothesized associations only hold when the temporal lag is relatively short (i.e., less than 3 weeks), which means that forgiveness predicts an increase in work outcomes in a relatively short time period.

Discussion

This study sought to establish the direction of a possible causal link between forgiveness and work outcomes using a longitudinal design with four time points in a sample of working employees. Our findings revealed that the association between forgiveness and work outcomes is causal in nature. While controlling for perceived severity of the incident, forgiving a colleague with whom one has a relatively good work relationship predicts better work outcomes at a later stage. We did not find that work outcomes predict later forgiveness.

First, our study adds to research on forgiveness, especially in the work context. Related to previous studies showing that forgiveness is beneficial in close relationships (Bono et al., 2008; Karremans et al., 2003), our findings revealed that forgiveness is also beneficial in the workplace, as it predicts higher job satisfaction, higher work engagement, and lower burnout. As noted before, an explanation for this may be that a lack of forgiveness affects crucial work relationships. Because the lack of positive, supportive relationships at work has been related to numerous negative outcomes (Day & Leiter, 2014), forgiveness is likely to be associated with increased work outcomes, precisely because forgiveness helps employees to maintain stable work relationships (McCullough, 2000). Furthermore, employees may for various reasons find it difficult to forgive their coworker, despite the good relationship they have. The combination of a lack of forgiveness and the stable and good work relationship may contribute to psychological tension and stress, which may be a second reason for why forgiveness in work relationships reduces work outcomes (for a similar reasoning, see e.g., Karremans et al., 2003; Van der Wal et al., 2016). Finally, it could also be that group-level factors help explain the

association between forgiveness and work outcomes. For example, an individual's (or leader's) forgiveness may serve as an example for employees on how to deal with conflicts. In this way, interpersonal forgiveness may ultimately create a more forgiving organizational climate (Fehr & Gelfand, 2012), which in turn benefits outcomes in the workplace (Cox, 2011). These findings may inform our understanding of potential mechanisms (even complex feedback loops) of forgiveness and work outcomes in future research.

Second, our study provided compelling evidence that forgiveness resulted in better work outcomes across time, but we did not find evidence for the reverse effect. That is, individual work outcomes did not predict levels of forgiveness to an offending coworker. It could be that such a reversed pattern does not exist. It is also possible that third variables, such as feelings and thoughts, more indirectly help explain the path from work outcomes to forgiveness. For example, people with higher levels of job satisfaction may value their colleagues more, which in turn helps them to forgive (Law, 2013). Moreover, feeling emotionally exhausted at work may increase employees' negative affect (Little et al., 2007), which in turn makes it more difficult for people to forgive offending others (Fehr et al., 2010). For now, we only found evidence that forgiveness predicts better work outcomes, suggesting that even if the possible reverse indirect paths linking outcomes to forgiveness discussed above are viable, they are considerably weaker than the effects of forgiveness on outcomes.

Third, our findings are based on forgiveness between coworkers in relatively good work relationships. Although we had good reasons for focusing on the role of forgiveness in response to conflicts in particularly good work relationships (Author, 2021), the question remains whether forgiveness might also be beneficial in lower-quality work relationships. This is important because, especially in a work context, employees cannot always choose themselves who they work and interact with, including their supervisors, coworkers and subordinates (Day & Leiter, 2014). It is, for example, possible that in low-quality relationships interpersonal offenses are considered the rule rather than the

exception (as in high-quality relationships), perhaps (in the work context) leading to higher levels of turnover/withdrawal rather than stress and lower well-being. Given that forgiveness has exclusively been shown to be beneficial in relatively close and stable relationships (Bono et al., 2008; Karremans et al., 2003; Van der Wal et al., 2016), it remains unclear whether our findings can be generalized to offenses that take place in lower-quality work relationships.

Finally, the question remains whether it is *always* good to forgive an offending colleague, even in work relationships of relatively high quality. Although research on forgiveness generally highlights the positive consequences of forgiveness (Karremans et al., 2003, 2005; McCullough et al., 2001), it is important to note that forgiveness might in some circumstances have detrimental outcomes (Adams et al., 2015; Luchies et al., 2010; McNulty, 2011). In particular, in case of repeated offenses and without any signals that one will be safe and valued in the future (such as an apology), forgiving a coworker one has a good work relationship with may go at the cost of an individual's self-respect and self-concept clarity (Luchies et al., 2010).

Strengths, Limitations and Future Research

To our knowledge, the present research is among the first to examine the causal associations between forgiveness and general work outcomes. This research used a longitudinal design with four time points among employees working in a variety of different organizations in China. The use of recall methodologies asking participants to recall an incident happened in real organizational settings increased ecological validity (Barclay & Saldanha, 2016). At the same time, this research had several limitations that need to be discussed. First, our sample was predominantly Chinese; thus, it is unclear whether our results generalize among individuals with another cultural background. Moreover, due to the dropout resulting from the four-wave longitudinal design, this research draws on a relatively small sample size. In our analyses, we therefore treated the constructs as observable variables, instead of as latent factors

(see also Liu et al., 2020). Nevertheless, it is important that future research replicates our findings using a larger sample across different cultures.

A second limitation is the use of the recall method. First, the accuracy of the recall may be doubtful, as this kind of retroactive reporting could easily be colored by selective memory or current mood or recovery stages (Chi et al., 2019). For example, when participants recalled a hurtful incident from the past, they may have recalled events that they perceived as particularly severe, which could have affected the longevity of the effects found in our study (although identical findings were found when including and excluding perceived severity as a control variable – Appendix B). Moreover, in this longitudinal design, participants were required to recall an offense at Time 1 and reread it at the following study waves. Although unintended, this might have led to increased negative thoughts and feelings, which may have decreased levels of forgiveness (Fehr et al., 2010). We suggest more prospective research to replicate our findings.

A final limitation pertains to the self-report data. Although a longitudinal panel design and randomized presentation of questions may help reduce common method bias (CMB) to some extent (Podsakoff et al., 2003), there is still a possible influence of CMB on the results given that all dependent and independent variables were rated by the same source. Future research should include other measures of forgiveness and work outcomes, such as measuring forgiveness implicitly (IATs) (Goldring & Strelan, 2017), or behaviorally (Dorn et al., 2014). Also, objective data on work outcomes may be used, such as number of days absent, output maintained in organizational records (Koopmans et al., 2011) or subjective judgments from supervisors and peers (Taris, 2006).

Practical Implications

This research makes a meaningful contribution to the literature because it holds important insights for managers who want to prevent employee burnout and improve employee job satisfaction and work engagement. Our findings indicate that forgiveness might be an essential antecedent of employee well-

being, in that forgiveness has a small, yet significant and systematic effect on later work outcomes, controlling for earlier outcomes. On the one hand this underlines the need for managers (and, perhaps, employees themselves) to make sure that conflicts and incidents in the workplace are resolved quickly and effectively, as the adverse consequences of hurtful events tend to linger on for longer periods of time – the negative feelings associated with such events do not seem to go away quickly nor do their effects peter out at short notice, not even in the higher-quality relationships examined in the present study. On the other hand, it is noteworthy for managers that in order to achieve the benefits of forgiveness on employee well-being, the *benefits* of forgiveness are also especially visible in higher-quality work relationships. This indicates that in minimizing the adverse consequences of possibly hurtful events at work, managers might first try to promote connectedness and social relationships between employees as much as possible. This provides a fertile ground to ultimately reap the benefits of forgiveness at work (Struthers et al., 2005).

Conclusions

Whereas the topic of forgiveness has received much attention in research in social and clinical psychology, only recently scholars started to explore the role of forgiveness in an organizational context. Our research adds to the small and so far exclusively cross-sectional literature on forgiveness at work by showing that forgiveness causally predicts better work outcomes. These findings provide a starting point to further address and promote the topic of forgiveness at work.

Appendix A*Differences between matched samples and unmatched samples*

Variable	Matched samples			Unmatched samples			<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>		
Forgiveness	4.59	1.23	139	4.64	1.36	358	-0.38	.71
Job Satisfaction	5.56	0.98	139	5.60	1.16	358	-0.36	.72
Work Engagement	5.22	1.04	139	5.35	1.19	358	-1.13	.26
Burnout	2.91	1.30	139	3.12	1.43	358	-1.51	.13

Appendix B*Standardized path coefficients of M_{2a} excluding control variable*

	β	<i>SE</i>	<i>p</i>
Temporal stability effects			
Forg (T1) → Forg (T2)	.87	.02	.00
Forg (T2) → Forg (T3)	.91	.02	.00
Forg (T3) → Forg (T4)	.95	.01	.00
WO (T1) → WO (T2)	.80	.03	.00
WO (T2) → WO (T3)	.81	.03	.00
WO (T3) → WO (T4)	.90	.02	.00
Cross-lagged effects			
Forg (T1) → WO (T2)	.07	.03	.00
Forg (T2) → WO (T3)	.08	.03	.00
Forg (T3) → WO (T4)	.08	.03	.00

Note. Forg = Forgiveness; WO = Work outcomes; T1-T4 refer to Time 1-Time 4, respectively.

Chapter 4

Whether and why people forgive their offending colleagues over time: The trajectory of forgiveness and the role of organizational factors

This chapter is based on: Cao, W., van der Wal, R. C., & Taris, T. W. (2022). Whether and why people forgive their offending colleagues over time: The trajectory of forgiveness and the role of organizational factors. *Manuscript currently under editorial consideration (1st review)*.

Author contributions: Wenrui Cao (Conceptualization; Methodology; Software; Data curation; Formal analysis; Investigation; Visualization; Writing-original draft); Reine C. van der Wal (Conceptualization; Supervision; Validation; Writing-review & editing; Project administration); Toon W. Taris (Supervision; Validation; Writing-review & editing).

Abstract

As an effective way to address workplace mistreatment, forgiveness is receiving increasing attention in the work context. However, since forgiving others is a process that involves change in the attitudes towards an offender, it is surprising to see that little research has examined these across-time changes. Moreover, previous research has largely focused on individual and interpersonal factors affecting forgiveness, yet little is known about the role of organizational factors. The present research was designed to understand (i) how forgiveness develops in work relationships, and (ii) whether organizational factors affect this development. Using four-wave longitudinal data ($N = 139$) we examined the trajectory of forgiveness over time and whether this trajectory is influenced by possibly relevant organizational factors (i.e., forgiveness climate, social cohesion, team-member exchange, and leadership style). At the first wave, participants were asked to recall and describe a recent hurtful incident by one of their coworkers. At the follow-up waves, they were presented with the same offense. Latent growth analyses revealed that forgiveness remained at a similar level, rather than to increase over time. The initial level of forgiveness was influenced by all organizational factors, while change in forgiveness over time was not. Hence, while organizational factors influence the starting points of forgiveness, they are unrelated to how fast employees go through the forgiveness process. Additional exploratory analyses revealed that relational and offense-related factors also affected changes in forgiveness over time. Implications for a better understanding of the process of forgiveness in work relationships are discussed.

Keywords: forgiveness, workplace mistreatment, latent growth model

Introduction

In recent years, the topic of forgiveness at work has received increasing attention from scientific scholars (Faldetta, 2021; Zipay et al., 2021). These findings generally show that forgiveness is an effective way to address workplace mistreatment, maintain good work relationships (Thompson & Audrey Korsgaard, 2019) and achieve better work outcomes (e.g., job satisfaction, work engagement, and performance; Cao et al., 2021a, 2021b; Cox, 2011; Toussaint et al., 2018). Forgiveness can be defined as a prosocial change toward the offender despite the offender's hurtful actions (e.g., McCullough, 2001). It involves a process in which a victim becomes less motivated to retaliate against an offender, less motivated to keep distance from this offender, and more motivated to act in ways that benefit this offender (McCullough et al., 1997).

Although forgiveness is a process that takes place over time, researchers have investigated forgiveness overwhelmingly at a single point in time (Brady et al., 2022). Only few studies have examined forgiveness as a process of longitudinal change, showing that participants generally become more forgiving over time ('time heals all wounds', e.g., McCullough et al., 2010; Orth et al., 2008; Wohl & McGrath, 2007). Yet crucially, all these studies examined trajectories of forgiveness in close relationships (which are communal-based relationships; Clark & Mills, 1979), whereas it remains unknown whether this increase of forgiveness over time also applies to forgiveness in work relationships (where relationships are often dominated by economic exchanges, instrumental rationality, and formal procedures; Faldetta, 2021).

Moreover, by examining the developmental trajectory of forgiveness in work relationships it is possible to investigate another important question: that is, do organizational factors influence the process of forgiveness? For example, does more cohesion within a team or a more forgiving climate mean that employees forgive each other easier and faster? Although organizational

scholars have displayed an increasing interest in forgiveness in work relationships, only a handful studies took into account factors that characterize the organization or the team individuals work in. Overlooking the role of such organizational factors may result in an oversimplification of the processes through which forgiveness in work relationships emerges and unfolds (Fehr & Gelfand, 2012), and consequently, may ignore possible ways to improve the quality of relationships at work.

Addressing these gaps, the present research investigates (a) the temporal unfolding of forgiveness in work relationships and (b) whether various organizational factors (i.e., forgiveness climate, social cohesion, team-member exchange and transformational leadership) influence employee's trajectory of forgiveness.

The trajectory of forgiveness in work relationships

Forgiveness is widely recognized as a transformation from negative emotions, cognitions, and behaviors towards an offender, to positive ones (McCullough et al., 1997). This means that forgiveness is a sequential process that takes place over time, starting with the regulation of retaliatory tendencies and followed by the reparation of relationships (Holmgren, 1993; Rusbult et al., 2005). Although most researchers tend to conceptualize forgiveness in this way, forgiveness research has overwhelmingly relied on cross-sectional designs that usually only statistically controlled for the amount of time that elapsed since a particular transgression (e.g., Aquino et al., 2001; Toussaint et al., 2018; Zdaniuk & Bobocel, 2015). Such studies reveal mixed findings regarding the association between time and people's willingness to forgive. While some found that offenses that took place longer ago are more likely to be forgiven (Barclay & Saldanha, 2016), others reported that time since an offense occurred was negatively associated with employee's willingness to forgive (Cao et al., 2021b). Interestingly, in a meta-analytic synthesis, Fehr and colleagues (2010) reported a negligible association between the time passed since a transgression

and forgiveness. However, the few longitudinal studies that examined the forgiveness process reveal that over time individuals generally become more forgiving because of increased levels of empathy and decreased levels of perceived transgression severity (e.g., McCullough et al., 2003; Wohl & McGrath, 2007). Given that trajectories of forgiveness have only been studied in close relationships, the first goal of the study is to test the trajectory of forgiveness in work relationships. Based on the intuitively plausible notion that negative cognitions and emotions elicited by an offense fade out with time, and in line with previous findings in research on close relationships that forgiveness generally increases over time, we hypothesize that employees' forgiveness will increase over time:

Hypothesis 1: There is an increase in employee's willingness to forgive over time.

Organizational factors influencing the trajectory of forgiveness in work relationships

When examining employee attitudes and behaviors such as forgiveness, it is important to take the organizational context into account. Typical for many organizational contexts is that teams are used as the primary work units to reach organizational goals (Bell et al., 2018; Mathieu et al., 2017). Members of organizational teams usually view themselves as a social entity. Team members also develop common norms, share specific goals, and work within a specific team climate (Dasborough et al., 2020; Marks et al., 2001). These shared goals and norms strongly determine whether and how employees respond to workplace mistreatment (Aquino et al., 2001, 2006), such as responding prosocially (Hartnell et al., 2019; Zdaniuk & Bobocel, 2015), or constructively (Bobocel, 2013). The notion that team goals and norms influence employee behavior is a central tenet of Social Identity Theory (SIT; Tajfel & Turner, 1979). This theory posits that the extent to which employees identify with their team shapes their attitudes and behavior at work (Myers et al., 2009; Ramarajan, 2014). The stronger people identify with a

particular social group, the more likely it is that they take the collective perspective as self-defining and act in the collective best interest (Hogg et al., 2004; Sluss & Ashforth, 2007; Van Knippenberg & Van Schie, 2000). As previously mentioned, forgiveness is a process that requires employees to inhibit initial self-directed impulses (i.e., taking revenge) and instead respond on the basis of broader considerations, such as the value of the collective (McCullough et al., 1997). Following this reasoning, employees might be more forgiving toward workplace transgressions when broader considerations such as the collective identity are more salient.

We propose that forgiveness climate, social cohesion, team-member exchange, and transformational leadership are organizational factors that facilitate a collective identity among employees, which in turn enhances forgiveness in work relationships. Yet, the way in which these organizational factors evoke a collective identity, and hence impact employees' forgiving tendencies, might differ. Specifically, where forgiveness climate evokes a collective identity by means of shared norms of appropriate behaviors within the team, social cohesion and team-member exchange evoke a collective identity by focusing on the strength of social ties and work relationships within the team. Leaders evoke a collective identity by means of communicating important values as a role model (Epitropaki et al., 2017). Regardless of how a collective identity evolves, we reason that forgiveness in work relationships is more likely to take place when this collective identity is stronger.

Moreover, given that a collective identity tends to be continually salient (e.g., Brewer & Gardner, 1996; Gardner et al., 1999; Singelis, 1994), organizational factors may not just influence the initial response of forgiveness in the aftermath of a transgression, but also the subsequent development of forgiveness over time.

