Can Faith Move Mountains? How Implicit Theories about Willpower Moderate the Adverse Effect of Daily Emotional Dissonance on Ego-Depletion at Work and Its Spillover to the Home-Domain

Recent findings have demonstrated that implicit theories about willpower (the belief whether willpower relies on a limited vs. unlimited resource) moderate the ego-depletion-effect. This study examines this moderating mechanism in occupational settings where employees increasingly face the unpleasant state of emotional dissonance, which requires the exertion of volitional self-control. By integrating findings on implicit theories about willpower, arguments brought up by the strength model of self-control, and notions from the spillover literature, we propose that believing in a unlimited resource theory of willpower buffers the effect of emotional dissonance on ego-depletion at work and diminishes the spillover of ego-depletion from the work- to the home-domain. In a diary study covering ten working days (N=71), we examine a moderated mediation model in which ego-depletion at work mediates the relation between emotional dissonance and ego-depletion at home and analyse whether implicit theories about willpower moderate both paths (a and b) of the proposed mediation model. Our results provide support for the mediation hypothesis and show that endorsing a unlimited resource theory buffers the effect of emotional dissonance on ego-depletion at work, thereby disrupting the indirect effect of emotional dissonance on ego-depletion at home. Subsequently, we discuss implications of holding a unlimited resource theory.

Keywords: diary study, ego-depletion, emotional dissonance, implicit theories about willpower, strength model of self-control, work-to-home spillover
Consistent with the rising importance of customer satisfaction through service, actively managing one’s emotions to improve work outcomes is widely regarded as essential for effective workplace interactions (e.g., interacting with customers by showing smiles and good humour; Grandey, 2000). However, the common mantra of providing “service with a smile” routinely exposes employees to situations in which their true affective states may be incongruent with the organizationally desired expressions (Grandey, 2003). The discrepancy that occurs when an employee is required to express emotions which are not genuinely felt in the particular situation is commonly referred to as emotional dissonance (Zapf, 2002), a state that has been shown to predict a number of adverse outcomes, such as absenteeism (Hülsheger & Schewe, 2011), reduced work performance (Grandey, 2003), and psychological strain (Cheung & Tang, 2007).

The adverse effects of coping with emotional dissonance on employees’ well-being and performance can be explained by research on volitional self-control (e.g., Diestel & Schmidt, 2011a; Diestel, Rivkin, & Schmidt, 2015). This line of research suggests that the process of dissolving emotional dissonance necessitates suppressing genuine feelings in order to express organisationally desired emotions. Therefore, in order to overcome emotional dissonance, employees need to exert volitional self-control, which involves inhibiting, altering, and overriding automatic or habitual responses (e.g., Gailliot & Baumeister, 2007). According to the strength model of self-control, these processes can be thought of as effortful internal acts, which deplete a common regulatory resource capacity and thereby leave it less available for further volitional self-control (e.g., Muraven & Baumeister, 2000; Gailliot & Baumeister, 2007). Thus, resolving emotional dissonance (i.e., suppression of genuine- and expression of organisationally desired emotions) on a regular basis necessitates prolonged exertion of volitional self-control, which reduces the capacity for further self-
control – a state referred to as ego-depletion (Baumeister, Bratslavsky, Muraven, & Tice, 1998).

In awareness of these findings and their relevance for organisations, many scholars have analysed emotional dissonance and associated ego-depletion effects directly at the workplace. While initial studies on emotional dissonance have adopted a between-person approach to explain why some employees (e.g., frontline employees, Rafaeli & Sutton, 1987; nurses, Schmidt & Diestel, 2014) experience higher levels of emotional dissonance than others, recent studies have revealed that emotional dissonance also varies between workdays (within-person). For instance, a daily diary study conducted by Diestel and colleagues (2015) revealed that on workdays characterized by higher emotional dissonance than usual (e.g., more frequent customer interactions), employees report increased ego-depletion in comparison to days with lower levels of emotional dissonance. Only recently, this notion has been further expanded by Germeys and de Gieter (2018), who demonstrated that exerting volitional self-control on a specific workday does not only manifest in day-specific ego-depletion at work, but also affects employees’ experiences of ego-depletion later at home. In other words, it has been shown that adverse consequences of exerting volitional self-control at work spill over to the home-domain, thereby influencing employees’ levels of ego-depletion after work.

Another line of research extends knowledge on ego-depletion by focusing on implicit theories about willpower. According to a series of studies, people differ in their implicit theories whether willpower – the capacity to exert volitional self-control – relies on a limited vs. nonlimited resource (Job, Dweck, & Walton, 2010). While some people believe that willpower relies on a limited resource that is easily used up and needs to be replenished after a strenuous mental activity (i.e., limited resource theory;
Job et al., 2010), others believe that willpower is nonlimited, implying that it is not easily used up and can even be fuelled by exerting volitional self-control (i.e., nonlimited resource theory; Job et al., 2010). In a variety of studies, implicit theories about willpower have been shown to moderate the extent to which self-control performance decreases after previous acts of self-control (Job et al., 2010), influences the acquisition of cognitive skills (Miller et al., 2012), and predicts effective goal striving of students (Bernecker & Job, 2015). These studies have come to the conclusion that believing in a nonlimited resource theory of willpower prevents (at least to some degree) the ego-depletion effect after exerting volitional self-control and supports people to sustain self-control, whereas believing in a limited resource theory leads to reversed effects.

The basic tenor of this research is that a person’s implicit theory about willpower reflects a relatively stable individual trait, which is supported by two field studies that validated its middle-term stability over a time period of two months (Job et al., 2010, Study 4) and its long-term stability over a time period of six months (Bernecker, Herrmann, Brandstätter, & Job, 2015, Study 2). On the other hand, laboratory studies have shown that this implicit theory might also be shaped (at least partially) by external information (such as experimental manipulation; e.g., Job et al., 2010), but this variability has not been replicated in settings outside the laboratory. Thus, in the study at hand, we define implicit theories about willpower as a stable individual characteristic and examine how this trait-like belief affects everyday self-control processes at work. Therefore, the current study intends to broaden empirical knowledge on implicit theories about willpower (e.g., Job et al., 2010), volitional self-control (e.g., Diestel & Schmidt, 2011a), and spillover (e.g., Germeys & de Gieter, 2018) by analysing the buffering role of believing in a nonlimited resource theory on the...
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relation between emotional dissonance and ego-depletion throughout a workday. For this purpose, we adopt a multilevel approach to test a moderated mediation model (see Figure 1): First, emotional dissonance is proposed to adversely affect ego-depletion at work and at home. Second, the adverse effect of emotional dissonance on ego-depletion at home is suggested to be mediated by ego-depletion at work. Third, believing in willpower as a nonlimited resource is predicted to buffer the day-specific effect of emotional dissonance on ego-depletion at work and (fourth) to further buffer the day-specific spillover of ego-depletion from work to home. Fifth, it is hypothesized that the positive indirect relation between emotional dissonance and ego-depletion at home via ego-depletion at work is moderated (attenuated) for those employees who believe in a nonlimited resource theory.

