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## **Switch Off Totally or Switch Off Strategically? The Consequences of Thinking About Work on Job Performance**

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All authors commented on previous versions of the manuscript as well as read and approved the final manuscript.

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which received research ethics committee approval.

So, we did not have a specific certificate for this study.

### **Ethical Approval**

All procedures performed in this study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

### **Conflict of Interest**

There is no conflict of interest in the present research.

All participants participated in this study voluntarily and anonymously.

## **Abstract**

As a universal workplace phenomenon, the impact of work-related rumination on job performance is attracting scholars' attention. In the current study, the relationship between two types of work-related rumination, counterproductive behavior, and creativity at work were examined, as well as the mechanism of this association. Participants were 1109 employees from a variety of jobs in mainland China. The results showed that affective rumination was negatively associated with employees' work creativity and positively associated with counterproductive behavior. On the contrary, problem-solving pondering was positively related to creativity and negatively related to counterproductive behavior. The loss of self-control resource partially mediated the link between affective rumination and counterproductive behavior. Problem-solving pondering had no significant impact on self-control resource. Results suggest the significant effects of problem-solving pondering may be positive in the workplace and clarify the self-control resource is the internal mechanism linking rumination and job performance.

## **Keywords**

Work-related rumination, affective rumination, problem-solving pondering, work creativity, counterproductive behavior

## **Switch Off Totally or Switch Off Strategically? The Consequences of Thinking About Work on Job Performance**

### **Introduction**

The classic Zeigarnik effect suggests that humans are naturally obsessed with unfinished goals (Syrek et al., 2017). And the process of completing work is the means of achieving a series of goals (Smit & Barber, 2016). In today's rapid economic development, organizational work requirements continue to increase, making it easier for employees to experience unfinished work goals before leaving work. Therefore, the psychological phenomenon of still paying attention to work during non-working hours is increasing (Kinman et al., 2017; Weinberger et al., 2018). A large-scale survey of thousands of people shown that at least 70% of employees have been disturbed by work after hours and continue to think about work (Gallie et al., 1998), and the number is still growing (Weinberger et al., 2018). In other words, the ideal state of psychological detachment from work that occupational health psychologists have always emphasized is difficult to achieve in the context of today's work environment. In particular, the development of work-related use of information and communication technologies after hours (W\_ICTs) in recent years has made detachment more difficult (Ragsdale & Hoover, 2016).

This mental inability to leave work behind after work is known as work-related rumination (WRR; Crompton & Zijlstra, 2011), which refers to the state of some people repeatedly thinking about work-related issues and events outside of work

(Querstret & Cropley, 2012). In the past 10 years, the important impact of WRR on physical and mental health as well as work and life has gradually attracted the attention of occupational health psychologists. Some researchers view rumination as the opposite of psychological detachment, emphasizing its negative effects, for example, individuals with high levels of rumination at work experienced more emotional exhaustion (Flaxman et al., 2018) and less happiness (Kinnunen et al., 2017). However, people may also ponder because they are interested in work problems. This kind of thinking after-hours reflects their enjoyment of work, and the thinking process can help them solve work-related issues (Cropley & Zijlstra, 2011). Some studies have found that positive rumination during non-work hours can predict employees' active work behaviors and organizational citizenship behaviors, which are conducive to the improvement of well-being (Binnewies et al., 2009).

Combining the results of interviews and factor analysis, Cropley and Zijlstra (2011) proposed two dimensions of working-related rumination: affective rumination and problem-solving pondering. Affective rumination is a negative cognitive state. The ruminant content focuses on the negative emotional experience brought about by work experience. It is invasive, widespread, and repetitive. Individuals will experience negative emotions such as tension and boredom when ruminating. The problem-solving pondering reflects the individual's continuous psychological review of a particular problem or how work can be improved by evaluating previous work, including thinking about the problem from a new perspective, finding and removing obstacles, and developing creative ideas. The process of problem-solving enables

individuals to generate positive emotions and obtain pleasant experience. Studies have shown that these two dimensions have different effects on an individual's work and life (e.g., Bono et al., 2013; Frone, 2015; Cropley et al., 2015).