Below, we explain the association between the four organizational factors and forgiveness in more detail.

Forgiveness climate

The first organizational factor that positively affects forgiveness in work relationships is forgiveness climate (e.g., Cox, 2011; Fehr & Gelfand, 2019; Zhang & Long, 2014), which refers to the degree to which organizational members share the perception that “empathic, benevolent responses to conflict from victims and offenders are rewarded, supported and expected in organizations” (Fehr & Gelfand, 2012, p.666). Groups with higher levels of forgiveness climate share the norm that workplace aggression should be addressed with forgiveness. A higher forgiveness climate has also been associated with employees being more likely to form a friendly relationship with mutual tolerance (Yao et al., 2020), and being less likely to hold grudges, refrain from accusing one another when they face mistakes (Cox, 2011), and working through problems, including correcting the errors that may arise (Guchait et al., 2016, 2019). Based on this, we hypothesize that:

Hypothesis 2: Forgiveness climate is positively associated with (a) the initial level of forgiveness; (b) the increase in forgiveness over time.

Social cohesion

As one of the most widely studied team characteristics (Beal et al., 2003; Kozlowski & Ilgen, 2006), social cohesion is defined as a process that enables team members to “stay together” as they accomplish their goals/objectives and/or to satisfy the affective needs of each other (Carless & De Paola, 2000). It enables team members to act in concert to maintain a sense of team identity (Hagstrom & Selvin, 1965). Workers in highly cohesive work environments tend to have greater enthusiasm and engage in more positive and frequent interconnections with other team members

(Chen et al., 2009). Accordingly, they are more likely to identify themselves as members of the team. This shared collective identity helps to enhance their willingness to cooperate and help each other, and to devote more efforts to achieving collective goals (Abu Bakar & Sheer, 2013; Van Dyne et al., 1995). Previous research suggests that in highly cohesive work teams, employees engage in more prosocial behavior (e.g., organizational citizenship behavior) as an identity cue to verify their organizational identity (Decoster et al., 2013; Liu et al., 2011). Since forgiveness can be seen as a prosocial act (McCullough, 2001), we hypothesize that:

Hypothesis 3: Social cohesion is positively associated with (a) the initial level of forgiveness; (b) the increase in forgiveness over time.

Team-member exchange

A third organizational factor related to forgiveness is team-member exchange (TMX), defined as an employee's exchange relationship with teammates regarding contributing and receiving resources (Seers, 1989; Seers et al., 1995). A high-quality TMX is characterized by cooperation, collaboration, and higher social rewards. That is, individuals who are in high-quality TMX relationships are more likely to receive assistance from team members, and share information, ideas, and provide feedback within their team (Hülshager et al., 2009; Liden et al., 2000). Accordingly, employees reciprocate these valuable resources by behaving more prosocially toward other team members (Trivers, 1971). Additionally, higher levels of TMX imply that team members feel more attached to other team members, and experience higher quality work relationships (Iverson & Roy, 1994). Based on this, we hypothesize that:

Hypothesis 4: Team-member exchange is positively associated with (a) the initial level of forgiveness, and (b) the increase in forgiveness over time.

Transformational leadership

It is well-established that leaders have the power to inspire employee's attitudes and behaviors (Epitropaki et al., 2017; Hannah et al., 2009; Lord & Brown, 2001). Among various leadership behaviors, transformational leadership has the most direct impact on followers' self-concept as a member of a group through which follower identities are influenced (Avolio & Yammarino, 2013). Characterized by four categories of behaviors (i.e., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration), transformational leadership activates a collective identity of members by emphasizing shared values and by inspiring them through the leader's own self-sacrificing behavior to transcend their personal interests for the collective purpose (Bass, 1985; Paul et al., 2001; Shamir et al., 1993). Employees with a transformational leader are more likely to move beyond self-interest and work for the collective good (Koh et al., 2019; Pawar & Eastman, 1997; Yukl, 1999). Most importantly, Zdaniuk and Bobocel (2015) found empirical support for the proposition that leaders who increase the collective identity of followers (i.e., idealized influence of transformational leadership) facilitate forgiveness among employees (see also Kim et al., 2018). Therefore, we hypothesize that:

Hypothesis 5: Transformational leadership at baseline is positively associated with (a) the initial level of forgiveness; (b) the increase in forgiveness over time.

The Present Research

Although empirical work on forgiveness in work relationships is growing, none of these studies have modeled and tested forgiveness as a process that unfolds over time. This study deploys a longitudinal research design with a four-week interval and tests, using latent growth modeling, whether forgiveness after an offense by a colleague generally increases over a four-week period.

Moreover, given that organizational factors, which are unique to the workplace context, are generally strongly associated with forgiveness in work relationships, we further examine whether organizational factors influence this change. Specifically, we focus on four potentially relevant organizational factors (i.e., forgiveness climate, social cohesion, team-member exchange, and transformational leadership style), seeing whether these factors facilitate the increase of forgiveness in work relationships.

Method

Participants

Participants were recruited through Credamo, a professional Chinese platform for online data collection. Individuals of at least 18 years old and working at least 20 hours per week in a team with at least three other members were invited to take part in the study. This longitudinal study consisted of four time points (T1-T4), with a one-week interval between each time point (for a similar procedure, see McCullough et al., 2003). At Time 1, $n = 527$ eligible participants participated in the study. Three participants indicated that we should not use their data, and another $n = 27$ participants failed to follow our instruction to recall a hurtful incident by a coworker. Data were available for $n = 497$ employees at Time 1, $n = 139$ employees at Time 2, $n = 138$ employees at Time 3 and $n = 130$ employees at Time 4. Finally, 139 participants with full data on two or more time points were entered in the analyses. To investigate the potential impact of attrition, we tested mean-level differences on our key variables (forgiveness, job satisfaction, work engagement, and burnout) at Time 1 between participants who participated at all four time points and participants who dropped out of the study at some point after Time 1 ($n = 358$). Independent t-tests revealed no significant differences for any of the variables (see Appendix A), suggesting that our final sample was generally representative for the larger sample that started the study.

The sample comprised 56.1% women, with a mean age of 30.88 years ($SD = 6.19$), and most of the participants (77.7%) held a university degree. Participants worked in a variety of occupations for on average 47.76 hours per week ($SD = 8.26$), and had been working for 2.23 years ($SD = 1.93$) in the same team. When asked to indicate at which level they were working in the organization (with 1 being the lowest level and 10 being the highest level), most of them (69.8%) said they were positioned at a higher level (≥ 5). Participants received 28 yuan (about €3.50) in exchange for their participation at all time points.

Procedure

The study was approved by the Ethics Committee of our institution (#20-0149) and was preregistered at aspredicted.org (bit.ly/3t3vzvd)⁵. This study was part of a larger study.

At Time 1 (T1), after providing informed consent and demographic information, participants were firstly asked to complete questionnaires about organizational factors including forgiveness climate, social cohesion, team-member exchange, and transformational leadership. Then they were asked to recall and describe a hurtful incident by one of their coworkers that met the following conditions: 1) The hurtful incident took place in the workplace; 2) The hurtful incident took place in the past seven days; 3) The offender was someone with whom the participant generally has a good work relationship; 4) The participant felt or still feels hurt by the hurtful incident; and 5) It was the other to blame (at least from the perspective of the participant). An example description of a hurtful incident was “Two days ago, our team submitted a project proposal. As the project leader, I was very attentive and stayed up many nights doing more than 70% of the work. As a result, my supervisor thought the work was nicely done and when she submitted the project proposal, she assigned the position of project leader to herself. She stole the

⁵ The present study deviated slightly from the pre-registration study, especially since we included two additional organizational factors.

credit from me”. Next, they received some questions about the incident. As preregistered, we removed participants who did not follow the instructions (i.e., did not recall a hurtful incident by a close other that took place in the past seven days, $n = 27$). Participants also received questions about their level of forgiveness and their negative affect when thinking about the incident. At the following time points (T2-T4), participants were presented with the hurtful incident they recalled at Time 1, and were asked to read it again carefully. Next, they completed the same questions regarding the incident, forgiveness, and negative affect as at Time 1. Items within all scales were presented randomly. After completing the survey, participants were thanked and debriefed.

Measures

All items were presented in Chinese. Unless reported otherwise, participants responded to items on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree).

Forgiveness climate. Participants’ perceived forgiveness climate in their current workplace was measured with four items of the scale developed by Cox (2008). An example item is “In our team, we are forgiving of each other’s offenses”. The mean score of the four items was used as indicator of forgiveness climate.

Social cohesion. Social cohesion was measured using four items developed by Seers (1989). An example item is “The team I work in has a strong sense of togetherness”. The mean score of the four items was used as indicator of social cohesion.

Team-member exchange (TMX). TMX was measured using Seers’s 10-item scale (Seers, 1989). An example item is “Other team members understand my problems and needs”. The mean score of the 10 items was used as indicator of TMX.

Transformational leadership. Transformational leadership was measured using the scale developed by Bass and Avolio (1992), which includes four dimensions: idealized influence (three

items; e.g., “my leader makes others feel good to be around him/her”), inspirational motivation (three items; e.g., “my leader helps others find meaning in their work”), intellectual stimulation (three items; e.g., “my leader enables others to think about old problems in new ways”) and individualized consideration (three items; e.g., “my leader gives personal attention to others who seem rejected”). The mean score of the 12 items was used as indicator of transformational leadership.

Questions about the hurtful incident. After recalling the incident, participants received questions related to the incident. They were asked: (1) how long ago the hurtful incident had taken place (in days); (2) how they rated the quality of their work relationship with the offender *before* the hurtful incident took place on a scale from 1 (very low) to 7 (very high); (3) how severe they thought the incident was (three items, e.g., “The incident was severe”; van der Wal et al., 2014); and (4) whether it was their supervisor ($n = 38$), peer coworker ($n = 87$) or subordinate ($n = 14$) who had offended them.

Forgiveness. Forgiveness was assessed using the Transgression-Related Interpersonal Motivations Inventory (TRIM) developed by McCullough et al. (1998), which consists of three dimensions: benevolence toward the offender (four items; e.g., “Despite the incident, I want to have a positive relationship”), revenge (four items; e.g., “When I think about the incident, I wish that something bad would happen to him/her”) and avoidance (four items; e.g., “When I think about the incident, I would rather avoid him/her”). The revenge and avoidance subscale were reverse-coded. We then used the mean score of all items as indicator of forgiveness.

Statistical analyses

Preliminary Analyses

Any examination of change in a variable over time requires the demonstration of measurement invariance. We tested measurement invariance of forgiveness, (i.e. configural invariance, metric invariance, scalar invariance and residual variance), and found that forgiveness was measurement-invariant for factor loadings (i.e., the second-order metric invariance model showed adequate fit, RMSEA = .06, CFI = .93, TLI = .92, SMRM = .06). All analyses were conducted using the Mplus 8.6 statistical package (Muthén & Muthén, 2017) and models were evaluated using the chi-square test, the Root Mean Square Error of Approximation (RMSEA), the Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SMRM). As there is no consensus on the cut-off values indicating adequate fit (e.g., Lance et al., 2006), conservative guidelines were followed, with fit considered to be acceptable if RMSEA was lower than .08, TLI and CFI were .90 or higher, and SMRM was .08 or lower.

Latent Growth Curve (LGC) Analyses

First, unconditional growth curve models were estimated for forgiveness to examine average growth over time. An unconditional growth model is based on the repeated assessment of indicators across time, in this study across four time points, with the model accounting for the covariance structure as well as the mean structure. To determine the shape of forgiveness's trajectory, unconditional intercept-only, linear and nonlinear (i.e., quadratic) growth models were fit to the data. We used the Aikake information criterion (AIC), Bayesian Information Criterion (BIC), and the sample size-adjusted Bayesian information criterion (ABIC) to compare model fit, with lower values indicating better fit. In addition, we analyzed model fit indices of the respective

models (e.g., RMSEA, TLI, CFI). In LGC modeling, the measure of time is not incorporated as a separate variable but via the factor loading matrix (Curran, Bauer, & Willoughby, 2004). The factor loadings on the intercept factor were fixed to 1 and the loadings of the slope were fixed to values corresponding to the length of the time intervals (i.e., weeks), starting with 0 for the first assessment. In this study, assessments were distributed regularly over time; therefore, we fixed the loadings of the four repeated assessments to 0, 1, 2, and 3. Factor loadings on the quadratic slope were set as the squared linear terms (i.e., 0, 1, 4, and 9).

Second, conditional growth models with organizational factors as time-invariant predictors were estimated to examine whether the trajectory of forgiveness is influenced by four different organizational factors. Specifically, the parameters of trajectory (e.g., I, S, Q) were regressed on each organizational factor (i.e., forgiveness climate, social cohesion, TMX and transformational leadership).

Results

The trajectory of forgiveness in work relationships

Descriptive statistics are provided in Table 1. We first examined how forgiveness, independent of organizational factors, unfolded over time. Using Mplus 8.6 (Muthén & Muthén, 2017), we evaluated the fit of three possible models: an intercept-only (i.e., no growth) model, a lineal model and a nonlinear (i.e., quadratic) model to determine the growth pattern of development of forgiveness. Fit indices of the unconditional LGCs (intercept-only, linear slope, quadratic slope) are presented in Table 2. Significantly better than the intercept-only model, the linear model optimally fit our data, suggesting that the average person's forgiveness toward the offending coworker increased over time ($I = 4.49, p < .001$; $S = .08, p < .001$). In other words, the average individual had an initial status of 4.49 and forgave at a rate of 0.08 scale units per week.

Table 1*Descriptive Statistics and Correlations for Main Study Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Transformational leadership	(.93)										
2. Forgiveness climate	.49**	(.72)									
3. Social cohesion	.48**	.66**	(.83)								
4. Team-member exchange	.47**	.59**	.47**	(.90)							
5. Work relationship quality before the offense	.51**	.35**	.34**	.39**	(.85)						
6. Time	.15	-.07			.04						
7. Offender	.11	.12			.06	-.19*					
8. Forgiveness_T1	.28**	.21*	.21*	.25**	.48**	.04	.10	(.95)			
9. Forgiveness_T2	.27**	.22**	.20*	.27**	.47**	.01	.11	.87**	(.96)		
10. Forgiveness_T3	.20*	.26**	.21*	.23**	.40**	-.05	.08	.79**	.91**	(.96)	
11. Forgiveness_T4	.21*	.17	.13	.19*	.39**	-.01	.07	.81**	.90**	.95**	(.96)
<i>M</i>	14.57	5.29	5.77	5.47	5.40	4.82	1.83	4.59	4.51	4.62	4.75
<i>SD</i>	2.81	0.80	0.81	0.73	0.93	1.81	0.59	1.23	1.25	1.28	1.37

Note. $N = 130-139$; alphas are reported on the diagonal. * $p < .05$, ** $p < .01$ (two-tailed); Offender = Offended by supervisor = 1, offended-by-coworker = 2; offended-by-subordinate = 3; T1-T4 refer to Time 1-Time 4, respectively.

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

We then checked whether there was evidence for curvilinear change in employees' forgiveness. The inclusion of a quadratic latent factor significantly improved the model fit ($\Delta\chi^2(3) = 19.56, p < .001$), which suggested a non-linear component in the development of forgiveness over time. The intercept parameter was significant ($I = 4.36, p < .001$), indicating that the mean starting point of forgiveness deviated significantly from zero. The slope was negative ($S = -.09, p = .14$), indicating a decrease of forgiveness across time; but due to its non-significance, there was on average no development of forgiveness over time. However, the quadratic parameter, describing the mean change of the slope parameter, was positive and significant ($Q = .05, p < .01$), meaning that the forgiveness curve showed a convex curvilinear trend. In other words, the level of forgiveness decreased in the first week after the offense, and then increased over time. Moreover,

significant variances of I , S and Q (Table 2) suggested there were significant individual differences in starting levels, changes and quadratic rates in levels of forgiveness. That is, the development of forgiveness across time differed across employees, and different trajectories of forgiveness might exist. However, when we further explored the data and compared different quadratic models to retain the optimal number of trajectories (from one to eight), the one-cluster solution was selected as it provided the best and most parsimonious fit to the data (see Table 3 for model comparisons). It had the lowest AIC, BIC and ABIC, and the two-cluster solution did not significantly improve on the single-cluster solution (LMRT (p) = .31). We therefore retained the one-cluster solution, suggesting that forgiveness in work relationships generally develops in a non-linear trajectory (first a decrease and then an increase over time). Thus, hypothesis 1, stating that an employee's willingness to forgive increases over time, was not supported.

The role of organizational factors in the trajectory of forgiveness

We further tested whether organizational factors (i.e., forgiveness climate, social cohesion, TMX, and transformational leadership) significantly predicted the trajectory of forgiveness over a four-week period (H2-H5). A series of regression analyses were conducted to examine the prediction of the forgiveness trajectory by each organizational factor. We expected participants with higher scores on perceived forgiveness climate to have higher starting points of forgiveness and also to go through the process of forgiveness faster (H2), that is, to display steeper increases in forgiveness over time. The results indeed showed a significant positive association between forgiveness climate and the intercept parameter ($B = .33, p < .01$), but not for the slope parameter ($B = .10, p = .19$) or quadratic parameter ($B = -.04, p = .07$). Therefore, while Hypothesis 2a was supported, Hypothesis 2b was not.