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By examining this model, we aim to contribute to theory and practice in at least three ways. First, past research has only paid little attention to the underlying mechanisms that explain how adverse consequences from experiencing emotional dissonance at work spill over to employees’ states in the evening at home, when emotional dissonance is no longer present (Zhang, Zhang, Lei, Yue, & Zhu, 2016). Therefore, we intend to broaden empirical knowledge on spillover effects (e.g., Bakker & Geurts, 2004; Germeys & de Gieter, 2018; Ilies et al., 2007) by proposing and testing a potential underlying psychological mechanism that links emotional dissonance at work to experiences of ego-depletion at home. We believe that analysing how consequences of coping with emotional dissonance transcend the work-boundary and affect ego-depletion at home is an important step towards understanding the daily depletion process and fostering replenishment of the regulatory resource for employees working in customer-oriented occupations.
Second, studies on implicit theories about willpower predominantly measured self-control processes at the between-person level in laboratory settings (exceptions being Bernecker & Job, 2015; Bernecker et al., 2015, Study 3). While this research expanded our understanding of the basic mechanisms of implicit theories about willpower, we believe that transferring these insights into the occupational field and analysing them from a daily perspective could enhance the external validity of previous findings. By adopting a daily diary approach, we intend to examine state levels and changes in ego-depletion during the day, thereby capturing the dynamic aspects of employees’ ego-depletion levels from a within-person perspective. In line with Hamaker’s suggestion (2012; see also Fisher & To, 2012) that relations on the between- and within-person level may significantly vary in size and even direction, utilizing a diary approach for studying the interplay of coping with emotional dissonance, state levels of ego-depletion, and implicit theories about willpower (as a trait-like individual characteristic) could allow identifying more fine grained differences in resource allocation that occur on the within-level and could further contribute to a better understanding of the causality of these effects (Xanthopoulou, Bakker, & Ilies, 2012).

Since implicit theories have been shown to be sensitive to the influence of external information and have been proposed to be shaped by organisational climate (Dweck, 2006), understanding how employees’ implicit theories (i.e. believing in a limited vs. nonlimited resource theory) affect regulatory resource depletion effects (and as such, performance on further tasks that require the exertion of volitional self-control) might provide valuable implications for managerial practice.

Third, a vast majority of research has examined the moderating effect of implicit theories about willpower only on the immediate consequences of exerting volitional self-control. These studies have largely focused on analysing the performance reduction
directly after engaging in an initial self-control task (e.g., Job et al., 2010). However, until now, it remains unclear whether implicit theories about willpower also affect enduring experiences of ego-depletion, once the regulatory resource has already been depleted. As past research indicates that implicit theories about willpower shape how individuals allocate resources and how they monitor signs of ego-depletion (Job, Walton, Bernecker, & Dweck, 2013; Job, Bernecker, Miketta, & Friese, 2015), they might also affect whether experiences of ego-depletion endure over a workday and whether these experiences spill over from the work- to the home-domain. The current study intends to shed light on this proposition, thereby examining if believing in a nonlimited resource theory facilitates coping with everyday emotional dissonance and if it further affects whether the depleted regulatory resource becomes replenished after work. By incorporating the spillover literature (e.g., Germeys & de Gieter, 2018; Bakker & Geurts, 2004) and findings on implicit theories about willpower (e.g., Job et al., 2010), we go beyond past research and analyse the benefits of holding a nonlimited resource theory throughout a workday.

**Emotional Dissonance as a Job Stressor**

Over the last decades, emotion-regulation has become one of the most widely studied antecedents of ego-depletion (Lian, Yam, Ferris, & Brown, 2017). In this field of research, emotional dissonance is what has been seen as problematic right from the beginning (Hochschild, 1983; Zapf, 2002), because it is considered as a job demand that exposes employees to situations where they need to resolve the discrepancy between felt emotions and desired expressions of emotions (Zapf, Vogt, Seifert, Mertini, & Isic, 1999; Zapf, 2002). For instance, when an eliciting event (e.g., rudeness of a customer) has already triggered an undesirable emotional response (e.g., anger), this affective state is in contrast to the required emotional display (e.g., being friendly and supportive).
In order to dissolve this unpleasant state, the process of coping with emotional dissonance requires continuous monitoring of felt and required emotions, inhibition or suppression of experienced emotions, and a continuous altering of the emotional expression (Konze, Rivkin, & Schmidt, 2017; Schmidt & Diestel, 2014). Consequently, several scholars have considered these processes from a self-control perspective and have described them as effortful internal acts of response-focused emotion-regulation, which involve the exertion of volitional self-control (Zapf & Holz, 2006; Diestel & Schmidt, 2011a; Diestel & Schmidt, 2011b). This line of research has adopted the theoretical framework of the strength model of self-control (Muraven & Baumeister, 2000) to explain the underlying mechanisms through which emotional dissonance adversely affects employees’ psychological well-being. Accordingly, in order to bring expressed emotions in line with organizationally required emotions, employees need to override automatic responses and are required to act out of sync with their natural tendencies, thereby taxing the regulatory resource and manifesting in heightened levels of ego-depletion. And indeed, several studies have revealed that exaggerating a required emotional display and suppressing true feelings cause ego-depletion and impair subsequent self-control processes (Schmeichel, Vohs, & Baumeister, 2003; Schmeichel, 2007). Thus, coping with emotional dissonance is associated with psychological costs that manifest in short-term consequences, such as ego-depletion, and in long-term consequences, such as impaired psychological well-being (e.g., burnout symptoms, Konze et al., 2017) and absenteeism from the workplace (Diestel & Schmidt, 2011a).

Thus, there is broad evidence that coping with emotional dissonance at work immediately leads to ego-depletion effects and also relates to heightened values of ego-depletion after work (Diestel et al., 2015). In line with these findings, we predict that coping with emotional dissonance involves the exertion of volitional self-control,
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thereby taxing a regulatory resource, which directly manifests in ego-depletion (at work and at home) as decrements of this resource. By adopting a diary study approach, we examine these predictions from a within-person perspective and analyse how fluctuations in day-to-day emotional dissonance relate to day-to-day fluctuations in ego-depletion.

Hypothesis 1: Day-specific emotional dissonance is positively related to day-specific ego-depletion (a) at work and (b) at home.