Table 2
Fit Indices and LGC Model Comparisons

Models	χ^2	df	RMSEA	CFI	TLI	SRMR	AIC	BIC	ABIC	Mean			Variance		
										I	S	Q	I	S	Q
Intercept-only	47.69	5	.25	.94	.93	.14	1138.26	1164.47	1136.20	4.55**			1.44**		
Linear slope	21.21	5	.15	.98	.97	.06	1111.78	1138.19	1109.72	4.49**	.08**		1.30**	.04**	
Quadratic slope	1.65	2	.00	1.00	1.00	.02	1098.22	1133.44	1095.47	4.59**	-.09	.05**	1.51**	.42**	.02**

Note. AIC = Aikake information criterion; BIC = Bayesian information criterion; ABIC = Sample-size adjusted BIC. I = intercept, S = slope, Q = quadratic parameter.

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

Table 3
Fit indices for competing models

No. of classes	AIC	BIC	ABIC	Entropy	LMRT (p)	LMR-LRT(p)	BLRT(p)
1	1098.22	1133.44	1095.47				
2	1555.73	1588.01	1553.21	.83	.31	.32	.00
3	1292.78	1336.80	1289.34	.95	.00	.00	.00
4	1186.85	1242.60	1182.49	.94	.00	.00	.00
5	1147.10	1214.59	1141.83	.92	.05	.05	.00
6	1125.07	1204.30	1118.88	.93	.20	.21	.00
7	1130.60	1221.57	1123.49	.93	.67	.68	.53
8	1141.07	1243.78	1133.05	.94	.50	.50	.64

Note. AIC = Aikake information criterion; BIC = Bayesian information criterion; ABIC = Sample-size adjusted BIC; LMRT = Lo-Mendell-Rubin likelihood ratio test; LMR-LRT = Lo-Mendell-Rubin adjusted likelihood ratio test; BLRT = bootstrap likelihood ratio test.

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

Similar patterns were found for the other organizational factors social cohesion, TMX, and transformational leadership. Specifically, we found a significant association between social cohesion and the intercept parameter ($B = .32, p < .05$), but not the slope ($B = .06, p = .47$) or quadratic parameters ($B = -.03, p = .14$); a significant association between TMX and the intercept parameter, $B = .41, p < .01$, but not the slope ($B = .05, p = .56$) or quadratic parameters ($B = -.02, p = .33$); and a significant association between transformational leadership and the intercept parameter, $B = .12, p < .01$, but not the slope, $B = -.02, p = .43$, or quadratic parameters ($B = .00, p = .65$). Therefore, while hypotheses 3a-5a were supported, hypotheses 3b-5b were not.

Exploratory Analyses

In contrast to our expectations, the findings revealed that organizational factors affected initial levels of forgiveness but not changes in forgiveness over time. Changes in forgiveness over time could be influenced by time-varying variables (e.g., relational, and offense-related factors) rather than relatively stable organizational factors. For example, there is much evidence revealing that relational variables, such as the quality of the interpersonal relationship (e.g., Cao et al., 2021b; Finkel et al., 2002; Karremans et al., 2003), are proximal determinants of interpersonal forgiveness (McCullough et al., 1998). Moreover, offense-related factors, such as perceived severity of the transgression, are also well-documented to influence people's willingness to forgive (McCullough et al., 2003; Pronk et al., 2010; Zdaniuk & Bobocel, 2015).

In line with this, we conducted several additional exploratory analyses, testing whether work relationship quality and perceived offense severity as time-varying factors were associated with changes in forgiveness over time. Correlational analyses revealed that work relationship quality with the offender and perceived severity of the offense were both correlated with forgiveness within each time point (see Table 4). For both time-varying variables, the LGC model

was used for model specifications, the same one as was used for forgiveness. The results showed that linear models had the best fit for both work relationship quality and perceived offense severity (see Table 5). Specifically, work relationship quality increased over time with a positive and significant mean intercept ($I = 4.06, p < .01$) and slope ($S = .07, p < .01$). Further, perceived severity decreased over time, with a mean initial level at $I = 5.00, (p < .01)$ and mean slope at $S = -.24 (p < .01)$.

Table 4

Descriptive Statistics and Correlations for Exploratory Study Variables

		1	2	3	4	5	6	7	8	9	10	11	12
1	SEV_T1	.86											
2	SEV_T2	.73**	.86										
3	SEV_T3	.68**	.84**	1									
4	SEV_T4	.60**	.81**	.85**	.93								
5	RQ_T1	-.47**	-.58**	-.56**	-.54**								
6	RQ_T2	-.48**	-.62**	-.59**	-.58**	.74**							
7	RQ_T3	-.49**	-.61**	-.59**	-.62**	.71**	.78**						
8	RQ_T4	-.48**	-.63**	-.64**	-.61**	.79**	.83**	.87**					
9	Forg_T1	-.47**	-.63**	-.58**	-.60**	.79**	.71**	.69**	.75**	.95			
10	Forg_T2	-.42**	-.64**	-.61**	-.67**	.67**	.71**	.75**	.79**	.87**	.96		
11	Forg_T3	-.41**	-.60**	-.61**	-.70**	.67**	.64**	.74**	.80**	.79**	.91**	.96	
12	Forg_T4	-.43**	-.63**	-.66**	-.72**	.67**	.68**	.72**	.79**	.81**	.90**	.95**	.96
	<i>M</i>	5.06	4.72	4.54	4.31	4.06	4.13	4.22	4.29	4.59	4.51	4.62	4.75
	<i>SD</i>	1.27	1.27	1.37	1.63	1.32	1.20	1.32	1.31	1.23	1.25	1.28	1.37

Note. $N = 130-139$; alphas are reported on the diagonal * $p < .05$, ** $p < .01$ (two-tailed); SEV = Perceived severity; RQ = Relationship Quality; Forg = Forgiveness; T1-T4 refer to Time 1-Time 4, respectively.

Table 5
Model Comparisons for Time-varying Variables

Models	χ^2	df	RMSEA	CFI	TLI	SRMR	AIC	BIC	ABIC	I	S	Q
Work relationship quality												
Intercept-only	8.03	5	.07	.99	.99	.07	1361.72	1388.14	1359.66			
Linear slope	3.34	5	.00	1.00	1.00	.05	1357.04	1383.45	1354.98	4.06**	.07**	
Quadratic slope	3.31	4	.00	1.00	1.00	.05	1359.00	1388.35	1356.71	4.05**	.09	.01
Severity												
Intercept-only	57.29	5	.27	.89	.86	.28	1505.45	1531.86	1503.39			
Linear slope	3.82	5	.00	1.00	1.00	.04	1451.99	1478.40	1449.92	5.00**	-.24**	
Quadratic slope	2.99	4	.00	1.00	.98	.04	1453.16	1482.40	1450.86	5.04**	-.31**	.02

Note. AIC = Aikake information criterion; BIC = Bayesian information criterion; ABIC = Sample-size adjusted BIC. I = intercept, S = slope, Q = quadratic parameter.

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

We then ran conditional models in which the development of forgiveness was predicted by the trajectory of time-varying factors (i.e., work relationship quality and severity). The LGC models for each time-varying factor were combined with LGC models of forgiveness, and regressions between the latent growth parameters were modeled. In a first step, we modeled all possible covariances among the latent growth parameters, after which nonsignificant covariances were set to 0 (Sticca & Perren, 2015). For work relationship quality, the model fitted the data well ($\chi^2 = 39.72$, $df = 8$, RMSEA = .09, CFI = .99, TLI = .98, RMSEA = .05). The latent intercept of work relationship quality was found to be positively correlated with the latent intercept ($B = .96$, $p < .01$) and curvature of forgiveness ($B = .05$, $p < .05$), but negatively with its slope ($B = -.16$, $p < .05$). Therefore, high initial scores in work relationship quality after the transgression were associated with higher initial scores, steeper initial trends, and stronger changes in trends of forgiveness over time. Furthermore, the latent slope of work relationship quality was positively associated with the slope ($B = 2.71$, $p < .01$) and negatively with the curvature of forgiveness ($B = -.62$, $p < .01$). Accordingly, steep developments of work relationship quality were associated with steeper initial trends of forgiveness. For the effects of the development of severity on the development of forgiveness, the results showed that the initial level of forgiveness was significantly and negatively related to the initial level of severity ($B = -.79$, $p < .01$). Moreover, the slope of forgiveness was significantly and negatively related to the slope of severity ($B = -1.28$, $p < .01$). Therefore, time-varying factors (i.e., both work relationship quality, and severity) significantly affected the changes (especially the slope) of forgiveness over time.

Discussion

To our knowledge, our study is the first that tested the trajectory of forgiveness in work relationships over time. Additionally, we examined the role that organizational factors play in this

development. Echoing the call of Brady and colleagues (Brady et al., 2022) to consider temporal aspects when examining forgiveness in work relationships, we adopted latent growth modeling and explicitly incorporated the factor time. In a sample of working employees from China, we found that employees' willingness to forgive offending coworkers generally remained stable over a four-week period. Moreover, we found that organizational factors reflecting a collective identity (i.e., forgiveness climate, social cohesion, TMX and transformational leadership) indeed positively influenced initial forgiving responses, but not the changes in forgiveness over time. Exploratory analyses revealed that relational (i.e., work relationship quality), and offense-related factors (i.e., perceived offense severity) influenced changes in forgiveness over time.

This study contributes to the literature in several important ways. First, contrary to previous studies showing that forgiveness changes in a direct increasing trend (either a linear trend, e.g., McCullough et al., 2003; or a curvilinear trend, Pronk et al., 2010), we found that employee's willingness to forgive toward offending coworkers *declined* in the first few weeks after the offense, to increase only in the later weeks. Based on our data, it thus seems that forgiveness does not immediately increase after an offense, but rather takes some time. Recalling a hurtful offense by an offending colleague may have reopened old wounds, which may explain the lower levels of forgiveness in the first weeks. It could also be that if we had used different time points, different results could have been obtained. For example, McCullough et al. (2003) measured forgiveness in a cruder way that we did, taking measures once every two weeks (i.e., one, three, five, seven, and nine weeks after the offense). They found that people's avoidance and revenge motivations tended to decrease monotonously over time. Apparently, our more fine-grained analysis provided more detail and nuance regarding the development of forgiveness in the first part of the process of forgiving others.

Second, we found that organizational factors positively influence initial levels of forgiveness, which advances the literature of forgiveness in organizations by taking the specific context of work into account. That is, with higher levels of organizational factors (i.e., forgiveness climate, social cohesion, TMX and transformational leadership) that are in some way expected to promote a collective identity, employees are more likely to forgive the offending coworkers at the initial stage. This is in line with previous research suggesting that transformational leadership (Zdaniuk & Bobocel, 2015) and forgiveness climate (Cox, 2011) facilitate employee forgiveness. In this way, our research highlights the substantial effects of the characteristics of working teams and organizations on employee reactions to workplace transgressions (e.g., forgiveness). This adds to the often-studied intrapersonal and interpersonal antecedents of forgiveness (such as perceived severity, relationship quality, apology etc.; Aquino et al., 2001, 2006; Byrne et al., 2014). Therefore, based on the evidence provided in this research, further research investigating forgiveness in work relationships should take into account the broader work context (i.e., the environment employees work in).

However, while these organizational factors affected initial levels of forgiveness, they were unrelated to changes of forgiveness in work relationships. One explanation could be that participants' responses to the organizational factors in the present study did not show enough variation. That is, all participants were working in "good" organizations/teams (i.e., with generally high levels of perceived forgiveness climate, social cohesion, TMX and transformational leadership). To obtain more systematic variance in the data and thus enlarge statistical power, future research may manipulate different levels (i.e., high vs. low) of these organizational factors to investigate whether these organizational factors also determine the changes of forgiveness. Based on the findings from the exploratory analyses, it could also be that more proximal factors

such as relational and offense-related factors influence the development of forgiveness. This is in line with previous research that individuals are increasingly motivated to forgive offenders with whom they retain a high-value relationship that they want to continue (McCullough et al., 2010), or when they perceive an offense to be less severe (e.g., Kachadourian et al., 2005; McCullough et al., 1998). Thus, in addition to characteristics of the work environment, relational and offense-related factors remain important for understanding the unfolding of forgiveness in work relationships.

Practical implications

The present research has several important implications for practice. First, this research highlights the role of organizational factors in facilitating prosocial responses to mistreatment in work relationships (i.e., forgiveness). Fortunately, these organizational factors can be cultivated and changed (Avolio et al., 2009). For example, organizations can strategically select and/or train leaders to be more transformational, which in turn is associated with higher levels of forgiveness in work relationships. Moreover, human resources management could focus on encouraging employees to be more benevolent and moral, which should facilitate the emergence of a forgiveness climate. Additionally, based on our reasoning that organizational factors can facilitate forgiveness through evoking a collective identity, any intervention that heightens employee collective identity may also be able to facilitate forgiveness. For example, team-building exercises, social events that emphasize shared values, and organizational routines should help to strengthen the sense of collective identity and, in turn, facilitate forgiveness as well.

Second, our findings suggest that the trajectory of forgiveness over time is predicted by time-varying proximal variables that are related to the qualities of the interpersonal relationship and the offense. That is, we found that an increase in perceived work relationship quality after the

offense also predicted an increase of forgiveness, which is in line with previous research showing strong associations between work relationship quality and forgiveness (e.g., Cao et al., 2021a; 2021b). Thus, organizations and managers should focus on building and maintaining crucial social relationships in the workplace. For example, in addition to interventions focusing on relational repair after a transgression, managers should also be diligent in discouraging or preventing transgressions from occurring in the workplace. Establishing strong norms to trust each other and maintain harmony would also help maintaining good and stable work relationships (Karremans et al., 2011; Schoorman & Ballinger, 2022).

Limitation and Future research

Our findings should be interpreted in light of some limitations. Our first limitation concerns the relatively small sample size ($N = 139$), as previous sample sizes used in similar studies ranged from 73 to 372 (McCullough et al., 2003, 2010; Pronk et al., 2010). Future research should replicate our findings using a larger sample. Additionally, the sample of our research exclusively came from China, a typical eastern/collectivistic culture where it is important to be part of the collective (i.e., have a collective identity; Hook et al., 2009). This could mean that workers who experience transgressions are more motivated to restore relationships with the transgressor (i.e., to forgive them) than members of individualistic cultures. In this sense it remains unclear whether our findings can be generalized to other cultures. However, note that the basic presumptions relating to characteristics of the forgiveness process (i.e., the recognition of transgression and types of transgression) do not differ across eastern and western cultures (Ho & Worthington, 2020). Indeed, some research found that participants from individualistic cultures reported even *higher* levels of forgiveness than those in collectivistic cultures (Radulovic et al., 2019). With more

studies on forgiveness carried out in different cultural contexts, our knowledge of forgiveness and its process will be more comprehensive.

Second, we exclusively relied on self-report measures. Although the use of recall methodologies asking participants to recall an incident that happened in a real organizational context increases ecological validity (Barclay & Saldanha, 2016), these self-reported responses might be biased by social desirability and common method bias (Podsakoff et al., 2003, 2012). An idea for future research would be to use collective-level measures for collective-level constructs, which could be obtained by aggregating the individual perceptions of team or organization-level variables to their according levels. For example, aggregating individuals' perception of forgiveness climate into a team level might be appropriate to understand the team-level climate, and help to reduce the risk of common method bias.

Third, although we measured forgiveness in a longitudinal design, the organizational factors were measured only at baseline. Therefore, we cannot rule out the possibility that the reverse pattern also holds, such that an employee's willingness to forgive influences organizational factors. To illustrate, studies have found that forgiveness is an important way to maintain social harmony in a group (McCullough, 2000), in which forgiveness leads to greater levels of perceived social and emotional support and an enhanced sense of community and connectedness with others (Park, 2012). Future longitudinal research measuring both forgiveness and organizational factors at multiple time points is needed to determine whether interpersonal forgiveness can influence organizational factors as well.

Conclusion

Conflicts are inevitable in the workplace and increasing attention has been paid by organizational and managerial researchers on forgiveness to deal with the conflicts. It has been

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suggested that forgiveness has important benefits for individuals, relationships, as well as organizations (Faldetta, 2021). Although forgiveness is often defined as a transformation of motivation that takes place over time, its longitudinal development had as yet not been tested empirically in a work context. Using latent growth models, our findings reveal a general stable pattern in forgiveness over time in work relationships. Moreover, organizational factors (i.e., forgiveness climate, social cohesion, TMX and transformational leadership) are important because they determine employees' starting point of forgiveness. However, organizational factors did not influence the change in forgiveness over time. Work relationship quality with the offender and perceived severity of the offense may in the end determine how easy or difficult it is to forgive an offending employee.

Chapter 5

What do leaders bring to the table? Investigating the role of leaders' forgiveness on employees' forgiveness

This chapter is based on: Cao, W., Taris, T. W., & van der Wal, R. C. What do leaders bring to the table? Investigating the role of leaders' forgiveness on employees' forgiveness. *Manuscript currently in preparation for submission.*

Author contributions: Wenrui Cao (Conceptualization; Methodology; Software; Data curation; Formal analysis; Investigation; Visualization; Writing-original draft); Reine C. van der Wal (Conceptualization; Supervision; Validation; Writing-review & editing; Project administration); Toon W. Taris (Supervision Validation; Writing-review & editing).