While the relationship between emotional dissonance and ego-depletion has already received some empirical attention, less attention has been paid to how the adverse consequences of emotional dissonance spill over from the work- to the home-domain (Zhang et al., 2016). In the context of the current study, we define daily spillover as the within-person mechanism that links these two domains of everyday life in a way that psychological states transfer from the work- to the home-domain (Lambert, 1990). More specifically, in line with Edwards and Rothbard’s (2000) conceptualisation of spillover effects, the current study focuses on examining the resource drain effect. This specific effect is characterized by an adverse, direct relationship between the work- and the home-domain, so that drawing from a finite resource in one domain reduces the availability of this resource in the other domain (Edwards & Rothbard, 2000). This theoretical proposition ties in with notions from the strength model of self-control (Muraven & Baumeister, 2000), suggesting that once the regulatory resource has been depleted, the resource takes time to replenish, so that the experience of ego-depletion will linger (Baumeister & Vohs, 2016). In support of this prediction, a recent study conducted by Germeys and de Gieter (2018) has demonstrated that the adverse effect of having exerted volitional self-control previously at work
endures over some time and transcends the work-domain, leading to heightened levels of ego-depletion at work and at home. The strength model of self-control (Muraven & Baumeister, 2000) further predicts that the state of ego-depletion endures until replenishment of the depleted regulatory resource is possible. However, research on recovery indicates that experiencing emotional dissonance at work impedes recovery possibilities after work (Sonnentag, Kuttler, & Fritz, 2010; Volmer, Binnewies, Sonnentag, & Niessen, 2012; Xanthopoulou, Bakker, Oerlemans, & Koszucka, in press). Consequently, we propose that after experiencing a workday with high emotional dissonance, the process of replenishing the depleted regulatory resource after work is protracted, so that experiences of ego-depletion endure after work and spill over to the home-domain.

By incorporating notions from the strength model of self-control (Muraven & Baumeister, 2000), propositions from the spillover literature (Edwards & Rothbard, 2000), and recent findings on recovery after work (e.g., Sonnentag et al., 2010; Xanthopoulou et al., in press), we propose ego-depletion at work as a mediator that links emotional dissonance at work to ego-depletion at home. Thus, we predict that once the regulatory resource has been depleted, this state of ego-depletion persists over some time until replenishment of the resource is possible, thereby causing a spillover of ego-depletion to the home-domain.

Hypothesis 2: The day-specific positive relationship between emotional dissonance and ego-depletion at home is mediated by ego-depletion at work.

Implicit Theories about Willpower as a Moderator of the Ego-Depletion Effect

Previous research indicates that implicit theories about willpower influence how people react to demands on volitional self-control and affect the ego-depletion effect. This
stream of research suggests that endorsing a nonlimited resource theory (i.e., the belief that the regulatory resource is not easily depleted and refuels itself) is associated with a variety of beneficial outcomes, whereas holding a limited resource theory (i.e., the belief that the regulatory resource is easily depleted and needs rest to recover) is detrimental to subsequent self-control performance and subjective well-being (Job et al., 2010; Bernecker et al., 2015). First evidence for the benefits of believing in a nonlimited resource theory was provided by Martijn, Tenbült, Merckelbach, Dreezens, and de Vries (2002), who found that peoples’ theory of the consequences of self-control moderated performance reduction after self-control exertion. That is, participants who were told that performing an effortful task (controlling their emotions) would improve performance on a subsequent task, did not show decreases in subsequent self-control performance. Drawing on this evidence, Job et al. (2010) introduced the concept of implicit theories about willpower to account for these findings. In a series of laboratory studies, the authors demonstrated that only participants who held or who were led to hold a limited resource theory showed ego-depletion effects after exerting self-control, whereas endorsing a nonlimited resource theory diminished the ego-depletion effect. Moreover, a field study that examined students’ self-control performance revealed that students who held a nonlimited resource theory were better able to exert self-control in phases of high demands on self-control than students who held a limited resource theory (Job, Walton, Bernecker, & Dweck, 2015).

In an attempt to uncover the underlying psychological process that might account for these empirical findings, scholars have discussed the role of implicit theories about willpower in monitoring and conserving regulatory resources (e.g., Job et al., 2013; Baumeister & Vohs, 2016). They have drawn from theoretical extensions of the strength model of self-control, suggesting that the tendency to conserve some of the
regulatory resource is involved in the ego-depletion effect (Baumeister, Muraven, & Tice, 2000). More specifically, Baumeister and Vohs (2016) argue that there are psychological systems that monitor consumption of the regulatory resource and inhibit further allocation of depleted resources when current allocations occur at an unsustainable rate. By integrating these theoretical notions from the strength model of self-control (Muraven & Baumeister, 2000) and empirical findings on implicit theories about willpower (Job et al., 2010), it has been suggested that people endorsing a limited vs. nonlimited resource theory primarily differ from each other in how intensively they monitor consumption of their regulatory resource and to what extent they aim to conserve what remains of the regulatory resource (e.g., Job et al., 2013; Baumeister & Vohs, 2016).

In line with these propositions, we assume that when people believe that willpower relies on a highly limited resource that becomes easily depleted and is already impaired even after one strenuous mental activity, they will monitor the availability of the regulatory resource more intensively, because they expect decrements in this resource. Consequently, we expect them to be more sensitive to cues for ego-depletion and to realize sooner that they are getting ego-depleted. On the other hand, we assume that when people believe that willpower relies on a nonlimited resource, they do not have the urge to monitor levels of ego-depletion, because they do not expect that exerting volitional self-control on a strenuous mental activity diminishes any resource.

Applying these proposed underlying psychological mechanisms to the current study, we argue that employees holding a nonlimited resource theory will not expect to become ego-depleted, even when daily demands on emotional dissonance exceed their personal average. Coping with emotional dissonance is thus hypothesized to manifest in smaller decrements of the regulatory resource, because employees believing in a
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nonlimited resource theory perceive themselves as having sufficient resources to deal
with accumulating daily emotional dissonance (i.e., plenty customer complaints). On the
contrary, we suggest that employees holding a limited resource theory expect to become
ego-depleted after exerting even a slight amount of mental effort, such as dealing with a
single customer complaint. Thus, on days when emotional dissonance occurs more often
than usual, employees holding a limited resource theory should be more vigilant for
cues of ego-depletion, and consequently, will act as though their regulatory resource is
depleted long before it reaches an actual limit. Therefore, we predict:

Hypothesis 3: Person-level implicit theories about willpower moderate the day-
specific positive relationship between emotional dissonance and ego-depletion at
work: The intraindividual relationship is amplified the more people believe that
willpower relies on a limited resource.

In line with the assumption that people holding a limited vs. a nonlimited
resource theory differ from each other in how intensively they aim to conserve what
remains of the diminished resource after exerting self-control, first laboratory findings
show that the exertion of volitional self-control activates the goal to conserve the
remaining resource and promotes the orientation towards rest especially in people with a
limited resource theory (Job, Bernecker et al., 2015). Thus, there is initial evidence
indicating that people believing in willpower as relying on a limited resource turn
towards rest or inactivity after exerting volitional self-control. However, research on
recovery suggests that inactivity or low-effort activities (such as relaxing on the sofa or
doing nothing) may be considered as dysfunctional recovery strategies, as these
activities have little or no effect on the replenishment of a depleted resource (Sonnentag
& Natter, 2004; Rook & Zijlstra, 2006). Active leisure activities (physical activities,
creative activities, and social activities; Sonnentag, 2001), on the other hand, have repeatedly been shown to exert a stronger effect on the replenishment of a depleted resource (e.g., Sonnentag & Natter, 2004; van Hooff, Geurts, Beckers, & Kompier, 2011; Oerlemans, Bakker, & Demerouti, 2014) and thus, could be considered a more functional recovery strategy.