Abstract

In recent years, the constructive role of forgiveness in addressing workplace conflicts has received increasing attention. Previous research focused almost exclusively on the offender-victim dyad, yet little is known about the role of the leader. The present research explores the role of leaders' forgiveness. Specifically, we investigate whether leaders' tendency and/or leaders' instructions to forgive others are associated with employees' forgiveness toward offending coworkers, thereby considering the offender-victim work relationship quality. Study 1 (an autobiographic recall study; $N = 478$) revealed that in addition to work relationship quality, employee-perceived leader tendency to forgive and instructions to forgive were both positively associated with employee forgiveness. Moreover, the associations between leaders' tendency to forgive and employees' forgiveness were stronger when leaders also instructed their employees to forgive others. Study 2 (a scenario-based between-subjects experiment; $N = 237$) showed that only leaders' instructions to forgive others was associated with higher employee forgiveness. This association was replicated in Study 3 (a multi-source scenario study with $N = 186$ members in 37 teams). The main effect of employee perceptions of leader tendency to forgive was found in only one of the scenarios. Moreover, leaders' self-reported tendency to forgive was also associated with higher employee willingness to forgive. Hence, leaders seem to play a crucial role in employees' forgiveness. Implications for a better understanding of how leaders' forgiveness associates with employee forgiveness are discussed.

Keywords: forgiveness, leaders' forgiveness, work relationship quality, multi-level analysis

Introduction

Forgiveness has recently received increasing attention in dealing with workplace mistreatment (Aquino et al., 2001; Cao et al., 2021b). Defined as a prosocial change toward an offender despite an offender's hurtful actions (e.g., McCullough et al., 1998, 2001), forgiveness offers significant benefits including increased physical, psychological and relational well-being (e.g., Karremans et al., 2003; Karremans & Van Lange, 2008), as well as better outcomes at work (e.g., job satisfaction, work engagement, productivity; Cao et al., 2021a; Cox, 2011; Toussaint et al., 2018).

Given the important benefits of forgiveness, scholars have attempted to understand the factors associated with forgiveness in work relationships. Previous work mainly focused on factors associated with the offender-victim dyad, such as the relationship between victim and offender (i.e., work relationship quality) (Cao et al., 2021b; Radulovic et al., 2019; Thompson & Audrey Korsgaard, 2019). Yet, forgiveness in the work context is likely also influenced by distal factors, such as the leader (e.g., Kim et al., 2018; Zdaniuk & Bobocel, 2015). Zdaniuk and Bobocel (2015) indeed report that leaders who emphasize collective interests facilitate forgiveness among employees. Moreover, considered as a critical virtue for a modern leader (Caldwell & Dixon, 2010), leaders being forgiving is related to more citizenship behaviors and less counterproductive behaviors (Lee et al., 2020; Zhang et al., 2019). However, it remains unknown whether leaders' forgiveness is associated with employees' forgiveness. This is the focus of the present research.

Based on social learning theory (Bandura, 1977, 1986), we specify two potential pathways through which leaders' forgiveness is associated with employees' forgiveness. One in which leaders indirectly influence their employees' forgiveness through their own tendency to forgive others, and a second one in which leaders influence their employees' forgiveness through direct

instructions to forgive or not. In line with principles of behavioral integrity theory, employees are more likely to be influenced by their leaders if the latter's words and actions are consistent (Simons, 2002). We therefore also explore the interaction between leaders' tendency and leaders' instructions to forgive others on employees' forgiveness.

Taken together, the present research investigates the role of leaders' tendency and leaders' instructions to forgive as well as their interaction on employees' forgiveness, thereby considering work relationship quality between victim and offender.

Forgiveness in work relationships

As a strategy to deal with workplace transgressions, forgiveness is easier said than done. Among numerous potential predictors of interpersonal forgiveness, the quality of the relationship between victim and offender has been demonstrated to be important across different types of relationships. For example, people are more likely to forgive friends and close relationship partners than more distant or neutral others (Karremans et al., 2011; Karremans & Aarts, 2007). Employees are also more likely to forgive those with whom they have a high vs. low-quality work relationship (Cao et al., 2021b). Radulovic and colleagues (2019) additionally demonstrated that employees who enjoy higher levels of exchange quality with an offender (i.e. their leader), are more likely to achieve forgiveness. Such findings support the notion that employees are more willing to forgive an offending coworker to maintain essential work relationships, despite the inevitable offenses that occur within these relationships. Therefore, we propose that:

Hypothesis 1: Work relationship quality between victim and offender is positively associated with employees' willingness to forgive an offending colleague

The role of leaders' forgiveness

Leaders are functional in conflict management as well as impacting the reactions of employees toward workplace conflicts (Robijn et al., 2020; Römer et al., 2012). Drawing from social learning theory (Bandura, 1977, 1986), employees can learn from their leaders in two ways, such as through vicarious experience (e.g., learning from the behaviors of some model persons) and verbal persuasion by others (e.g., being encouraged to achieve a certain behavior). In this vein, leaders' forgiveness is likely to be associated with employees through two approaches, by: (a) indirectly setting a role model of forgiveness and (b) directly providing explicit instructions to forgive.

Social learning theory (Bandura, 1977, 1986) states that people learn new attitudes, values, and behaviors through overt reinforcement or punishment or via observational learning from attractive and credible models in their environment. It involves a number of processes through which individuals develop skills via interactions with others, often from people of higher status, experience, or power, such as parents (e.g., Grusec, 1992; Maio et al., 2008), and leaders (e.g., Lian et al., 2020; Paterson & Huang, 2019).

The idea that leaders can serve as role models is not new. Organizational research often uses social learning theory (Bandura, 1977, 1986) to explain how employees' emotions, cognitions, and behaviors at work are formed by leaders. For example, ethical leaders attract followers' attention to their ethical practices and decision-making norms, and can thus spread similar behavior throughout the organization as followers imitate their leader (Banks et al., 2021; Brown & Treviño, 2006). Similarly, servant leaders facilitate employees' engagement in serving behaviors (Wu et al., 2021). Jiang and Lin (2021) even showed that moral leadership can trickle-down from managers (senior leaders) to employee's direct supervisors, thereby reducing

employees' unethical behavior. A similar mechanism may apply to leaders with a general higher forgiving tendency. Employees may (unconsciously) observe and learn from this, which in turn influences employees to also forgive others when they are offended. Therefore, we propose that:

Hypothesis 2: Leaders' tendency to forgive is positively associated with employees' forgiveness tendencies toward offending colleagues.

However, behavioral imitation is only one aspect of social learning theory. In addition to imitating a role model's behavior, individuals can also learn from direct instructions (or verbal persuasion). This is in line with the notion that children can acquire behavioral patterns via direct instructions from their parents (e.g., Vygotsky & Cole, 1978) and students can obtain better school performance with strong teacher directiveness. Linking this approach to the work context, leaders can provide direct and explicit instructions to ask victims to forgive others when they are offended by coworkers. Previous research suggests that direct persuasion from leaders is influential in shaping employees' attitudes and behaviors, because leaders control an employee's time, resources and personal interactions (Loi et al., 2012). For example, leaders using verbal persuasion can shape employee efficacy beliefs (Murphy & Ensher, 1999; Tierney & Farmer, 2002) and emphasize the organization's mission (Shamir et al., 1993). Moreover, leaders who encourage a positive work environment by communicating what is appropriate and ethical, reduce mistreatment at work (Kath et al., 2009; Stouten et al., 2010). In this vein, leaders share an acceptable code of conduct through direct instructions to forgive, thereby setting clear norms for forgiveness in responding to workplace conflicts, which in turn may guide employee's forgiveness. Therefore, we propose that:

Hypothesis 3: Leaders' instructions to forgive is positively associated with employees' forgiveness tendencies toward offending colleagues.

Leaders' forgiveness: practice what you preach

It is likely that leaders' tendency and leaders' instructions to forgive are jointly, i.e., in interaction, associated with employees' willingness to forgive. Employees try to make sense of their leaders' values and behaviors, presumably allowing them to predict and control their future fate under the leader (Greenbaum et al., 2015). Drawing on behavioral integrity theory (Simons, 2002), employees try to figure out the pattern of managers' alignment between their words and deeds. Leaders are deemed hypocrites when they express certain values to their employees but fail to uphold those values as demonstrated by their attitudes and/or behaviors (Cha & Edmondson, 2006; Trevino et al., 2000). When a leader's moral integrity is in doubt, this leader will more likely fail to influence followers in achieving organizational goals (Kanungo, 2001). Indeed, Greenbaum and colleagues (2015) found that the relationships between an organization and its employees turn bad when employees perceive their leaders' behavior as hypocritical. Thus, when leaders instruct employees to forgive others in the workplace while having a low tendency to forgive themselves, employees may label their leaders as hypocrites (Bharanitharan et al., 2021), and may be less likely to accept these leaders as role models. Indeed, Eisenkopf (2020) confirmed that the alignment of words and deeds induces followers to act like their leader. Thus, when employees perceive the alignment of leaders' high-level of forgiveness tendency and high-level of instructions, they may be more likely to forgive offending others. Therefore, we propose that:

Hypothesis 4: The positive association between perceived leaders' instructions to forgive and employees' forgiveness toward offending colleagues is stronger when perceptions of leaders' tendency to forgive are higher ('practice what you preach').

Overview of Studies

The proposed research model is shown in Figure 1. To test our hypotheses, we conducted three studies. In Study 1, we used an established autobiographic recall procedure (Wallace et al., 2008). We examined whether leaders’ forgiveness was associated with employees’ forgiveness. To find further evidence for our hypotheses, in Study 2, we used a scenario-based experiment design in which all participants experienced the same transgression. Given that studies 1 and 2 both relied on single-source data, Study 3 used multi-source data collected from both team members and team leaders to partial out the biases related to incorporating only one measurement perspective. These diverse methods complement each other and reinforce confidence in our findings (Campbell & Fiske, 1959).

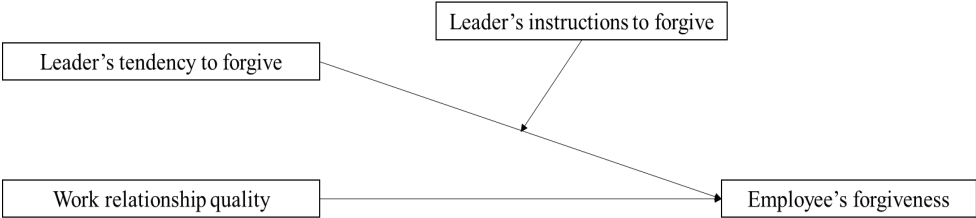


Figure 1. Research model

Moreover, we considered some control variables. First, in all studies we considered work relationship quality between victim and offender. As mentioned, victims’ perceived work relationship quality with the offender is one of the most important predictors of employees’ forgiveness (Cao et al., 2021b). Therefore, in Study 1, we manipulated work relationship quality (high vs. low) and examined whether leaders’ forgiveness explains additional variance in employees’ forgiveness. In Study 2 and 3, we solely focused on high quality work relationships. Second, in line with previous research (e.g., Aquino et al., 2006; Bobocel, 2013; Fehr et al., 2010), we also considered time - how long ago (in days) the hurtful incident took place - and severity -

how severe employees thought the incident was. Finally, we took into account leader-member exchange relationship between the leader and the employee (LMX; Scandura & Graen, 1984), since employees are more likely to be influenced by leaders when they have high-quality relationships with them (Brown & Treviño, 2014).

Study 1

As an initial starting point for our line of reasoning, in Study 1 we investigated whether leaders' tendency to forgive, leaders' instructions to forgive, as well as their interaction are associated with higher levels of forgiveness among employees (hypotheses 1-4), after taking into account work relationship quality between victim and offender. Moreover, as pre-registered, we did not only examine whether leaders play an additional role in employees' forgiveness next from work relationship quality, we also examined whether leaders' forgiveness in interaction with work relationship quality is associated with employees' forgiveness. In other words, we tested whether the associations between leaders' forgiveness and employees' forgiveness depend on the quality of work relationship between victim and offender. Perhaps especially when employees trust and respect the offending coworker (i.e., high quality work relationship) they may imitate and learn from their leaders' behavior (indirect) or follow their leaders' instructions (direct). Therefore, in Study 1, we additionally hypothesized:

Hypothesis 5: The positive associations between employees' forgiveness toward offending colleagues and (a) perceived leaders' tendency to forgive; (b) perceived leaders' instructions to forgive are stronger when work relationship quality between victim and offender is higher.

Furthermore, we took into account the interaction between the two approaches of leaders' forgiveness (i.e., leaders' tendency and instructions to forgive) as well as work relationship quality between victim and offender, implying that the *practice what you preach* hypothesis (H4) is

contingent on relationship quality within the transgression dyad. Therefore, we predicted that: The practice-what-you-preach hypothesis (H4) is further moderated by work relationship quality. That is:

Hypothesis 6: especially in relatively high-quality work relationships, higher perceptions of leaders' instructions to forgive and higher perceptions of leaders' tendency to forgive are associated with more forgiveness among employees (i.e., a significant three-way interaction).

Method

Participants

The study was approved by the Ethics Committee of our institution and preregistered at aspredicted.org (https://aspredicted.org/see_one.php). The minimum sample size needed for this study was identified through data simulation in R. We ran an a-priori power analysis with an alpha level of 0.05 and 80% power using the package *paramtest* (Hughes, 2017), simulating a multiple linear regression with three main effects, three two-way interactions, and one three-way interaction. The results of the simulation showed that to achieve the desired power for the three-way interaction, at least 430 participants were needed. Considering drop-out and outliers, we decided to collect around 600 observations. Participants were recruited through Credamo, a professional Chinese platform for online data collection. Individuals were invited to participate if they were at least 18 years old, worked at least 20 hours per week in a team with at least three other members, and worked with the same leader for at least three months. We received 628 complete responses. After removing two participants who indicated that they worked less than 20 hours per week and 148 participants who failed an instructional manipulation check based on the criteria explained below (Oppenheimer et al., 2009), our final sample consisted of 478 participants (225 male and 252 female). The average age of participants was 30.42 years ($SD = 5.55$) ranging from 20 to 57 years

old, and they mostly held a bachelor's degree (72.6%). On average, they worked 45.02 hours per week ($SD = 7.21$) in a broad variety of industries (i.e., internet communications and electronic (24.5%), manufacturing (20.5%), education (11.9%), banking, finance, and insurance (10.3%), et cetera). The average number of working years with their leader was 3.81 years ($SD = 2.63$) and average number of working years in their teams was 3.76 years ($SD = 2.47$). The average team size was 18 persons ($SD = 37.74$). In terms of participants' hierarchical position, the average job level was 5.5 ($SD = 1.70$) from 1 = the lowest level to 10 = the highest level. Participants received 8 yuan (about €1.0) for their participation in this study.

Procedure

After providing informed consent, participants completed a survey consisting of three parts. Part 1 consisted of questionnaires about their leader including perceived leaders' tendency to forgive, perceived leaders' instructions to forgive, and leader-member exchange (LMX). Part 2 consisted of incident-related questions: participants were asked to recall and describe a hurtful incident including the following restrictions: (1) The incident happened recently in the workplace; (2) The offender is a coworker (but not the leader) in the same team; (3) The participant felt or still feel hurt by the incident; (4) It was the other to blame (at least from the perspective of the participant). Participants were assigned to the high or low work relationship quality condition. Participants were asked to recall an offense that was committed by a coworker they had a **high (vs. low)-quality work relationship** with before the offense. A high-quality work relationship means that they trust and respect the other person (vs. they do not really trust and respect the other person). For instance, the other person knows their potential, understands, and helps them with their problems and needs, and works efficiently with them (vs. knows little about their potential, does not understand or help, and works less efficiently with them). Next, in both conditions, participants

received questions about the incident. As preregistered, participants who failed to follow instructions (e.g., who were assigned to the high work relationship quality condition but recalled an incident by a low work relationship quality other) were excluded from further analysis ($N = 148$). Part 1 and Part 2 were presented to participants in random order and the items within their scales were also randomized. Finally, participants completed questions regarding their demographic information (Part 3). Items within scales were presented randomly. Participants were allowed to quit the survey at any point but could not return to previous screens to change earlier responses. After completing the survey, participants were provided with opportunities to write comments and the author's contact information was provided for questions (if any). Moreover, they were thoroughly thanked and debriefed by reading the rationale and purpose of this study at the end of the survey.

Measures

All items were presented in Chinese. Unless reported otherwise, participants responded to items on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree). The internal consistency (Cronbach's alpha) of the multi-item measures varied from 0.73 to 0.96 (cf. Table 1), and $Malpha$ was 0.86.

Leaders' tendency to forgive. We used the tendency to forgive scale (TTF; Brown, 2003) to assess employees' perceptions of their leaders' forgiving tendencies toward others. Participants were asked to indicate how their leader generally responds to being offended in the workplace. An example item is "My leader tends to get over it quickly when someone hurts his/her feelings".