Therefore, we propose that people endorsing a limited resource theory develop a stronger need to conserve their resource once this resource has been diminished previously. Building on empirical evidence (Job, Bernecker et al., 2015), we predict that people endorsing a limited resource theory turn towards rest and inactivity (long before it might be necessary) in order to conserve what remains of this diminished resource. However, as we presume that this recovery strategy is less effective for replenishing the depleted resource (e.g., Rook & Zijlstra, 2006; Sonnentag & Natter, 2004), the state of feeling depleted might even be prolonged for people holding a limited resource theory. On the contrary, we suggest that believing in a nonlimited resource theory removes the perceived need to conserve a depleted resource (why conserving something that is nonlimited?), thereby breaking a process that undermines self-control performance and encouraging people to continue to allocate resources (Job, Bernecker et al., 2015; Baumeister & Vohs, 2016). Consequently, believing in a nonlimited resource theory and as such, a belief of having sufficient resources, is proposed to remove the orientation towards rest and inactivity, in that way enabling individuals to replenish their depleted resource in a more functional manner by conducting active leisure activities.

Applying this proposed underlying framework to the current study, we suggest that employees endorsing a nonlimited resource theory adopt a more functional recovery strategy in order to replenish the depleted regulatory resource, thereby reducing the spillover of ego-depletion from the work- to the home-domain. On the
other hand, we predict that employees endorsing a limited resource theory are more likely to adopt dysfunctional recovery strategies (i.e., by turning towards inactivity), thereby prolonging the state of feeling depleted instead of actively replenishing the depleted regulatory resource. For these employees, ego-depletion is proposed to linger and to spill over from the work- to the home-domain. Thus, it is hypothesized:

**Hypothesis 4:** Person-level implicit theories about willpower moderate the day-specific positive relationship between ego-depletion at work and ego-depletion at home: The intraindividual spillover from work to home is amplified the more people believe that willpower relies on a limited resource.

Building on the assumptions that holding a nonlimited resource theory (a) attenuates the relation between emotional dissonance and ego-depletion at home and (b) diminishes the spillover of ego-depletion from the work- to the home-domain, we predict that the positive indirect effect of emotional dissonance on ego-depletion at home will be reduced for employees endorsing a nonlimited resource theory. Hence, we hypothesize:

**Hypothesis 5:** Person-level implicit theories about willpower moderate the day-specific mediated (indirect) relationship between emotional dissonance and ego-depletion at home: The positive mediated relationship is attenuated the more people believe that willpower relies on a nonlimited resource.

**Method**

**Research design and participants**

Over the course of some years, contact information of service employees who had expressed their willingness to take part in a scientific study were collected (via social
networks, personal contacts, and public advertisements). For the purpose of this study, these employees were approached and asked to participate in this diary study. As a result, 71 employees from various organisations in Germany with regular contact to customers, clients, or patients at work registered for the study (occupations ranged from salespersons and consultants to kindergarten teachers and care institutions). Among these participants, 59% were female, 18% worked part-time (part-time employees in this study worked less days per week, but only had full working days, which were included in the analyses), and the mean age of the participants was 40.23 (SD = 13.51) years. The whole process of data collection was conducted electronically via an online survey platform that allowed participants to fill out the surveys on smartphones, tablets, or personal computers. In advance of the day-specific measurements, participants responded to a general questionnaire that assessed biographical variables and person-level constructs (e.g., implicit theories about willpower). After that, over a period of 10 consecutive working days, participants received e-mails two times per day (in the afternoon at work and in the evening at home) in order to answer day-specific questionnaires. In the afternoon at work (1:00 p.m.), participants received an e-mail asking them to report emotional dissonance and ego-depletion. In the evening at home (7:00 p.m.), another email with an invitation to rate ego-depletion was sent. After receiving the e-mails, the surveys were accessible for six hours. If participants did not react to the survey within the first two hours, a reminder for participation was sent. On average, the surveys were completed at 2:47 p.m. at work and at 8:35 p.m. at home. On weekends or public holidays, the diary study was suspended and continued the next regular working day. Participation was voluntary as well as anonymous and data across measurements were matched via an anonymous code. The completion of the diary study was compensated for by 50 Euro (information about completion of surveys and actual
data were gathered separately). Overall, response rate to our daily questionnaires was 93.7%, resulting in 665 (out of 710) day-specific measurements.

**Measures and control variables**

The general questionnaire included implicit theories about willpower as study variable and age, gender, and self-control capacity as control variables. Age and gender were assessed and included in the analyses to control for their potential confounding influence. Moreover, we controlled for self-control capacity as an individual trait, because it has been found to influence the appraisal of stressors (like emotional dissonance) and strain (Schmidt, Hupke, & Diestel, 2012). In the day-specific questionnaires, we explained that the items of emotional dissonance refer to situations within the last hours of work, while the items of ego-depletion refer to momentary experiences.

**Self-control capacity.** We assessed self-control capacity as an individual trait with a 17-item version of Tangney, Baumeister, and Boone’s (2004) self-control capacity scale (e.g., “People would say that I have iron self-discipline.”). All items were scored using a 5-point intensity-rating format (1 = not at all; 5 = very much).

**Implicit theories about willpower.** To measure person-specific implicit theories about willpower, we used Job et al.’s (2010) strenuous mental activity scale. A typical (reversed) item is “When you have been working on a strenuous mental task, you feel energized and you are able to immediately start with another demanding activity.” Participants responded using a six-point intensity-rating format (1 = strongly disagree; 6 = strongly agree), whereas higher values represent greater agreement with a limited resource theory.

**Emotional dissonance (at work).** The measurement of day-specific emotional dissonance was based on five items that assessed the frequency of experienced
discrepancies between felt emotions and those required by the job role *within the last hours of work* (e.g., “Within the last hours at work, how often did you have to show feelings that you did not really feel?”). The items were adapted from the Frankfurt Emotion Work Scales (Zapf et al., 1999). Some questions were slightly modified by asking specifically about interactions with colleagues, patients, and customers.

Participants responded using a five-point intensity-rating format (1 = *never*; 5 = *very often*).

**Ego-depletion (at work and at home).** We assessed day-specific ego-depletion using five items related to the participant’s *current* experiences with resource depletion (e.g. “At the moment, I feel increasingly less able to focus on anything.”). The scale was developed and validated by Bertram, Unger, and Dickhäuser (2011), who intended to assess the temporary affective state of ego-depletion proposed by Muraven and Baumeister (2000). All items were scored using a four-point intensity-rating format (1 = *not at all*; 4 = *a great deal*).

**Construct Validity of Day-Level Variables**

We conducted multilevel confirmatory factor analyses (MCFAs) to test the psychometrical distinctiveness of our day-level variables. We tested a three-factor measurement model including all three day-level variables of the present study as distinct factors (emotional dissonance, ego-depletion at work, and ego-depletion at home). Fit indices for this model showed a satisfactory fit ($\chi^2 (174) = 620.74, p < .01$; root mean square error of approximation (RMSEA) = .061; comparative fit index (CFI) = .934; standardized root mean square residual within-person/between-person (SRMRw/SRMRb) = .030/.059).
**Analytical procedure**

We used multilevel structural equation modelling in Mplus 7 (Muthén & Muthén, 1998-2017), because the day-level data (level 1) were nested within the person-level data (level 2), and this procedure takes the interdependence of both levels into account (Hox, 2002). In a first step (in order to test Hypotheses 1 and 2), we specified a 1-1-1 mediation model (Preacher, Zyphur, & Zhang, 2010), in which ego-depletion at work mediates the adverse effects of emotional dissonance on ego-depletion at home. To test this multilevel mediation with all study variables assessed at the day-level, we followed Preacher and colleagues’ procedure and tested a random-intercept fixed-slope model (Preacher et al., 2010; Preacher, Zhang, & Zyphur, 2011). In line with the analysis approach described by Hülsheger and colleagues (2014), within-person and between-person relations were analysed simultaneously, whereas coefficients at level 1 indicate pure within-person relationships and coefficients at level 2 indicate pure between-person relationships. Thus, the decomposition into within-person and between-person relations is such that it “can be viewed as an implicit, latent group-mean centring of the latent within-level covariate” (Muthén & Muthén, 1998 –2017; p. 243).

In a second step, we specified a moderated mediation model to examine the moderating effect of implicit theories about willpower on the day-level relation between emotional dissonance and ego-depletion (Hypotheses 3, 4, and 5). In this model, we defined the slope of emotional dissonance on ego-depletion at work (path a) and the slope of ego-depletion at work on ego-depletion at home (path b) as random, as these relations were hypothesized to vary as a function of implicit theories about willpower. Subsequently, we added implicit theories about willpower as a predictor of the random slopes. Since the focus of this analysis was to examine day-specific effects, we centred emotional dissonance around the person mean (group-mean centring; Enders & Tofighi, 2007), whereas implicit theories about willpower and ego-depletion at work were
centred around the grand mean (grand-mean centring). This procedure allows to exclusively test the moderating effect on the within-person-/day-level (Ohly, Sonnentag, Niessen, & Zapf, 2010; van de Pol & Wright, 2009). All paths between the study variables were modelled using robust maximum likelihood method of estimation.

Results

Table 1 displays the descriptive statistics, internal consistencies (Cronbach’s alpha), and correlations among the study variables. The proportion of within-person variation in ego-depletion was 54.8% at work and 52.2% at home, indicating that due to high levels of day-specific fluctuations, the application of multi-level modelling is necessary.

--- Please insert Table 1 about here ---

Mediating effect of ego-depletion at work

Hypothesis 1 proposed that day-specific emotional dissonance is positively related to ego-depletion (a) at work and (b) at home. In support of Hypothesis 1, the results indicate that emotional dissonance is positively related to (a) ego-depletion at work (between-level: $\beta = 0.41, p < .01$; within-level: $\beta = 0.15, p < .01$; cf. Table 2), as well as to (b) ego-depletion at home (between-level: $\beta = 0.26, p < .01$; within-level: $\beta = 0.08, p < .05$). In a next step, we included ego-depletion at work to predict ego-depletion at home, thereby testing the proposed mediating mechanism. In line with Hypothesis 2, the results show that ego-depletion at work is positively related to ego-depletion at home (between-level: $\beta = 0.82, p < .01$; within-level: $\beta = 0.39, p < .01$), while emotional dissonance is no longer related to ego-depletion at home (between-level: $\beta = -0.08, n.s.$; within-level: $\beta = 0.02, n.s.$). Moreover, this mediation model provided a good model fit ($\chi^2 (3) = 5.81, n.s., \text{RMSEA} = .037, \text{CFI} = .983, \text{SRMRw/b} = .000/.086$). In addition, pseudo-$R^2$ statistics (Raudenbush & Bryk, 2002) were calculated to obtain an indication
of the portion of explained variance (cf. Table 2).

For analysing the indirect (mediating) effect of ego-depletion at work, as proposed by Hypothesis 2, we utilized the Monte Carlo re-sampling method to estimate the appropriate confidence intervals for the indirect effect, because bootstrapping cannot be applied to multilevel analyses (Preacher & Selig, 2012; van der Leeden, Meijer, & Busing, 2008). More specifically, we computed bias-corrected 95% confidence intervals (CIs) for the indirect effect based on 20,000 re-samples using the software provided by Selig and Preacher (2008). In support of Hypothesis 2, the CI for the indirect effect of ego-depletion at work in the relation of emotional dissonance and ego-depletion at home did not include zero for the within-person part of our model ($\beta = 0.06 \ [CI: 0.03:0.08]$).

Thus, ego-depletion at work fully mediates the day-specific relation of emotional dissonance and ego-depletion at home. Moreover, Table 2 also indicates a significant indirect effect for the between-person part of our model ($\beta = 0.34 \ [CI: 0.16:0.55]$). This result implies that the mediating effect of ego-depletion at work is also present in the relation between cumulative emotional dissonance and ego-depletion at home aggregated across ten days.

Taken together, results of the mediation analysis demonstrate that day-specific emotional dissonance increases day-specific ego-depletion at work, which in turn spills over and manifests in ego-depletion at home. Furthermore, the adverse effect of emotional dissonance on ego-depletion at home is fully mediated by ego-depletion at work.¹

¹ In order to account for potential day effects in the analyses, we re-ran our analyses by including day-of-week dummy coded variables. Including these control variables did not change the pattern of results.
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Moderating effect of implicit theories about willpower

To further test whether implicit theories about willpower moderate the day-specific relation between emotional dissonance and ego-depletion at work (Hypothesis 3) and the day-specific spillover of ego-depletion from work to home (Hypothesis 4), we specified the slope of emotional dissonance on ego-depletion at work (path a) and the slope of ego-depletion at work on ego-depletion at home (path b) as random. Subsequently, we added implicit theories about willpower as a predictor of these random slopes. Because traditional fit indices are not applicable to random slope models, we tested whether the model fit was improved by conducting a Log-likelihood ratio test, as suggested by Muthén and Muthén (1998-2017). The results of this test show that compared to the mediation model, the moderated mediation model yields an improved data fit ($\Delta\text{log-likelihood}(df) = 98.78 (6); p < .01$).

--- Please insert Table 3 about here ---

Results indicate a positive effect of implicit theories about willpower on the slope between emotional dissonance and ego-depletion at work (within-level: $\beta = 0.07$, $p < .01$; cf. Table 3), thereby providing support for Hypothesis 3. To facilitate the interpretation of the interaction effect, we depicted the interaction effect and performed simple slope tests, as recommended by Preacher, Curran, and Bauer (2006). Figure 2 suggests that emotional dissonance relates positively to ego-depletion at work only for those who believe that willpower relies on a limited resource ($\gamma = .20, p < .01$), while the relationship is non-significant for those who believe that willpower relies on a nonlimited resource ($\gamma = .06, n.s.$). Thus, results provide support for Hypothesis 3.