Leaders' instructions to forgive. Participants were asked to indicate the extent to which their leaders generally give the following explicit instructions to them when they are offended by a coworker in the team. We used the three dimensions of the Transgression-Related Interpersonal

Motivations Inventory (TRIM; McCullough et al., 1998) to measure explicit instructions from the leader, and adapted them in the following way: 1) Instructions to be benevolent (four items, e.g., "When I am offended by another coworker, my leader generally advises me to forgive the offending coworker". 2) Instructions to avoid (three items; e.g., "When I am offended by another coworker, my leader generally advises me to keep distance from the offending coworker"), and 3) Instructions to retaliate (three items; e.g., "When I am offended by another coworker, my leader generally advises me take revenge in one way or another". Response categories ranged from 1 (not at all) to 7 (always) in all cases.

Employees' willingness to forgive. Employees' willingness to forgive was assessed using the TRIM (McCullough et al., 1998), which consists of 3 dimensions: forgiveness toward the offender (four items; e.g., "Despite the incident, I want to have a positive relationship"), revenge (four items; e.g., "When I think about the incident, I wish that something bad would happen to him/her") and avoidance (four items; e.g., "When I think about the incident, I would rather avoid him/her"). We reverse-scored the revenge and avoidance subscales and used the mean score of all items as our indicator of forgiveness. Thus, a higher score indicated a higher willingness to forgive.

Questions about the hurtful incident. After describing the hurtful incident, participants received some questions about the incident. Participants were asked how long ago the hurtful incident took place (in days), how severe they thought the incident was (three items; e.g., "The incident was severe"), and their work relationship quality with the offender before the incident took place (1 = very low, 7 = very high).

Leader-member exchange (LMX). Leader-member exchange relationship between the leader and the participant was measured with the LMX-7 (Scandura & Graen, 1984). An example item was "my leader knows my problems".

Statistical analysis

Confirmatory factor analyses (CFA) were conducted to test the measurement model for our study variables. Model fit was assessed by several goodness-of-fit indices in Mplus 8.3 (Muthén & Muthén, 2015). All models were evaluated using the chi-square test, the Root Mean Square Error of Approximation (RMSEA), the Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SMRM). As there is no consensus on cut-off values for adequate fit (Lance et al., 2006), conservative guidelines were followed, with fit considered to be acceptable if RMSEA is lower than 0.08, TLI and CFI are 0.90 or higher, and SMRM is 0.08 or lower (Bentler, 1980; Hu & Bentler, 1999). To address the possible issue of same source bias, we also conducted a Harman One-Factor Test (Podsakoff et al., 2012).

Correlational analyses were conducted to obtain basic insight into the data. Analysis of variance tests (ANOVA) were used to check our manipulation to ensure that high and low work relationship quality operated as we expected. Then, stepwise multiple regression analysis (in SPSS 27) was used to examine the hypotheses. The predictors were first centered, to avoid multicollinearity between the predictors and interaction terms, and then entered into the regression in the following five steps: (1) control variables including time, severity, and LMX (if confirmed in the correlational analysis); (2) work relationship quality (*H1*); (3) leaders' tendency to forgive (*H2*) and leaders' instruction to forgive (*H3*); (4) three two-way interaction terms (*H4*, *H5*); (5) the three-way interaction term (*H6*).

Results

Discriminant validity

To examine the distinctiveness of the measured variables, we conducted confirmatory factor analyses (CFAs) within Mplus 8.6 (Muthén & Muthén, 2017). The results showed that the

five-factor structure (perceived leaders' tendency to forgive, perceived leaders' instructions to forgive, LMX, perceived severity, employee's willingness to forgive) had the best fit with the data ($\chi^2 = 1176.84$, $df = 578$; TLI = .95; CFI = .95; RMSEA = .05; SRMR = .06) compared to alternative models.

Harman's one-factor test

We entered all the measured study variables into an exploratory factor analysis using unrotated principal axis factoring analysis to determine whether one factor emerges or whether one factor accounts for the largest part of the covariance among the measures (with a commonly accepted threshold of 50%). The results of the analysis revealed that 33.29% (<50%) of the total variance was accounted for by this factor, indicating that common method bias was not a major concern in this study.

Descriptive statistics

The means, standard deviations, reliabilities, and intercorrelations for the variables in Study 1 are presented in Table 1. Employees perceived that their leaders had a relatively high tendency to forgive others ($M = 4.74$, $SD = 1.25$) and instructed them to forgive others quite frequently ($M = 5.21$, $SD = .88$). More specifically, employees perceived their leaders to instruct them to respond with benevolence (69.7%), avoidance (16.7%), and retaliation (2.5%) toward an offending coworker.

Table 1
Descriptive Statistics and Correlations for Main Study Variables (Study 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Time	51.98	122.30							
2. Severity	5.58	0.82	.14**	(.73)					
3. Leader-member exchange	5.54	0.74	-0.05	.15**	(.85)				
4. Work relationship quality	1.50	0.50	0.03	-.13**	-0.01				
5. Leaders' tendency to forgive	4.74	1.25	-.13**	-0.02	.61**	0.01	(.91)		
6. Leaders' instructions to forgive	5.21	0.88	-.11*	-0.01	.33**	0.04	.60**	(.87)	
7. Employees' willingness to forgive	3.90	1.42	-.14**	-.28**	.27**	.35**	.49**	.50**	(.96)

Note. *N* = 478; alphas are reported on the diagonal. * *p* < .05. ** *p* < .01 (two-tailed). Work relationship quality: Low work relationship quality condition = 1, High work relationship quality condition = 2.

As expected, work relationship quality was positively associated with employee's willingness to forgive ($r = .35, p < .01$). Most importantly, both leaders' tendency to forgive and leaders' instructions to forgive were also positively correlated with employee's willingness to forgive ($r = 0.49$ and $r = .50, p$'s < .01). Time since the incident took place ($r = -.14, p < .01$) and perceived severity of the incident ($r = -.28, p < .01$) were negatively associated with employee's willingness to forgive, indicating that employees were more forgiving of more recently happened incidents and less severe incidents. Moreover, LMX was also positively correlated with employee's willingness to forgive ($r = .27, p < .01$), suggesting that employees were more forgiving when they had a better relationship with their leader. These findings provided preliminary support for the proposed hypotheses.

Manipulation check

An analysis of variance (ANOVA) was conducted with work relationship quality condition (high vs. low) as predictor and the self-reported work-relationship quality between the offending other and the employee as outcome variable. This analysis revealed a significant effect on self-

reported work-relationship quality, $F(1, 476) = 1705.98, p < .001$. Participants who were asked to recall an incident by a colleague with whom they experience high work relationship quality indeed reported higher work relationship quality ($M = 5.87, SD = .64$) than those who were asked to recall an incident with whom they experience lower work relationship quality ($M = 3.14, SD = .79$). Hence, the manipulation showed the intended effects.

Hypotheses tests

The results in Table 2 show that higher work relationship quality between the victim and offending coworker predicted a stronger willingness to forgive offending coworkers ($\beta = .31, SE = .11, p < .01$). In addition, we found that leaders' tendency to forgive others and leaders' instructions to forgive both predicted an increase in employee's willingness to forgive team coworkers ($\beta = .28, SE = .06, p < .01$; $\beta = .36, SE = .07, p < .01$, respectively). Hence, Hypotheses 1-3 were supported.

Table 2*Main and interaction effects of leaders' forgiveness (Study 1)*

Variable	Step 1		Step 2		Step 3		Step 4		Step 5	
	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>	β	<i>SE</i>
Time	-0.08	0.00	-0.09*	0.00	-0.04	0	-0.04	0.00	-0.04	0.00
Severity	-0.32**	0.07	-0.28**	0.07	-0.24**	0.06	-0.25**	0.06	-0.25**	0.06
LMX	0.32**	0.08	0.30**	0.08	0.03	0.08	0.00	0.08	0.00	0.08
WRQ			0.31**	0.11	0.31**	0.1	0.31**	0.09	0.31**	0.11
LTF					0.27**	0.06	0.29**	0.06	0.29**	0.06
LIF					0.31**	0.07	0.35**	0.07	0.35**	0.07
LTF × LIF							0.14**	0.04	0.14**	0.04
LTF × WRQ							0.01	0.09	0.01	0.09
LIF × WRQ							0.08	0.13	0.08	0.14
LTF × LIF × WRQ									-0.01	0.07
<i>R</i>		0.19		0.28		0.48		0.50		0.50
ΔR				.10**		.19**		.02**		0

Note. $N = 478$. Table values are standardized estimates and standard errors from the estimated model. WRQ = Work relationship quality; LTF = Leaders' tendency to forgive; LIF = Leaders' instructions to forgive. * $p < .05$, ** $p < .01$.

Next, the moderation analyses revealed that the two-way interaction effect between leaders' tendency to forgive and leaders' instructions to forgive on employee's forgiveness was significant ($\beta = .14$, $SE = .04$, $p < .01$; see Table 3 and Figure 1). Specifically, simple slopes analyses revealed that leaders' tendency to forgive was more strongly and positively associated with employee's willingness to forgive when leaders' instructions to forgive was high ($B = .45$, $p < .01$) than when leaders' instructions to forgive was low ($B = .19$, $p < .01$). Put it another way, leaders' instructions to forgive was more strongly and positively associated with employee's willingness to forgive

when leaders' tendency to forgive was high ($B = .76, p < .01$) than when leaders' tendency to forgive was low ($B = .39, p < .01$). We plotted this significant moderation effects in Figure 2. Employees' forgiveness reached its highest level when both leaders' tendency to forgive and instructions to forgive were high. Hence, hypothesis 4 was thus supported. It is important to note that, in this study, we also examined two two-way interaction effects between work relationship quality and leaders' tendency to forgive and leaders' instructions to forgive, and one interaction effect between the three variables. However, neither of the two-way interaction effects between work relationship quality and (a) leaders' tendency to forgive or (b) leaders' instructions to forgive was significant ($\beta = .01$, and $\beta = .08$ respectively, $ps > .05$). Further, the three-way interaction effect between leaders' tendency to forgive, leaders' instructions to forgive, and work relationship quality on employee's willingness to forgive was not significant either ($\beta = -.01, p > .05$) – Table 2. Hence, Hypotheses 5, 6 and 7 were not supported.

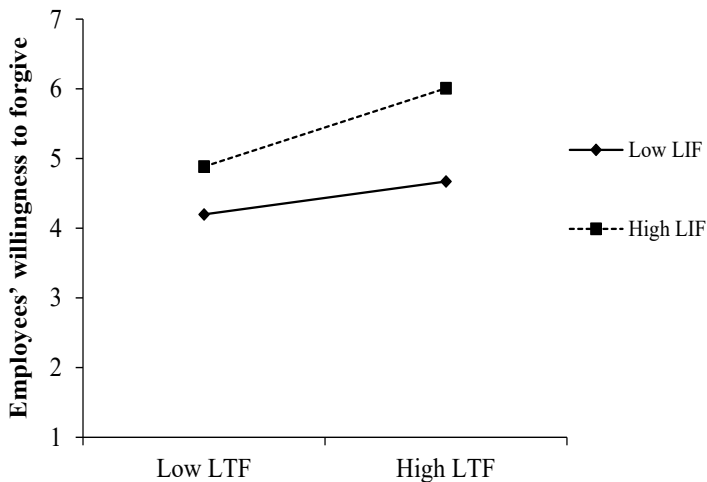


Figure 2. The interaction effect between LTF and LIF. LTF = Leaders' tendency to forgive; LIF = Leaders' instructions to forgive.

In sum, Study 1 demonstrates that both leaders' tendency to forgive and leaders' instructions to forgive are associated with higher levels of forgiveness among employees. Moreover, the positive association between perceived leaders' instructions to forgive and employees' forgiveness toward offending colleagues is stronger when perceptions of leaders' tendency to forgive are higher ('practice what you preach'), even when considering work relationship quality. That is, the highest forgiveness levels among employees were found if a leader was perceived as highly forgiving *as well as* providing forgiving instructions, irrespective of work relationship quality between victim and offender, time since the offense took place, perceived severity of the offense, and the relationship between the victim and the leader.

Study 2

Participants in Study 1 were asked to recall an incident that actually happened in the past. This method has many advantages, most notably that the context of the study is meaningful to participants, which ensures ecological validity. Our goal in Study 2 was to increase experimental control and thus internal validity (e.g., Dobbins et al., 1988) to make firmer conclusions regarding causality. Therefore, in Study 2, all participants were presented with the same transgression scenario in which we manipulated leaders' tendency to forgive and leaders' instructions to forgive. Since the findings of Study 1 revealed that work relationship quality did not affect the associations between leaders' tendency to forgive or leaders' instructions to forgive and employee's forgiveness (i.e., hypotheses 5-6 were not significant), and forgiveness seems most relevant in high-quality work relationships (Cao et al., 2021b), this study focused on high-quality work relationships only.

Method

Participants and design

The study was approved by the Ethics Committee of our institution (at #22-090) and pre-registered at https://aspredicted.org/blind.php?x=84C_82V. We used a 2 (high versus low leader tendency to forgive) \times 2 (high versus low leader instructions to forgive) between-subjects online experimental design. Similar to Study 1, we recruited participants from Credamo. A total of 240 employees were randomly assigned to one of the four conditions. Participants that worked less than 20 hours per week ($n = 2$) and indicated we should not use their data in the analysis ($n = 1$) were removed. The final sample consisted of 237 full-time employees, including 59 participants assigned in the condition of both high in leaders' tendency to forgive and high in frequency of leaders' instructions to forgive, 60 participants in the condition of high in leaders' tendency to forgive but low in frequency of instructions to forgive, 58 in the condition of low tendency to forgive but high frequency of leaders' instructions to forgive, and 60 participants were in both low condition. Of the participants, 48.9% were female ($M_{\text{age}} = 31.32$ years, $SD_{\text{age}} = 5.88$). Their educational backgrounds were: 13.1% held a junior college degree or lower, 73.00% a bachelor's degree, and 13.90% a master's degree or higher. They worked on average 46.58 hours per week ($SD = 5.51$) and in various industries: 21.1% in manufacturing and processing industries; 16.9% in telecommunications; 14.8% in education industry, 11.8% in accountancy/finance industry and others (e.g., healthcare, construction). Each participant received 1 euro for their participation.

Procedure

Participants were first informed that participation was voluntary and confidential, and that the completion would take about 10 minutes. We asked participants to read a series of scenarios and to imagine what they would do if they were in the given situation. Participants were asked to

imagine experiencing a transgression committed by a team coworker, who had failed to acknowledge their extensive contribution to a work project (e.g., Struthers et al., 2005; Zheng et al., 2018):

Imagine yourself working as an employee in a company. The team you work in consists of 5 team members. All team members share the same rank in the organization and are supervised by the same leader.

“It is Thursday afternoon, and you are having a meeting with your team members. It becomes clear that one of your team members, with whom you generally have a good work relationship, will be unable to complete an important report for the Monday meeting with the rest of the department. You decide to take it on and spend your entire weekend completing the report. Given that you have your own part of the project to deliver, you both agree that your team member will be presenting the report at the meeting. However, during the meeting on Monday afternoon, when your colleague presents the report, your contribution is not acknowledged in any way. You feel really upset and hurt about this.”

After reading the hypothetical transgression, participants were randomly assigned to one of the four conditions:

“After learning about this incident, your leader, who is generally very (*un*)forgiving in response to offending others (high vs. low leaders’ tendency to forgive), invites you to discuss together how to deal with this situation. The leader suggests that you should try to forgive your colleague for not acknowledging your contribution vs. *the leader suggests that you should try to keep distance from your colleague and be careful with offering help next time* (high vs. low leaders’ instructions to forgive).

Finally, participants in all conditions received questions about the scenario, their willingness to forgive, and some demographics.

Before formally administering this study, we conducted a pilot study to test our manipulations ($n = 40$). We examined whether the manipulations were successful by conducting one-way ANOVAs. Results indicated that participants perceived the work relationship quality to be relatively high and the offense to be *quite severe*. Importantly, participants in the high *leaders' tendency to forgive* condition reported higher *leaders' tendency to forgive* than participants in the low *leaders' tendency to forgive* condition. In addition, participants in the high *leaders' instructions to forgive* condition reported higher *leaders' instructions to forgive* than those in the low *leaders' instructions to forgive* condition. Thus, our manipulations were successful. Detailed results of pilot study can be found in the online materials.

Measures

All measures were translated into Chinese following a regular translation and back-translation procedure (Brislin, 1970). Unless otherwise noted, we used 7-point Likert-type scales ranging from 1 (strongly disagree) to 7 (strongly agree).

Manipulation of leaders' forgiveness. As manipulation checks, participants were asked to indicate 1) to what extent the leader in the scenario was generally forgiving toward offending others, and 2) to what extent the leader instructs to forgive an offending coworker (from 1 = not at all to 7 = very much).

Willingness to forgive. Similar to Study 1, employees' willingness to forgive was assessed with twelve items from the TRIM (McCullough et al., 1998). An example item is "When I think about the offense, I would forgive the offending coworker for what he or she did" $\alpha = .97$.

Offense realism. As recommended by Yi et al. (2011), participants received two questions

about the scenarios, 'I could imagine an actual workplace situation described in the scenario' and 'I believe that the described situation could happen in a real workplace', on a 7-point scale ranging from 1 = very unlikely to 7 = very likely.