--- Please insert Figure 2 about here ---

Hypothesis 4 proposed that implicit theories about willpower moderate the day-specific spillover of ego-depletion from home to work. However, as presented in Table...
3, our results reveal that there is no significant effect of implicit theories about willpower on the slope between ego-depletion at home and ego-depletion at work (within-level: $\beta = 0.03$, n.s.). This finding is inconsistent with Hypothesis 4. Finally, we tested whether our results provide evidence for the proposed moderated mediation model (Hypothesis 5) by analysing whether the mediating (indirect) effect of ego-depletion at work varies as a function of implicit theories about willpower. Thus, we examined conditional indirect effects of emotional dissonance on ego-depletion at home (via ego-depletion at work) at three values for implicit theories about willpower. More specifically, we computed 95% CIs of the indirect effect for people holding a nonlimited resource theory (one standard deviation below the mean of implicit theories about willpower), for people holding a limited resource theory (one standard deviation above the mean of implicit theories about willpower), and for people with an indecisive resource theory (mean level of implicit theory about willpower). For people holding an indecisive or a limited resource theory, the indirect effect of emotional dissonance on ego-depletion at home via ego-depletion at work was significant (indecisive resource theory: $\beta = 0.05$ [CI: 0.02:0.08]; limited resource theory: $\beta = 0.08$ [CI: 0.04:0.12]; cf. Table 3). In contrast, for people with a nonlimited resource theory, this indirect effect was not significant ($\beta = 0.03$ [CI: -0.01:0.05]). Thus, results support Hypothesis 5 and indicate that believing in willpower as relying on a nonlimited resource buffers the adverse effect of coping with high levels of emotional dissonance, thereby disrupting the indirect effect on ego-depletion at home via ego-depletion at work.²

² Following recommendations by Spector and Brannick (2011), we re-ran our analyses without the inclusion of biographical characteristics (age and gender) and self-control capacity as control variables. Excluding these control variables did not change the pattern of results. Thus, the possibility that the findings might be attributed to any of the control variables can be ruled out.
Discussion

Due to the prevalence of emotional dissonance in many occupational fields, the present diary study examined consequences of coping with emotional dissonance and tested whether the spillover of emotional dissonance on ego-depletion at home operates through ego-depletion at work. In line with a growing body of empirical evidence suggesting that implicit theories about willpower have the potential to moderate adverse effects of exerting volitional self-control, we further analysed whether believing in a nonlimited resource theory buffers these day-specific (direct and indirect) relations. Thus, the aim of this study was threefold. First, we intended to broaden our understanding on the prolonged effects of emotional dissonance by examining how consequences from coping with emotional dissonance at work affect employees’ experiences of ego-depletion throughout the day (that is, at work and in the evening at home). Second, we aimed at advancing knowledge on emotional dissonance at the workplace and implicit theories about willpower by adopting a daily diary design to study within-person differences in an occupational context. Third, we set out to investigate whether endorsing a nonlimited resource theory buffers against the adverse effects of emotional dissonance.

Results supported most of the hypothesized relationships. In particular, in terms of the examined mediation effect, our findings show a direct effect of emotional dissonance on ego-depletion at work and further indicate that the positive relation between emotional dissonance and ego-depletion at home is fully mediated by ego-depletion at work. In terms of the proposed moderating mechanisms, our results indicate that the intraindividual relationship between emotional dissonance and ego-depletion at work holds only for those employees, who believe that willpower relies on a limited resource. Thus, believing that willpower relies on a nonlimited resource attenuates the
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day-specific adverse relation between emotional dissonance and ego-depletion at work.
However, implicit theories about willpower do not seem to affect the intraindividual spillover of ego-depletion from work to home. Nevertheless, in line with the proposed moderated mediation model, the current study suggests that a nonlimited resource theory prevents that daily emotional dissonance manifests in states of ego-depletion at work and therefore disrupts the adverse indirect effect of emotional dissonance on ego-depletion at home via ego-depletion at work. Thus, our findings lend credence to the notion that believing in a nonlimited resource theory facilitates coping with daily emotional dissonance.

Theoretical implications

The present study may offer several contributions to the literature on emotional dissonance and its spillover to the home-domain and may extend our knowledge on the interplay between exerting volitional self-control and endorsing a nonlimited resource theory of willpower in several ways. First, we empirically replicate the adverse effect of emotional dissonance and provide additional support for the notion that coping with emotional dissonance involves exerting volitional self-control. Just like research on emotional dissonance has repeatedly found, portraying emotions inconsistent with one’s genuinely felt emotions depletes the regulatory resource (Grandey, 2003; Zapf & Holz, 2006; Diestel & Schmidt, 2010). Furthermore, in line with recent diary studies on emotional dissonance (e.g., Diestel et al., 2015) our results demonstrate that on days with higher levels of emotional dissonance (compared to an employee’s average level of emotional dissonance), employees report higher levels of ego-depletion. Results of the multilevel mediation analysis further indicate that the day-specific effect of emotional dissonance on ego-depletion at home is fully mediated by ego-depletion at work. This finding ties in with theoretical notions from the strength model of self-control.
(Baumeister & Vohs, 2016), propositions from the spillover literature (Edwards & Rothbard, 2000), and recent evidence on the spillover of ego-depletion (Germey & de Gieter, 2018). Furthermore, although the focus of the current paper was to examine within-person effects, findings of the multilevel mediation analysis further show that the pattern of results is similar at the within- and the between-person level. Accordingly, this result suggests that employees experiencing greater levels of emotional dissonance than others report higher values for ego-depletion at work, which spill over and affect ego-depletion at home (again, a full mediation via ego-depletion at work). Taken together, the present findings contribute to a better understanding of how emotional dissonance affects employees’ states at home and emphasize the importance of identifying boundary conditions that directly buffer the adverse effect of coping with emotional dissonance at work, so that experiences of ego-depletion are diminished directly at work and do not spill over to the home-domain.

Second, while previous studies on implicit theories about willpower have mainly relied on laboratory research and focused on between-person effects, we conducted a diary study in an applied occupational setting to examine the external validity of the buffering effect of believing in a nonlimited resource theory. The sample we chose (employees from different service-oriented occupations) is particularly relevant, because for these employees, continuously coping with emotional dissonance constitutes a core characteristic of their work-role. In this occupational setting, our results provide support for the buffering effect of believing in a nonlimited resource theory on the direct consequences of coping with emotional dissonance. In particular, we demonstrate that on days when employees experience higher levels of emotional dissonance than usual, only those believing in willpower as a limited resource report an increase of ego-depletion at work. While this research ties in with previous studies on
implicit theories about willpower (Job et al., 2010; Job et al., 2013; Bernecker & Job, 2015; Bernecker et al., 2015; Job, Walton et al., 2015), it further extends existing knowledge by transferring these insights to an occupational setting and by validating them on a within-person level. Further supplementing recent research, the current study demonstrates that holding a nonlimited resource theory eliminates the indirect effect of emotional dissonance on ego-depletion at home (as indicated by the insignificant indirect effect for people holding a nonlimited resource theory). Thus, only for people holding a limited resource theory, the adverse consequences of coping with emotional dissonance at work spill over to the home-domain and affect employees’ levels of ego-depletion in the evening. Taken together, the current study demonstrates that believing in a nonlimited resource theory does not only provide benefits in laboratory settings or in student samples, but might as well have practical implications for employees facing high levels of emotional dissonance on a daily basis.