Questions about the hurtful incident. *Work relationship quality* was assessed with one item "how would you rate the quality of your work relationship with this offending coworker before the offense took place?" (1 = very low, 7 = very high). *Perceived offense severity* was assessed with one item (Bradfield & Aquino, 1999): "How severe would you rate the offense described in the scenario?" (1 = not at all severe, 7 = very severe).

Statistical analysis

One-way ANOVAs were conducted to examine whether the manipulations of leaders' tendency and instructions to forgive were successful. We then conducted an analysis of covariance (ANCOVA) to test the effects of leaders' tendency to forgive (high versus low) × leaders' instructions to forgive (high versus low), with work relationship quality and perceived offense severity as covariates on employees' willingness to forgive.

Results

Manipulation checks

The results of one-way ANOVAs revealed that *leaders' tendency to forgive* manipulation had a significant effect on participants' perceptions of *leaders' tendency to forgive*, $F(1, 235) = 1523.1, p < .001$. Results indicated that participants in the high *leaders' tendency to forgive* condition reported higher *leaders' tendency to forgive* ($M = 6.53, SD = 0.70$) than participants in the low *leaders' tendency to forgive* condition ($M = 1.72, SD = 1.15$). Similarly, participants in the high *leaders' instructions to forgive* condition reported higher *leaders' instructions to forgive* (M

= 6.00, $SD = 0.97$) than those in the low *leaders' instructions to forgive* condition ($M = 2.97$, $SD = 1.67$), $F(1, 235) = 292.54$, $p < .001$.

As intended, work relationship quality with the offending coworker was perceived as relatively high ($M = 5.79$, $SD = 0.88$). A follow-up ANOVA revealed no significant difference between participants' perceptions of relationship quality across conditions. Participants perceived the offense as quite severe ($M = 5.67$, $SD = 1.03$). A follow-up ANOVA revealed no significant difference between participants' perceptions of offense severity across conditions.

Hypothesis tests

An ANCOVA with leaders' tendency to forgive (high versus low) \times leaders' instructions to forgive (high versus low) with work relationship quality and severity as covariates on willingness to forgive revealed a main effect of leaders' instructions to forgive, $F(1, 231) = 7.68$, $p < .01$, $\eta^2 = .003$ and a main effect of perceived severity, $F(1, 231) = 94.88$, $p < .01$, $\eta^2 = .29$. That is, leaders' instructions to forgive were associated with higher willingness to forgive, while perceived offense severity was associated with lower willingness to forgive. The main effects of leaders' tendency to forgive ($F(1, 231) = .44$, $p = .51$, $\eta^2 = .002$) and work relationship quality, $F(1, 231) = 3.06$, $p = .08$, $\eta^2 = .001$, were not significant. Moreover, the two-way interaction was also not significant $F(1, 231) = .00$, $p = .998$.

In sum, the results of Study 2 demonstrate that leaders' instructions to forgive predicts employees willingness to forgive, while leaders' tendency to forgive was not associated with employees willingness to forgive.

Study 3

Studies 1 and 2 measured employees' and leaders' levels of forgiveness from a single source (i.e., employees), leaving the issue of common method bias unaddressed (Podsakoff et al.,

2003). In Study 3, we sought to replicate and extend Studies 1 and 2 using multi-source data. Specifically, we explored associations between leaders' forgiveness and employees' forgiveness, looking at employees' perceptions of their leaders' forgiveness as well as leaders' self-perceived forgiveness. In this way, we also examined whether employees actually detect their leaders' forgiveness tendencies and are aware of the instructions leaders give them when offended by a coworker. As in our previous studies, we again considered leader-member-exchange as a control variable.

Method

Participants

Data for Study 3 were collected from teams in catering organizations in Wuhan, China. We contacted the human resource managers of these organizations to explain the purpose of this study, and they helped distributing the survey package to leaders and employees who agreed to participate in this research voluntarily. The data were collected via paper-and-pencil surveys. All participants were assured of confidentiality and were informed that their responses would be used only for research.

Complete data were obtained from 254 team members and 50 leaders. After removing participants who failed to meet the inclusion criteria: at least 18 years old ($n = 1$), having a paid job at least 20 hours ($n = 56$), with at least 3 people together in a team or working with their leaders for at least for 3 months ($n = 11$), the final sample consisted of 186 employees and 37 team leaders. The sample consisted of 46.8% female employees and 45.9% female leaders. The average age of the members of the final sample was 39.93 years ($SD = 9.11$) and the employees had been working with their leaders for on average 3.18 years ($SD = 3.23$). The average number of respondents in each group was five ($SD = 2.70$; ranging from 3 to 12 members). Most of the employees (68.8%)

had completed junior high school, the remaining participants had completed technical secondary school or vocational high school ($n = 38, 20.4\%$), junior college ($n = 11, 5.9\%$), college ($n = 7, 3.8\%$) or higher ($n = 2, 1.1\%$).

Procedure

Both leaders' and employees' surveys were collected using a paper-and-pencil approach. In the members' survey, after providing informed consent, participants were firstly asked to complete questionnaires about their direct team leaders including perceived trait forgiveness of their leaders, perceived forgiveness instructions from leaders, and LMX with their leaders. Then, they were asked to read two scenarios regarding workplace transgressions that were hurtful and committed by a team coworker with whom they had a good work relationship. Participants were asked to report their willingness to forgive. Demographic information was collected at the end. After completing the survey, participants were thanked and debriefed.

Leaders received a similar survey, requesting them to rate their own forgiveness tendency and forgiveness instructions to employees. Leaders were then asked to report their demographic information.

Measures

Similar to Studies 1 and 2, all items were presented in Chinese. Unless reported otherwise, participants responded to items on 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree).

Leaders' tendency to forgive. Both employees' perceptions of leaders' tendency to forgive and leaders' self-reported tendency to forgive were measured with the tendency to forgive scale (TTF; Brown, 2003), as used in Study 1. An example item of employee's perception of their leaders' tendency to forgive is "My leader tends to get over it quickly when someone hurts his/her feelings".

An example item of leaders' self-perception of their tendency to forgive is "I tend to get over it quickly when someone hurts my feelings". A certain amount of perceptual agreement is necessary to justify aggregation to the team level. We therefore examined intraclass correlations and R_{wg} (James et al., 1984). Bliese (2000) suggests $ICC(1) > .05$ and $R_{wg} > .70$ as conventional criteria for aggregation. For the composite team-level measure of perceived leaders' forgiveness tendency, we obtained an $ICC(1)$ of .70, and an average R_{wg} of .94, which justifies aggregation to the team level.

Leaders' instructions to forgive. Both employees' perceptions of leaders' instructions to forgive and leaders' self-reported instructions to forgive were measured using the same scales as in Study 1. That is, three dimensions of the TRIM scale (McCullough et al., 1998) were adapted to: instructions to be benevolent; 2) instructions to avoid and 3) instructions to retaliate. An example item of employee's perceptions of their leaders' instructions to forgive is "When I am offended by another coworker, my leader generally advises me to forgive the offending coworker". An example item of leaders' self-reported instructions to forgive is "When one of my team members is offended by another coworker, I generally advise him/her to forgive the offending coworker". To justify the aggregation of employees' perception of leaders' instruction to team level, intraclass correlations values $ICC(1)$ was calculated at .70 and the average R_{wg} across the 37 teams was .97, justifying aggregation to the team level is appropriate.

Employee's willingness to forgive⁶. Employee's willingness to forgive was assessed using a scenario-based measurement developed by Cox (2011). We used the subscale that was most relevant for the catering industry including two scenarios on personal offenses: (1) "You share

⁶As in Study 1, we intended to use the recall procedure including the TRIM-questionnaire to assess self-reported forgiveness levels among employees. Yet, in a first pilot study, we ended up with a lot of missing data on the recall and forgiveness measures (almost 75%). Apparently, it was too difficult for participants to recall a hurtful incident. Therefore, in this study, we decided to use Cox's (2011) scenarios to measure willingness to forgive.

something embarrassing about yourself with a coworker who promises to keep the information confidential. However, that person breaks this promise when he/she proceeds to tell several people. You are humiliated (i.e., breaking a promise); (2) "One of your coworkers starts a nasty rumor about you that is not true. As a result, people begin treating you differently at work" (i.e., spreading a rumor). The reliability of these two items (0.54) was lower than the threshold of .70 recommended by Hair et al., (1998). We therefore proceeded our analyses looking at both scenarios as outcome variables separately.

LMX. We took into account Leader-member exchange (LMX) as a control variable, measured with the same scale used in Study 1 (Graen & Uhl-bien, 1995).

Statistical analysis

The present data contained a hierarchical structure in which responses of individual-level variables were nested within teams. Therefore, we used a stepwise multilevel structural equation modeling approach to test the hypothesized model using Mplus 7.4 (Muthén & Muthén, 2017). First, we conducted confirmatory factor analysis (CFA) to assess the discriminant validity of our key constructs. Second, we conducted two sets of stepwise multilevel regression analyses: (a) we first focused on employee's perceptions of their leaders' forgiveness (i.e., leaders' tendency to forgive and leaders' instructions to forgive). In this analysis, all variables were treated as individual-level factors, while we controlled for their team-level variances; (b) next, we focused on leaders' self-reported tendency to forgive and instructions to forgive (they were team-level predictors). In this analysis, the interaction between leaders' self-reported tendency to forgive and instructions to forgive was also a team-level predictor. In both analyses, employees' level of forgiveness was the dependent variable at the individual level and LMX was a control variable as an individual-level factor. All individual-level variables were group-mean centered and team-level

variables were grand-mean centered. Importantly, because we had a relatively small sample size, we used mean scores of all variables to test our hypotheses.

Results

Means, stand deviations, and bivariate correlations of the main variables are presented in Table 3. Employees perceived that their leaders had a relatively high tendency to forgive others ($M = 5.26$, $SD = .99$) and instructed them to forgive others quite frequently ($M = 5.39$, $SD = .87$). More specifically, employees perceived their leaders to instruct them to respond with benevolence (68.2%), avoidance (27.7%), and retaliation (16.2%) toward an offending coworker, which is in line with the responses in Study 1.

Table 3

Descriptive Statistics and Correlations for Main Study Variables (Study 3)

	<i>M</i>	<i>SD</i>	1	2	3	4	5
<i>Individual level</i>							
1. Leaders' tendency to forgive	5.26	0.99	(.79)				
2. Leaders' instructions to forgive	5.39	0.87	.55**	(.89)			
3. Leader-member exchange	5.42	0.87	.57**	.47**	(.88)		
4. Employees' willingness to forgive (scenario 1: breaking a promise)	4.42	1.63	.36**	.31**	.17*		
5. Employees' willingness to forgive (scenario 2: spreading a rumor)	4.19	1.83	0.09	-0.07	-0.05	.37**	
<i>Team level</i>							
1. Aggregated Leaders' tendency to forgive	4.94	1.09	(.78)				
2. Aggregated Leaders' instructions to forgive	4.93	0.83	.56**	(.77)			
3. Leader-reported tendency to forgive	5.09	0.93	.79**	.51**			
4. Leader-reported instructions to forgive	5.35	0.81	.54**	.70**	.59**		

Note. $N = 186$ for the team member level variables; $N = 37$ for the team level. Alphas are reported on the diagonal.

* $p < .05$. ** $p < .01$ (two-tailed).

Moreover, team members aggregated perceptions of leaders' forgiveness tendency and leaders' instructions to forgive were highly positively correlated to leaders' self-reported levels of their tendency to forgive and their instructions to forgive. This indicates that team members' perceptions regarding their leaders' forgiveness correspond with leaders' self-perceptions. Perceived leaders' tendency to forgive and perceived leaders' instructions to forgive were positively associated with employees' willingness to forgive in scenario 1 (i.e., breaking a promise), but not in scenario 2 (i.e., spreading a rumor).

Discriminant validity

We conducted CFAs to examine the distinctiveness among our research constructs (i.e., perceived leaders' forgiveness tendency, perceived leaders' forgiveness instructions, and leader-member exchange). Results suggest that the three-factor model fit the data well ($\chi^2 = 384.79$, $df = 166$; RMSEA = .08; CFI = .92; TLI = .90; SMRM = .07). Further, this model fit the data significantly better than any alternative models. Therefore, the model variables have good discriminant validity.

Hypothesis tests

To estimate the hypothesized model, we separated the between and within variance for all variables at the individual and team level. Prior to hypothesis testing, we ensured that multilevel analysis was appropriate for analyzing our two-level data by running null models (M0) with no predictors on employees' willingness to forgive as dependent variable. Results revealed that there were 79% of variance resided between teams for both scenarios, supporting the use of a two-level analysis for model estimation.

For scenario 1 (i.e., breaking a promise), after controlling for LMX, we found that employees' *perception* of leaders' tendency to forgive and leaders' instructions to forgive were

both positively associated with employees' willingness to forgive (Model 2a; $B = .51, p < .01$ and $B = .30, p < .05$, respectively – see Table 4). Therefore, hypotheses 2 and 3 were supported. Hypothesis 4 proposed an interaction effect between employees' perceptions of leaders' tendency to forgive and leaders' instructions to forgive. As can be seen in Model 3a of Table 4, the interaction effects were not significant ($B = -.18, p > .05$). Hypothesis 4 was thus not supported.

We then examined whether leaders' *self-reported* forgiveness tendency and instructions to forgive were associated with employees' willingness to forgive. We found that leaders' self-reported tendency to forgive was positively associated with employees' willingness to forgive ($B = .58, p < .05$). We did not find any effects for leaders' instructions to forgive nor interaction effects between leaders' self-reported forgiveness tendencies and forgiveness instructions on employees' willingness to forgive (Model 3b; Table 4).

Table 4

Results of Multi-level analysis on Scenario 1: breaking a promise (Study 3)

Variables	M0		M1		M2a		M3a		M2b		M3b	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<i>Intercept</i>	5.16**	0.26	4.21**	.72	5.20**	.69	5.33**	.70	4.52**	.72	4.45**	.76
<i>Level 1: Individual level</i>												
LMX			-.01	0.127	-.2	0.12	-.22	.08	-.07	.13	-.07	.13
LTF					.51**	.11	.51**					
LIF					.30*	.12	.31*					
LTF × LIF							-.18	.35				
<i>Level 2: Team level</i>												
LTF									.58*	.27	.58*	.27
LIF									-.07	.35	-.13	.40
LTF × LIF											.10	.76
within level	0.59		0.59		0.46		0.45		0.59		0.59	
between level	2.27		2.28		2.44		2.48		1.96		1.95	
<i>Explained variance</i>												
<i>R</i> ² level 1					.22**		.23**		.01		.01	
<i>R</i> ² level 2									.15		.15	

Note. *N* = 186 for the team member level variables; *N* = 37 for the team level.

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

For scenario 2 (i.e., spreading a rumor), the analyses revealed that employees' perceptions of their leaders' instructions to forgive was positively associated with employees' willingness to forgive (*B* = .53, *p* < .01), whereas employees' perceptions of their leaders' tendency to forgive was negatively associated with employees' willingness to forgive (*B* = -.33, *p* < .01) – see Model 3a in Table 5. Hypothesis 3 was thus supported and hypothesis 2 was not. The interaction effects between employees' perceptions of their leaders' tendency to forgive and employees' perceptions of their leaders' instructions to forgive were non-significant (*B* = .07, *p* > .05). The findings regarding leaders' self-reported level of forgiveness showed that leaders' self-reported tendency to forgive, but not leaders' instructions to forgive, was positively associated with employees' willingness to forgive (*B* = .65, *p* < .05) (Model 3b; Table 5).

Table 5*Results of Multi-level analysis on Scenario 2: spreading a rumor (Study 3)*

Variables	M0		M1		M2a		M3a		M2b		M3b	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
<i>Intercept</i>	4.22**	.28	4.54**	.79	5.07**	.67	5.02**	.80	4.69**	.79	4.81**	.83
<i>Level 1: Individual level</i>												
LMX			-.06	.14	-.16	.14	-.15	.14	-.09	0.14	-.09	0.14
LTF					-.33**	.13	-.33*	.13				
LIF					.54**	.14	.53**	.14				
LTF × LIF							.07	.23				
<i>Level 2: Team level</i>												
LTF									.66*	0.29	.65*	0.29
LIF									-.7	0.38	-.60	0.43
LTF × LIF											-.18	0.37
Within Level	0.72		0.72		0.65		0.65		0.72		0.72	
Between Level	2.64		2.66		2.71		2.70		2.30		2.28	
<i>Explained variance</i>												
<i>R</i> ² level 1			.00		0.10		0.10		0.01		0.00	
<i>R</i> ² level 2									0.14		0.15	

Note. *N* = 186 for the team member level variables; *N* = 37 for the team level.

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

In sum, we again found evidence for the crucial role of leaders' instructions to forgive on employees' forgiveness given that in both scenarios employees' perceptions of their leaders' instructions to forgive were associated with a higher willingness to forgive. Yet, the results regarding the role of leaders' tendency to forgive are somewhat mixed. Employees' perceptions of their leaders' tendency to forgive was associated with higher levels of forgiveness toward breaking a promise while associated with lower levels of forgiveness toward spreading a rumor. Interestingly, in both scenarios, we found that leaders' self-reported tendency to forgive was associated with a higher willingness to forgive among employees.