Finally, results of the current study might open up a new discussion on implicit theories about willpower by identifying a potential limit of its moderating effect. While previous research has exclusively analysed the moderating role of implicit theories about willpower on immediate decrements in self-control resources, we also examined whether holding a nonlimited resource theory buffers the spillover of ego-depletion from the work- to the home-domain. By integrating empirical findings from research on recovery after work (e.g., Sonnentag & Natter, 2004; van Hooff et al., 2011; Oerlemans et al., 2014), we argued that people endorsing a limited resource theory turn towards inactivity once they feel that their resource is depleted to some degree, thereby adopting a dysfunctional recovery strategy that prolongs the state of feeling depleted. Simultaneously, we proposed that people holding a nonlimited resource theory adopt a more functional recovery strategy by conducting active leisure activities that facilitate
recovery. However, our findings did not support such a moderating effect, indicating
that believing in a nonlimited resource theory might not facilitate (or that believing in a
limited resource theory might not impede) the replenishment of a depleted regulatory
resource. This result may extend our knowledge on implicit theories about willpower by
suggesting that although endorsing a nonlimited resource theory might encourage
individuals to sustain prolonged exertion of volitional self-control; this implicit theory
does not seem to be capable of attenuating depletion effects once they have come to
pass.

Limitations and Suggestions for Future Research

Despite several contributions, our study is also subject to some limitations, which need
to be discussed. First, although collecting data at two measurement points per day over
10 consecutive workdays is an advantage of the current study, employees rated
emotional dissonance and ego-depletion at work at the same time point. In order to
examine the proposed sequence of our model, we chose different time periods as
reference points (emotional dissonance referred to the last hours and ego-depletion to
momentary experiences). Nevertheless, in accordance with Roe (2008), larger numbers
of time points, shorter intervals, and more specific methods of analysis are needed to
study temporal aspects of behaviour adequately. Therefore, future research should
assess ego-depletion effects more fine-grained by implementing more measurement
points per day.

Second, it would be important for further studies to consider more objective
measures of ego-depletion. The fact that we set out to investigate depletion effects of
the regulatory resource, but only assessed perceived ego-depletion is a shortcoming of
the current study. Future research could benefit from integrating more objective or
behavioural measures of ego-depletion in diary studies, such as smartphone applications
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that include short self-control tasks, so that intraindividual differences in self-control performance can be analysed more adequately.

Third, in our theoretical background we argued that people who hold a limited resource theory monitor first signs of depletion more intensively and might start conserving remaining resources sooner. Future research should consider these possible mechanisms and examine potential mediators that shed light on the underlying psychological processes through which implicit theories about willpower moderate adverse consequences of volitional self-control. Furthermore, it might be argued that people who start conserving resources earlier (due to a limited resource theory) might benefit from reduced exhaustion in the long run. However, until now, it remains unclear "how far effects of theories about willpower reach when periods of self-control exertion are extended" (Job, Bernecker et al., 2015, p. 704). Thus, analysing long-term patterns of ego-depletion by looking at the moderating mechanism of implicit theories about willpower on cumulative effects of ego-depletion across several working days could provide a deeper understanding of these constructs and their interrelationships.

Fourth, we conceptualised implicit theories about willpower as a stable trait-like belief that does not change over time and that is domain-independent. In contrast to this approach, some studies managed to experimentally manipulate implicit theories about willpower by asking participants to complete biased questionnaires that fostered agreement with either a nonlimited or a limited resource theory (e.g., Job et al., 2010, Study 2). In light of these inconsistent conceptualisations, future research should shed light onto the time-dependent variability of this construct. Furthermore, recent developments in this field of research suggest that implicit theories about willpower might be domain-specific, meaning that individuals might hold different implicit theories about whether engaging in strenuous mental activities, resisting temptation, or
controlling emotions depletes a limited regulatory resource (Bernecker & Job, 2017).

Thus, future research needs to deepen our knowledge on the interplay between emotional dissonance and implicit theories about willpower by considering emotion-specific willpower theories (that is, the belief whether controlling emotions depletes a limited resource).

Finally, the underlying framework for our reasoning and our hypotheses is derived from the strength model of self-control (Muraven & Baumeister, 2000). However, within the last years, inconsistent results from several meta-analyses (cf. Hagger, Wood, Stiff, & Chatzisarantis, 2010; Carter, Kofler, Forster, & McCullough, 2015; Dang, 2017) have challenged the conceptualisation of self-control as relying on a finite energy resource. Therefore, future research needs to refine our understanding of self-control processes and has to advance and update the strength model of self-control (Baumeister & Vohs, 2016). While we believe that the current study contributes to a better understanding on how implicit theories about willpower affect self-control processes, incorporating empirical findings on implicit theories about willpower and resource allocation into a refined strength model of self-control remains an important challenge for future research.

Practical implications

Because of the increasing significance of the service sector, coping with emotional dissonance has become a major stressor at work (e.g., Cheung & Tang, 2007; Diestel & Schmidt, 2010; Diestel et al., 2015). The current findings underline the hazard of coping with emotional dissonance at work and indicate that on days with high levels of emotional dissonance, employees feel depleted during the workday and also in the evening at home. Because emotional dissonance has been shown to affect ego-depletion at home only indirectly via ego-depletion at work, implementing strategies at the
workplace that counteract experiences of ego-depletion directly at work becomes most important. A first strategy could be to rethink the role of emotional display rules and to consider supporting a climate of authenticity in which customers appreciate the expression of true emotions (Grandey, Rupp, & Brice, 2015). Another promising strategy might be to strengthen protective factors that have the potential to reduce the adverse consequences of experiencing emotional dissonance at work, such as emotional support (de Jonge, Le Blanc, Peeters, & Noordam, 2008) and affective commitment (Rivkin, Diestel, & Schmidt, 2015; Rivkin, Diestel, & Schmidt, 2018). Moreover, training programmes, which teach employees how to authentically feel emotions that need to be displayed instead of faking desired emotions, have been shown to be effective in reducing adverse consequences of emotional dissonance (e.g., Hülsheger, Lang, Schewe, & Zijstra, 2015).