Discussion

Although research on forgiveness in work relationships has increased in recent years, few efforts have been made to better understand the role leaders play in employees' forgiveness. Drawing from social learning theory (Bandura, 1977, 1986), this research proposed two ways in which leaders' forgiveness may be associated with employees' forgiveness, through leaders' a) tendency to forgive and b) instructions to forgive. We also examined whether the interaction between leaders' tendency to forgive and leaders' instructions to forgive was associated with employees' forgiveness. We conducted three studies with different research designs to address these questions. Findings across the three studies were somewhat mixed. In Studies 1 and 3 we found that both employees' perceptions of their leaders' tendency to forgive and employees' perceptions of their leaders' instructions to forgive were positively associated with employees' forgiveness, even after taking work relationship quality between victim and offender into account. However, in Study 2, employees' perceptions of their leaders' instructions to forgive but not leaders' tendency to forgive was associated with employees' forgiveness. Furthermore, the interaction effect between leaders' tendency to forgive and instructions to forgive was only supported in Study 1 but not in Studies 2 and 3. Clearly, these inconsistent findings require future research, but overall, the findings are in line with the idea that leaders play a key role in maintaining crucial work relationships.

This research makes important contributions to the literature on forgiveness in work relationships. Previous research revealed that work relationship quality between victim and offender is one of the strongest predictors of forgiveness among employees. This research replicated these findings, revealing that in Study 1 employees were more forgiving toward offending others they had a higher work relationship quality with. Yet importantly, we found that

in addition to work relationship quality, leaders also play a role, irrespective of perceived work relationship quality between victim and offender. That is, employees are likely to learn from their leaders' forgiving tendency and follow their leaders forgiving instructions regardless of whether they had a high- or low-quality relationships with the offender. Thus, this research shows that not only work relationship quality is an important predictor of forgiveness among employees, but that also leaders play a role.

We proposed two approaches through which leaders influence employees' forgiveness. One of these focused on a leader's instructions. In general, we found that leaders often instruct to forgive offending colleagues, rather than instructing employees to avoid or retaliate against an offending coworker. This is in line with the function of leaders that they use their unique, influential role to manage conflict, maintain harmony as well as engage employees in a prosocial response to conflict in the workplace (Dragoni, 2005; Robijn et al., 2020). We also found that leaders' instructions to forgive was positively associated with employees' willingness to forgive (across all 3 studies). Thus, at this point, direct instructions seem to be an effective approach by which leader forgiveness influences their employees' forgiveness.

However, mixed evidence was found regarding the other approach, which focused on leaders' tendency to forgive. That is, whereas we found that leaders' instructions to forgive was consistently associated with employees' forgiveness in all three studies, leaders' tendency to forgive was related to employees' forgiveness in Studies 1 and 3, but not in Study 2. This may be because leaders' tendency to forgive is sometimes too subtle to detect by employees as compared to direct and more explicit instructions. For example, employees may rarely have the opportunity to witness a leader being offended, let alone observing a leader to respond with forgiveness or not. This is in line with previous research suggesting that overt expectations have a stronger influence

on employees' attitudes and behaviors than more subtle or indirect ones (Salancik & Pfeffer, 1978). More research is needed in the future to address the mixed results and draw more robust conclusions.

Third, by drawing on arguments from behavioral integrity theory (Simons, 2002), our research contributes to the literature and explored the alignment in leaders' forgiveness tendency and instructions. Although we found strong and consistent correlations between leaders' forgiveness tendencies and leaders' instructions, their interaction on employee forgiveness was less consistent. This is not entirely consistent with previous research suggesting that usually when leaders who walk their talk generate positive outcomes (Bharanitharan et al., 2021; Greenbaum et al., 2015; Simons et al., 2015). More research on the interaction effects is needed, which may also help to answer the question whether simply providing forgiveness instructions is sufficient, regardless of the extent to which leaders themselves are generally forgiving.

Finally, recalling the call of Faldetta (2021) to extend research on forgiveness from the individual level to a higher level (e.g., collective level), the focus of this research involved a team-level aspect. Indicated by leaders' self-reported level of forgiveness as well as aggregated perceptions from their employees, we investigated forgiveness at team leaders' level. This is important since leaders' forgiveness may foster the distribution and the institutionalization of employees' forgiveness. Future research could examine how forgiveness at different levels are associated with each other. For example, does a forgiving leader generate a climate of forgiveness and thereby influence employees to forgive, or vice versa? Greater insight into these aspects will ultimately contribute to help develop a better work environment.

Practical implications

This research emphasized the role of leaders' forgiveness. It seems that leaders' tendency and instructions to forgive are both associated with employees' forgiveness, albeit in different ways. Thus, organizations aiming to promote forgiveness among employees should consider leaders' forgiveness as a means of achieving this goal. One possible approach is through the selection and promotion of leaders with forgiving characteristics. Moreover, leadership training and development programs may also be helpful in facilitating leaders' forgiveness tendency as well as their ability to provide forgiving instructions to employees on how to deal with workplace conflicts.

Strengths, limitations and future research directions

To our knowledge, the present research is among the first that examined associations between leaders' forgiveness and employees' forgiveness, while taking into account work relationship quality between victim and offender. Another strength of this research is the use of three different types of research designs and methodologies. This approach allowed for the advantages of one research design to compensate for the shortcomings of the other (Dipboye, 1990) and alleviates some concerns regarding common method variance (Podsakoff et al., 2003). At the same time, the use of different methodologies may have resulted in inconsistent findings across the three studies. For example, although we manipulated leader's tendency and leader's instructions in Study 2, we cannot rule out the possibility that they were unrelated to each other. Also, our studies may simply have failed to detect an effect (or only a little, in Study 2), while in reality leaders' tendencies to forgive do affect employees' level of forgiveness (i.e., Type II error). Therefore, future research is needed to find out whether these results can be explained by the method used.

Second, although the scenario-based experiment design used in Study 2 offered some insights on the causal inference (Epitropaki et al., 2020), findings of Studies 1 and 3 were correlational. Therefore, causal conclusions should be interpreted with caution. Given that leaders and employees influence each other simultaneously (Güntner et al., 2020; Matthews et al., 2021), it might be that employees' willingness to forgive influences leaders' forgiveness as well. Future research using longitudinal research design should further investigate the causality between leaders' forgiveness and employee's forgiveness as well as its reversed pattern.

Moreover, given that we collected data solely in China, a recommendation for future research is to do similar studies in other, more Western, cultures. In a Chinese context, employees focus largely on the collective and have much respect for authorities (Lalwani et al., 2006; Rockstuhl et al., 2012). Employees are more likely to follow the instructions from leaders and work for collective interests, even when they are in conflict with personal interest (Rockstuhl et al., 2012). It could thus be that effects are different in more Western samples, in the sense that leaders' tendencies might be more important than leaders' instructions. This is an interesting avenue for future research.

Furthermore, although our research sheds light on the crucial role of leaders, how this exactly works is unclear. There may be truth in both approaches. It is also possible that leaders sometimes display different leadership styles to different employees regarding different incidents (Wu et al., 2010). Thus, an interesting avenue for future research would be to consider individual differences and examine whether leaders differentially provide forgiving instructions to different employees, and whether employees are differently susceptible to the influence of leaders' forgiveness.

Conclusion

The main purpose of the present research was to gain a better understanding of the role leaders play in employees' forgiveness. The results of the studies highlight that leaders play a role with their forgiving tendencies and their forgiving instructions. We hope this research inspires future scholars to further address the important topic as to whether and mostly *how* leaders' forgiveness is associated with employees' forgiveness.

Chapter 6

General Discussion

Author contributions: Wenrui Cao (Writing-original draft; Writing-review & editing); Reine C. van der Wal (Supervision; Validation; Writing-review & editing); Toon W. Taris (Validation; Writing-review & editing).

The purpose of the present dissertation was to gain more insight into the causes and consequences of forgiveness in work relationships, which until now has received only limited attention in organizational psychology. In this concluding chapter, we summarize the main findings of this dissertation by answering the research questions outlined in Chapter 1. Next, we discuss how our dissertation advances current literature on forgiveness in work relationships and provide directions for future research. Finally, we provide some practical suggestions for employees, managers, and organizations.

Summary of the Findings

Is forgiveness in work relationships associated with better work outcomes?

Although numerous pieces of evidence documented the benefits associated with forgiveness in close relationships, such as increased psychological and relational well-being (e.g., Bono et al., 2008; Fehr et al., 2010; Karremans et al., 2003), little is known about the benefits of forgiveness in work relationships. As a first step to better understand forgiveness in work relationships, we addressed the basic but important question whether and when responding forgivingly toward interpersonal offenses in the workplace is related to better work outcomes. In Chapter 2, three studies revealed consistent evidence that both trait and state levels of forgiveness were associated with better work outcomes, and in particular higher well-being-related work outcomes (i.e., job satisfaction, work engagement, and [less] burnout). Based on the literature on forgiveness it was further argued that the associations between forgiveness and work outcomes depends on the nature of the relationship in which forgiveness take place (e.g., Fehr et al., 2010; Finkel et al., 2002; Karremans et al., 2011; McCullough, 2008). Indeed, the results of Study 3 revealed that positive associations between state levels of forgiveness and work outcomes were only evident in relatively high (but not low) quality work relationships (in terms of exchange

quality rather than closeness). Moreover, the essential role of the relational context in explaining forgiveness tendencies among employees was confirmed, such that employees were more likely to forgive employees with high exchange quality.

Although Chapter 2 provided support for a positive association between forgiveness and work outcomes cross-sectionally, the temporal dynamics between these variables remained unknown. Therefore, in Chapter 3, we conducted a longitudinal study with four waves to examine whether forgiving an offending coworker benefits later work outcomes, or vice versa. Results from cross-lagged panel models revealed that forgiveness in relatively high-quality work relationships predicted better work outcomes (i.e., higher job satisfaction, higher work engagement, and lower burnout) over time, while controlling for perceived severity of the offense. Evidence for the reverse effect (with work outcomes predicting forgiveness) was not found.

Research Question 1

Is forgiveness in work relationships associated with better work outcomes?

- Yes, both trait and state levels of forgiveness were associated with better work outcomes, and in particular higher well-being-related work outcomes.
- Yet, the positive associations between state levels of forgiveness and work outcomes were only evident in relatively high (but not low) quality work relationships.
- Only in cases of high work relationships quality, the positive association between trait forgiveness and work outcomes could be explained by higher levels of state forgiveness.

How does forgiveness develop in work relationships?

Defined as a prosocial change toward the offender despite the offender's hurtful actions (e.g., McCullough, 2001), forgiveness involves a process in which a victim becomes less motivated to retaliate against an offender, less motivated to keep distance from an offender, and more motivated to act in ways that benefit an offender (McCullough et al., 1997). However, little research has examined forgiveness as a process that changes over time (Brady et al., 2022). Therefore, in Chapter 4, we aimed to align the investigation of forgiveness in work relationships with its conceptualization. Specifically, we examined how forgiveness in work relationships changes over time using four-wave longitudinal data. At the first wave, participants were asked to recall and describe a recent hurtful incident by one of their coworkers. At the follow-up waves, they were presented with the same offense. Latent growth analyses revealed that forgiveness remained at a similar level during the four weeks, which somehow contradicts the notion that "time heals all wounds" (Wohl & McGrath, 2007). Moreover, we conducted some exploratory analyses and found that time-varying variables, such as relational (i.e., work relationship quality), and offense-related factors (i.e., perceived offense severity) influenced changes in forgiveness over time.

Research Question 2

How does forgiveness develop in work relationships?

- Employees' willingness to forgive offending coworkers seemed to remain stable over a four-week period.
- Organizational factors (i.e., forgiveness climate, social cohesion, team-member exchange and transformational leadership) were unrelated to the change of forgiveness over time.
- Higher work relationship quality and lower perceived offense severity make the forgiveness process faster.

What factors determine forgiveness in work relationships?

Having recognized the many benefits of forgiveness in work relationships, we then moved on to the factors determining forgiveness in work relationships. Previous research focused almost exclusively on the offender-victim dyad, yet forgiveness in a work context is likely also influenced by organizational factors, such as the team climate or the leader. In Chapters 4 and 5, we investigated the role organizational factors play in forgiveness in work relationships.

In Chapter 4, we applied principles of social identity theory and predicted that organizational factors that make a collective identity salient (i.e., forgiveness climate, social cohesion, team-member exchange, and transformational leadership) are associated with more forgiveness in work relationships. We indeed found that all organizational factors were associated with higher starting points of forgiveness.

In Chapter 5, we further investigated whether and how leaders' forgiveness is associated with employees' forgiveness toward an offending coworker, even after taking into account offender-victim work relationship quality. Drawing on social learning theory, we proposed two ways in which leaders' forgiveness may be associated with employees' forgiveness, through leaders' a) tendency to forgive and b) instructions to forgive. We also examined whether the interaction between leaders' tendency to forgive and leaders' instructions to forgive was associated with employees' forgiveness. We conducted three studies with different research designs to address these questions. Findings were somewhat mixed: while leaders' instructions to forgive were found to be consistently and positively associated with employees' forgiveness in all three studies, leaders' tendency to forgive was positively related to employees' forgiveness only in Studies 1 and 3, but not in Study 2. Furthermore, the interaction effect between leaders' tendency to forgive and instructions to forgive was only supported in Study 1 but not in Studies 2 and 3.

Clearly, these inconsistent findings require future research, but the findings are in line with the general idea that leaders play a key role in maintaining crucial work relationships.

Research Question 3

What factors determine forgiveness in work relationships?

- Organizational factors reflecting a collective identity (i.e., forgiveness climate, social cohesion, team-member exchange and transformational leadership) were associated with higher starting points of forgiveness.
- Leaders seem to play a crucial role on employees' willingness to forgive. Specifically, leaders' instructions to forgive were consistently and positively associated with employees' forgiveness. However, leaders' tendency to forgive was positively related to employees' forgiveness in only 2 out of 3 studies presented here.

Theoretical Implications and Future Research Directions

This dissertation contributes to the extant literature on forgiveness in interpersonal relationships in several ways. The first theoretical contribution of the present dissertation is that we moved from forgiveness in romantic or other close relationships to work relationships. Similar to the benefits of forgiveness in close relationships (e.g., Fincham et al., 2002; Karremans et al., 2003; Pronk et al., 2010), this dissertation provides correlational as well as causal (longitudinal) evidence on the beneficial effects of forgiveness on occupational well-being. Hence, forgiveness in work relationships seems not to differ much from forgiveness in close relationships in terms of its beneficial effects. At the same time, this dissertation also demonstrates the uniqueness of forgiveness in work relationships. For example, in Study 3 of Chapter 2, we found that the benefits of forgiveness on work outcomes depends on exchange quality between victim and offender, but not on perceived levels of closeness between victim and offender, which has been found to be an important moderator of the outcomes of forgiveness in close relationships (see Karremans et al.,

2003). Moreover, forgiveness in work relationships is not only affected by the quality of the victim-offender relationship, but also by the organizational context, such as the work climate (Chapter 4) and the leader (Chapter 5). For now, the conclusion is that forgiveness in work relationships has considerable overlap with forgiveness in close relationships, but is unique in terms of its context in which forgiveness takes place.

Although our findings generally suggest that forgiveness is beneficial in work relationships, one might wonder if this is really always the case. For example, findings in Chapter 2 revealed that employees were more likely to achieve better work outcomes when forgiving employees with high exchange quality, but it remains unclear whether it is also beneficial to forgive colleagues with *low* exchange quality. Indeed, some findings from research on forgiveness in romantic relationships suggests that forgiveness may not always be beneficial. For example, Luchies and colleagues (2010) found that forgiveness can have a negative impact on victims' self-respect and self-concept clarity if the perpetrator failed to indicate that their victims will be safe and valued in the future (also known as 'the doormat effect'). Some other research also suggests that withholding (rather than expressing) forgiveness is more beneficial in promoting transgressor compliance when victims have low power (Zheng et al., 2018). Thus, we should be cautious by stating that forgiveness is a panacea for victims. Future researchers should further explore the conditions under which forgiveness in work relationship is beneficial, and when it is not.

Third, the present dissertation has several implications for the measurement of forgiveness. In most cases, we asked participants to recall a hurtful incident that actually occurred in the workplace, thereby ensuring ecological validity of the studies. Yet, the recall paradigm may suffer from potential memory bias (Hirst et al., 2019). For example, when participants recalled a hurtful incident from the past, they may have recalled particularly severe events (Smith et al., 2020). In

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some other studies (i.e., Studies 2 and 3 in Chapter 6), we asked participants to read and imagine themselves in scenarios of hypothesized transgressions, which ensured internal validity. Yet, this may challenge the external and ecological validity. Moreover, most of our studies used same-time measurement and self-reported data, which may lead to endogeneity bias and common method bias (Podsakoff et al., 2012), although we tried to minimize those by applying Harman one-factor tests and single-common-method-factor approaches (Podsakoff et al., 2003). In Chapter 5, we also used a multi-source research design to reduce the common method bias and make our results more reliable (Jordan & Troth, 2020). Hence, although we tried to use different methodologies, future studies are needed. Future research may combine objective measures of forgiveness and collect data from multiple sources (Heaphy & Dutton, 2008; Worthington, et al., 2015). For example, wearable technologies, particularly smart watches make it possible to incorporate physiological measures (e.g., heart rate variability and blood pressure) of forgiveness in a work context (Gabriel et al., 2019).

Another important consideration is related to the generalization of our findings in terms of cultural background. That is, most of our studies used data collected from samples in China (Chapters 3, 4 and 5). Previous research suggest that the basic presumptions of forgiveness are similar across cultures (Ho & Worthington, 2020). We also did not find differences related to cultural background. For example, in Chapter 2, we used samples from the Netherlands (Study 2) and international participants from MTurk (Study 1) and Prolific (Study3) and the findings revealed similar patterns regarding the association between forgiveness and work outcomes. For now, the most important conclusion deriving from the findings in this dissertation is that forgiveness in work relationships seem to work the same for employees from China and Western countries. However, we cannot rule out the possibility that different cultures may indeed affect

forgiveness in work relationships differently, and this is an interesting topic for future research. For example, in a typical eastern/collectivistic culture where it is important to be part of the collective, employees may be more willing to forgive offending coworkers to meet collective interests (Hook et al., 2009). Therefore, we recommend future research to further explore forgiveness in work relationships from different cultural backgrounds.

Finally, in our studies we exclusively relied on the perspective of the victim when addressing forgiveness in work relationships. This is in line with most previous research on forgiveness in work relationships (Aquino et al., 2001, 2006; Bradfield & Aquino, 1999), yet it neglects the perspective from the offender (Samnani & Singh, 2012) or from a third party (i.e., bystander). Indeed, previous research has shown that forgiveness is not only the result of actions from the victim, but that offenders and bystanders also play a role, perhaps especially in a work context. For example, research shows that employees report higher levels of forgiveness when they received a sincere apology from the offender than when they received an insincere or non-apology (Basford et al., 2014). Moreover, like the crucial role of the leader on employees' forgiveness as shown in Chapter 5, other third parties (e.g., coworkers) are also important. For example, employees tend to be more willing to forgive when they perceive social support from coworkers, which can buffer stress resulting from the conflict (Cohen & Wills, 1985; Giebels & Janssen, 2005; Van den Brande et al., 2016). Furthermore, third parties who are not directly involved might also experience vicarious mistreatment and might be affected by the offense (Dhanani & LaPalme, 2019). What the causes and consequences of third-party forgiveness are may also be an interesting question for future research. Hence, research on forgiveness in work relationships would benefit from an approach in which offenders and third parties are also involved.

Practical Implications

Next to these theoretical implications and recommendations for future research, the present dissertation also provides valuable practical implications for employees, managers, and organizations. Since this dissertation has shown that forgiveness is beneficial in work relationships, it is important to further explore when and how to promote forgiveness in work relationships. We describe four ways in which forgiveness in work relationships may be facilitated, by focusing on 1) the relationship between victim and offender, 2) the victim's level of forgiveness, 3) the leader, and 4) the broader organizational context.

First, our studies highlight the crucial role of the relational context (i.e., work relationship quality between the victim and offender) in employees' forgiveness. That is, it is especially beneficial for employees to forgive an offending colleague one has a good work relationship with. Yet, high-quality work relationships, characterized by mutual respect, trust, and obligation (Graen & Uhl-Bien, 1995; Schermuly & Meyer, 2016), take time to reach maturity. Organizations and managers should therefore focus on trainings and interventions that improve employees' capacity to build and maintain high-quality work relationships. For example, by engaging in team building activities, community and social events that encourage high-quality relationships (Baker & Dutton, 2006).

Second, interventions aimed at directly facilitating individual forgiveness may also be helpful in promoting forgiveness in work relationships. Individual forgiveness seems to be facilitated by training programs focusing on an individual's empathy (particularly perspective taking; McCullough et al., 1997), emotion regulation skills (e.g., mindfulness training; Brady et al., 2022), and conflict management skills (Law, 2013). There is also some research showing that forgiveness can be facilitated by writing about the benefits of forgiveness (McCullough et al.,

2006). Future research should test whether such interventions are also effective in promoting forgiveness in work relationships.

Moreover, moving beyond the victim-offender dyad, this dissertation also emphasized the role leaders play in employees' forgiveness. Chapter 4 demonstrated that perceived transformational leadership was associated with higher forgiving responses to mistreatment in work relationships. In addition, in Chapter 5, we found that especially leaders' instructions to forgive were associated with a higher willingness to forgive among employees. These findings indicate that organizations should consider leaders' forgiveness as a means of achieving greater employee forgiveness. Luckily, leadership can be developed and changed (Avolio et al., 2009; Barling & Kelloway, 1996). Organizations can use effective human resource practices to develop leaders' conflict management skills and train leaders to be forgiving, caring, and nurturing towards their employees. Moreover, organizations may also recruit and select leaders who generally tend to forgive others.

Finally, the findings in Chapter 4 revealed that organizational factors, such as forgiveness climate, team-member exchange and social cohesion, are associated with higher levels of forgiveness. Based on this, it may be fruitful trying to provide such a conducive work environment to promote forgiveness. For example, in order to promote team-member exchange, organizations can emphasize team interdependence, where trust, communication and close interaction among employees is needed (Kao et al., 2021). Human resources management could perhaps focus on encouraging employees to be more benevolent and moral, which should facilitate the emergence of a forgiveness climate. Additionally, based on our reasoning that organizational factors are associated with increased forgiveness by evoking a collective identity, any intervention that heightens employee collective identity may also be associated with more forgiveness among

employees. For example, team-building exercises, social events that emphasize shared values, and organizational routines may help strengthening a sense of collective identity and, in turn, facilitate forgiveness.

Concluding remarks

Workplace offenses are pervasive and leave numerous deleterious impacts on organizational life. How to deal with these offenses properly and hence mitigate their harmful consequences is a major concern for employees, organizations and even society. Being able to act in a forgiving manner in response to an offending coworker may help employees to move forward despite the offenses and conflicts that occur. The findings reported in this dissertation reveal important insight into the causes and consequences associated with forgiveness in work relationships. In addition to highlighting the importance of the relationship between victim and offender in which forgiveness takes place, this dissertation emphasized the influential role of the work environment. It is my hope that this dissertation will inspire future scholars to further study the important topic of forgiveness in work relationships.

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Nederlandse Samenvatting

Stabiele sociale relaties op het werk zijn essentieel voor het geluk en het presteren van iedere werknemer. Bovendien zorgen stabiele sociale relaties voor het beter functioneren van een organisatie. Goede werkrelaties kunnen dan ook een bron van vreugde, vertrouwen en geluk zijn. Tegelijkertijd kunnen deze werkrelaties ook een bron van pijn en ellende zijn. Het is haast onvermijdelijk dat een werknemer vroeg of laat door een collega gekwetst zal worden. Werknemers kunnen elkaar buitensluiten, over elkaar roddelen, of niet de erkenning geven die de ander verdient. Deze paradox illustreert de twee fundamentele aannames waarop dit proefschrift is gebaseerd: werknemers hebben elkaar nodig om goed te kunnen presteren en plezier te beleven aan hun werk en tegelijkertijd is het onontkoombaar dat werknemers elkaar kwetsen. De belangrijkste boodschap van dit proefschrift is dat het vermogen om te vergeven een manier is om werkrelaties, ondanks alle teleurstellingen, te kunnen behouden. Het doel van dit proefschrift was om meer inzicht te krijgen in de oorzaken en gevolgen van vergeving in werkrelaties, een onderwerp dat tot nu toe slechts beperkte aandacht heeft gekregen in de organisatiepsychologie.

Is vergeving in werkrelaties geassocieerd met betere werkresultaten?

Hoewel tal van studies de voordelen van vergeving in hechte relaties hebben laten zien, zoals een verhoogd psychologisch en fysiek welzijn en stabielere relaties (zie Bono et al., 2008; Fehr et al., 2010; Karremans et al., 2003), is er nog weinig bekend over de gevolgen van vergeving in werkrelaties. Als een eerste stap om de rol van vergeving in werkrelaties beter te begrijpen, hebben we ons gebogen over de fundamentele en belangrijke vraag of en wanneer vergevingsgezind reageren op interpersoonlijke “overtredingen” op het werk (dat wil zeggen, sociale interacties die door een van de betrokken partijen – het slachtoffer - worden gezien als kwetsend gedrag van een andere partij – de dader) samenhangt met betere werkresultaten. In

hoofdstuk 2 boden drie studies consistent bewijs dat zowel *trait* als *state*-niveaus van vergevingsgezindheid samenhangen met betere werkuitkomsten, en in het bijzonder met betere welzijnsgerelateerde werkuitkomsten (dat wil zeggen, een hogere werktevredenheid en werkbetrokkenheid, en [minder] burnout). Op basis van de literatuur over vergeving werd ook verwacht dat de associaties tussen vergeving en werkuitkomsten zouden afhangen van de aard van de relatie waarin vergeving plaatsvindt (zie bijvoorbeeld Finkel et al., 2002; Karremans et al., 2011; McCullough, 2008). De resultaten van studie 3 lieten inderdaad zien dat positieve associaties tussen de mate van vergevingsgezindheid en werkuitkomsten alleen evident waren in werkrelaties van relatief hoge (maar niet lage) kwaliteit (in termen van vertrouwen en respect). Bovendien werd de essentiële rol van de relationele context in het verklaren van vergevingsgezindheid onder werknemers bevestigd, zodanig dat werknemers meer geneigd waren om anderen te vergeven, als zij een goede werkrelatie met deze anderen onderhielden.

Hoewel Hoofdstuk 2 een positieve associatie tussen vergevingsgezindheid en werkuitkomsten ondersteunde, bleef de vraag over oorzaak en gevolg onbeantwoord. Zorgt vergeving voor verbeterde werkuitkomsten, of werkt het (ook) andersom? Daarom werd in hoofdstuk 3 een longitudinale studie met vier meetmomenten uitgevoerd om te onderzoeken of het vergeven van een overtredende collega (de dader) latere werkuitkomsten van het slachtoffer ten goede komt, of vice versa (de werkuitkomsten bepalen of en in hoeverre de dader vergeven wordt). Resultaten van cross-lagged panel modellen toonden aan dat vergeving in relatief goede werkrelaties betere werkuitkomsten voorspelden op een later moment (dat wil zeggen, hogere werktevredenheid, hogere werkbetrokkenheid, en lagere burnout), ook als er werd gecontroleerd voor de waargenomen ernst van de overtreding. Bewijs voor het omgekeerde effect (waarbij de werkuitkomsten de latere mate van vergeving voorspellen) werd niet gevonden.

Samenvattend suggereren de bevindingen in hoofdstuk 2 en 3 dat vergevingsgezindheid in werkrelaties inderdaad samenhangt met betere werkuitkomsten. Bovendien waren de positieve associaties tussen vergevingsgezindheid en werkuitkomsten duidelijker in werkrelaties van relatief hoge (maar niet lage) kwaliteit.

Hoe ontwikkelt vergeving zich in werkrelaties?

Vergevingsgezindheid wordt gedefinieerd als een prosociale verandering van het slachtoffer ten opzichte van de dader, ondanks diens kwetsende daden (McCullough, 2001). Vergevingsgezindheid is een proces waarin een slachtoffer minder gemotiveerd raakt om wraak te nemen op een dader, of afstand te bewaren tot een dader, en meer gemotiveerd raakt om te handelen op een manier die de dader ten goede komt (McCullough et al., 1997). Dit veronderstelt een proces dat tijd kost. Er is echter weinig onderzoek gedaan naar vergeving als een *proces dat verandert in de loop van de tijd* (Brady et al., 2022). Daarom hebben we in Hoofdstuk 4 onderzocht hoe vergeving in werkrelaties verandert in de loop van de tijd, met behulp van een longitudinaal onderzoek met vier wekelijkse meetmomenten. Tijdens de eerste meting werd de deelnemers gevraagd zich een recent incident te beschrijven waarin zij zich door een van hun collega's gekwetst voelden. Bij de volgende meetmomenten werd datzelfde incident aan de deelnemers voorgelegd, zodat zij steeds op dezelfde gebeurtenis reageerden. Latente groeianalyses toonden aan dat de vergevingsgezindheid op hetzelfde niveau bleef gedurende de vier weken, wat enigszins in tegenspraak is met het idee dat "tijd alle wonden heelt" (Wohl & McGrath, 2007). Bovendien lieten enkele extra exploratieve analyses zien dat een betere werkrelatie en een minder ernstige overtreding samenhangen met een sneller vergevingsproces.

Samenvattend kan gesteld worden dat het huidige onderzoek geen bewijs leverde dat vergevingsgezindheid zich ontwikkelt of verandert in de loop van de tijd, althans niet in een

periode van vier weken. Het lijkt er eerder op dat voornamelijk de kwaliteit van de werkrelatie en de ernst van de overtreding verantwoordelijk zijn voor het feit dat sommige werknemers sneller en gemakkelijker vergeven dan anderen.

Welke factoren bepalen vergeving in werkrelaties?

Tot slot hebben we ons gericht op de factoren die vergeving in werkrelaties bepalen. Eerder onderzoek richtte zich bijna uitsluitend op de dader-slachtoffer relatie, maar vergeving in de werkcontext wordt waarschijnlijk ook beïnvloed door organisatorische factoren, zoals het teamklimaat of de leider. In hoofdstukken 4 en 5 hebben we onderzocht welke rol dergelijke organisatorische factoren spelen bij vergeving in werkrelaties.

In hoofdstuk 4 pasten we principes van de sociale identiteitstheorie toe en voorspelden we dat organisatorische factoren die een collectieve identiteit zichtbaar maken (dat wil zeggen, vergevingsgezind werkklimaat, sociale cohesie, *team-member exchange*, en transformationeel leiderschap) geassocieerd zijn met meer vergeving in werkrelaties. We vonden inderdaad dat de aanwezigheid van deze organisatorische factoren geassocieerd was met hogere startniveaus van vergeving. Toch vonden we niet dat deze organisatorische factoren werknemers hielpen om daders ook *sneller* te vergeven.

In Hoofdstuk 5 hebben we verder onderzocht of en hoe de vergevingsgezindheid van leiders samenhangt met de vergevingsgezindheid van werknemers. Op basis van de sociale leertheorie stelden we twee manieren voor waarop de vergevingsgezindheid van leiders kan samenhangen met de vergevingsgezindheid van werknemers, namelijk door a) de mate van vergevingsgezindheid van de leider zelf, en b) de mate waarin leiders hun werknemers instrueren om anderen te vergeven. We onderzochten ook of de interactie tussen de mate van vergevingsgezindheid van leiders zelf en de instructies van leiders om te vergeven geassocieerd

was met de vergevingsgezindheid van werknemers. We hebben drie studies met verschillende onderzoeksopzetten uitgevoerd om deze vragen te beantwoorden. De bevindingen waren gemengd: terwijl de vergevingsinstructies van leiders in alle drie de studies consistent en positief geassocieerd bleken te zijn met de vergevingsgezindheid van werknemers, was de mate van vergevingsgezindheid van leiders zelf alleen gerelateerd aan de vergevingsgezindheid van werknemers in studie 1 en 3, maar niet in studie 2. Bovendien werd het interactie-effect tussen de mate van vergevingsgezindheid van leiders zelf en hun instructies om te vergeven alleen ondersteund in studie 1, maar niet in studies 2 en 3. Het is duidelijk dat deze inconsistente bevindingen toekomstig onderzoek vereisen, maar de bevindingen zijn wel in lijn met het algemene idee dat leiders een sleutelrol spelen in het onderhouden van cruciale werkrelaties. Samenvattend suggereren de bevindingen in de hoofdstukken 4 en 5 dat organisatorische factoren van invloed zijn op de bereidheid van werknemers om te vergeven.

Samenvattend, het is onvermijdelijk dat werknemers elkaar kwetsen op het werk. Dit kan negatieve gevolgen hebben voor werknemers en de organisatie. In dit proefschrift is gekeken of vergevingsgezindheid ertoe zou kunnen leiden dat deze negatieve effecten verdwijnen of verzacht worden en zodoende cruciale werkrelaties kunnen worden behouden. De in dit proefschrift gerapporteerde resultaten laten wederom zien dat vergeving een uiterst succesvolle en efficiënte strategie is om constructief om te gaan met conflicten en onenigheden. Het is misschien wel de enige manier om werkrelaties, die zo belangrijk zijn voor ons welzijn op het werk, te beschermen en te behouden.

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October 2022, Wenrui Cao

Curriculum Vitae

Wenrui Cao was born on the 13th of December 1992 in Hebei, China. In 2015, she finished her Bachelors at Hebei University of Technology. From 2015 to 2018, she studied Organizational Behaviors and Human Resources Management and obtained her Master's degree at Hebei University of Technology. During her master, she developed a great interest in positive psychology and understanding how people could efficiently deal with negative behaviors at work. With funding from the China Scholarship Council (CSC), Wenrui came to the Netherlands in 2018 to pursue a PhD's degree in Social, Health and Organizational Psychology at Utrecht University.

Journal Publications

Cao, W., van der Wal, R. C., & Taris, T. W. (2021). When work relationships matter: Interpersonal forgiveness and work outcomes. *International Journal of Stress Management*, 28(4), 266–282.

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Conference Presentations

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Cao, W., van der Wal, R. C., & Taris, T. W/ **Cao, W.** *When work relationships matter: Interpersonal forgiveness and work outcomes*. Paper presented at the EAOHP conference, online, April 2020.

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