Another important implication from the present study is that implicit theories about willpower have an immediate beneficial effect for employees who experience high levels of emotional dissonance. Thus, the current findings tie in with research on how implicit theories about own possibilities and resources fuel behaviour and growth (e.g., Dweck, 1986; Dweck & Leggett, 1988; Dweck, 1996). What research on implicit theories in general and on implicit theories about willpower in particular suggests is that promoting a climate in which cherished qualities (e.g., intelligence or willpower) are not carved in stone, but can be cultivated through effort, supports employees to develop and to grow (Dweck, 2006). Thus, managers and leaders should refrain from emphasizing limits of willpower, as this might unintentionally cultivate beliefs in a limited resource theory, which cause employees to habitually energize below their optimum. Instead, fostering an organisational climate that values employees’ potentials and focuses on
employees’ abilities to improve self-control performance can be considered a promising strategy to support them when coping with emotional dissonance.

**Conclusion**

Can faith move mountains? In the current study, we set out to investigate whether believing in a nonlimited resource theory prevents employees from adverse consequences of emotional dissonance. Our results indicate that when employees are required to cope with emotional dissonance at work, they benefit from believing that exerting volitional self-control is energizing rather than depleting. Although the current study did not indicate that believing in a nonlimited resource theory may help replenishing a depleted resource, the findings underline that endorsing a nonlimited resource theory supports us to overcome first signs of depletion and to sustain self-control when others already feel depleted and turn towards inactivity.


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diary studies. *Journal of Applied Psychology, 100*, 809-827. DOI: 10.1037/a0038373


regulation and customer tips in service jobs. *Journal of Applied Psychology, 100*(2), 263-277. DOI: 10.1037/a0038229


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Table 1. Means, Standard Deviations, Internal Consistencies (Cronbach’s Alpha) and Intercorrelations of Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ego-depletion at work</td>
<td>(0.91-0.95)</td>
<td>0.60</td>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ego-depletion at home</td>
<td><strong>0.79</strong> (0.91-0.94)</td>
<td><strong>0.24</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Emotional dissonance</td>
<td><strong>0.54</strong></td>
<td><strong>0.34</strong> (0.94-0.98)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Theories about willpower a</td>
<td>0.20</td>
<td>0.19</td>
<td>0.06</td>
<td>(0.69)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Self-control capacity</td>
<td><strong>-0.43</strong></td>
<td><strong>-0.34</strong></td>
<td>-0.22</td>
<td>-0.03</td>
<td>(0.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Age</td>
<td><strong>-0.43</strong></td>
<td><strong>-0.40</strong></td>
<td>-0.23</td>
<td>0.04</td>
<td><strong>0.34</strong></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7. Gender b</td>
<td>-0.14</td>
<td><strong>-0.27</strong></td>
<td>0.12</td>
<td><strong>-0.32</strong></td>
<td>0.20</td>
<td>0.04</td>
<td>-</td>
</tr>
</tbody>
</table>

| M                                       | 1.82 | 1.98 | 2.24 | 4.27 | 3.13 | 39.72 | 1.41 |
| SD                                      | 0.61 | 0.60 | 0.74 | 0.80 | 0.50 | 14.18 | 0.50 |

Note: Cronbach’s alpha for day-level variables are indicated as range of alpha values across all measurement days. Correlations below the diagonal are person-level correlations ($N_{between} = 71$). Correlations above the diagonal are day-level correlations ($N_{within} = 665-677$).

a Theories about willpower (high values indicate agreement with a limited resource theory).
b Gender (1 = female, 2 = male).
Numbers in bold $p < .05$. 
### Table 2. Results of the Mediation Analysis

<table>
<thead>
<tr>
<th>Between-person direct effects</th>
<th>Ego-depletion at work</th>
<th>Ego-depletion at home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.20 (.10)</td>
<td>-.36 (.12)</td>
</tr>
<tr>
<td>Age</td>
<td>-.01 (.00)</td>
<td>-.02 (.01)</td>
</tr>
<tr>
<td>Self-control capacity</td>
<td>-.22 (.10)</td>
<td>-.09 (.13)</td>
</tr>
<tr>
<td>Emotional dissonance</td>
<td>.41 (.09)</td>
<td>.26 (.09)</td>
</tr>
<tr>
<td>Ego-depletion at work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Between-person indirect effects</th>
<th>Ego-depletion at work</th>
<th>Ego-depletion at home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional dissonance</td>
<td>.34 (.09)</td>
<td>.16 .55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Within-person direct effects</th>
<th>Ego-depletion at work</th>
<th>Ego-depletion at home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional dissonance</td>
<td>.15 (.03)</td>
<td>.08 (.03)</td>
</tr>
<tr>
<td>Ego-depletion at work</td>
<td></td>
<td>.02 (.03)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Within-person indirect effects</th>
<th>Ego-depletion at work</th>
<th>Ego-depletion at home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional dissonance</td>
<td>.06 (.01)</td>
<td>.03 .08</td>
</tr>
</tbody>
</table>

Note: 1-1-1 mediation model with random intercepts and fixed slopes; 
SE=standard error; LLCI=lower level confidence interval (95%); ULCI= upper level confidence interval (95%); N\textit{between} = 71; N\textit{within} = 665.
Table 3. Results of the Moderated Mediation Analysis

<table>
<thead>
<tr>
<th>Within-person direct effects</th>
<th>Estimate (SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path a&lt;sub&gt;W&lt;/sub&gt;: emotional dissonance → ego-depletion at work</td>
<td>.13 (.03)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Path b&lt;sub&gt;W&lt;/sub&gt;: ego-depletion at work → ego-depletion at home</td>
<td>.36 (.06)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Path c&lt;sub&gt;W&lt;/sub&gt;: emotional dissonance → ego-depletion at home</td>
<td>.03 (.03)</td>
<td>.353</td>
</tr>
<tr>
<td>Moderation: theories about willpower (TW) → path a&lt;sub&gt;W&lt;/sub&gt;</td>
<td>.07 (.02)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Moderation: theories about willpower (TW) → path b&lt;sub&gt;W&lt;/sub&gt;</td>
<td>.03 (.04)</td>
<td>.553</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Within-person conditional indirect effects</th>
<th>Estimate (SE)</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional dissonance → Ego-depletion at work → Ego-depletion at home</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Nonlimited resource theory (low TW)</td>
<td>.02 (.02)</td>
<td>-.01</td>
<td>.05</td>
</tr>
<tr>
<td>➢ Indecisive resource theory (mean TW)</td>
<td>.05 (.01)</td>
<td>.02</td>
<td>.08</td>
</tr>
<tr>
<td>➢ Limited resource theory (high TW)</td>
<td>.08 (.02)</td>
<td>.04</td>
<td>.12</td>
</tr>
</tbody>
</table>

Note: moderated mediation model with random intercepts and random slopes; SE=standard error; LLCI=lower level confidence interval (95%); ULCI=upper level confidence interval (95%); N<sub>within</sub> = 665; R<sup>2</sup> ego-depletion at work = .085, R<sup>2</sup> ego-depletion at home = .182; *TW = Theories about willpower (high values indicate agreement with a limited resource theory);