Earlier studies focused on the effects of affective rumination and problem-solving pondering on health and well-being (e.g., Querstre & Cropley, 2012; Bono et al., 2013). Recently, researchers have gradually paid attention to how this non-working time rethinking about work issues will affect the performance of job roles. The results showed that affective rumination could negatively predict work engagement (Kinnunen et al., 2017) and work creativity two years later (Vahle-Hinz et al., 2017), and also forward projections of job burnout one year and two years on (Kinnunen et al., 2019; Kinnunen et al., 2017). On the other hand, problem-solving pondering had a positive and significant association with work engagement (Zhang et al., 2020). Moreover, the positive effect of problem-solving pondering on working variables has strong stability over time, which could not only significantly predict job creativity after one year (Vahle-Hinz et al., 2017), but also positively predicted the level of work engagement after two years (Kinnunen et al., 2017).

For the internal mechanism of WRR affecting job role performance, a few existing studies analyzed it from the perspective of resources. For example, Vahle-Hinz et al. (2017) regarded the recovery of non-working hours as a resource, suggesting that two types of WRR may affect work creativity by damaging or promoting recovery. However, the results did not provide supporting evidence for recovery as a mediator. Weinberger et al. (2018) proposed that problem-solving



pondering as a form of psychological restoration of resources can promote entrepreneurs' creativity in the next day's work, but the study did not specifically analyze which resources were reconstructed.

In summary, it can be seen that compared to the research on the impact of WRR on individual health and well-being, the analysis of the impact of WRR on job role performance is still in its infancy. A few studies have explored the internal mechanism of WRR that affects the performance of job roles from the perspective of resources, but there are problems with inappropriate resource selection. Since WRR is becoming an inevitable phenomenon, it is of great significance for us to fully understand its after-effects to make use of its positive effects and eliminate its negative effects. Based on this, our study focused on the impact of WRR on individual job performance, thereby providing more evidence for research in this area.

With the continuous development of the era of the knowledge economy, innovation has gradually become the key factor that determines the success or failure of an organization, and organizational innovation depends on employee innovation. Therefore, employee innovation performance has gradually become one of the important indicators for the organization to evaluate employee performance. Innovation performance is reflected in the creativity of employees and refers to the new and potentially valuable ideas generated by employees, which are related to new products or services, new production methods, and management processes (George & Zhou, 2001). Creativity not only helps employees cope with and adapt to change as well as solve problems at work; moreover, it determines the innovation ability of the

organization and is the basic source of enterprise competitive advantage (Harari et al., 2016).

In addition to positive job role performance, employees may also exhibit negative work behaviors, such as counterproductive behavior. It refers to negative and spontaneous behaviors that employees in the workplace violate the organizational norms and threaten the interests of the organization or members (Bennett & Robinson, 2000). It reduces organizational productivity, increases security costs, undermines organizational finance, and severely hinders personal job development. In view of the importance of counterproductive behavior and creativity to the development of employees and organizations, the present study selected both of these aspects of employees' job performance.

### **WRR and Work Creativity**

In the field of clinical rumination, the relationship between depressive rumination and creativity has received much attention. Studies have shown that the adaptive component of depressive rumination (individuals intentionally adjust their cognition during rumination to find a solution to relieve the symptoms of depression, it is proactive), such as reflective rumination is positively related to creativity (Verhaeghen et al., 2014), and deliberate rumination also predicted creativity (Forgeard, 2013). However, non-adaptive components (individuals focusing passively on depression and negative self-evaluation during rumination), such as brooding and intrusive rumination do not predict creativity significantly (Verhaeghen et al., 2014; Forgeard,

2013). It can be seen from this conceptual connotation that there is the similarity between the adaptive components of depressive rumination and problem-solving pondering (active, focusing on seeking a solution), as well as the similarity between non-adaptive components in depressive rumination and affective rumination (passive, focusing on negative emotional experience). Therefore, the research conclusions about the relationship between rumination and creativity obtained in a non-work background can be used as a reference for the relationship between similar variables in the work context (Vahle-Hinz et al., 2017). This inference has been supported by some research (Vahle-Hinz et al., 2017; Weinberger et al., 2018), testing the hypotheses shown below:

H1a Affective rumination is negatively related to work creativity

H1b Problem-solving pondering is positively related to work creativity

### **WRR and Counterproductive Behavior**

Previous studies have shown that the two types of WRR had different effects on individual behavior. For example, those who carried out affective rumination reported more unhealthy eating behaviors in leisure time, but problem-solving pondering did not affect individuals' food choices (Cromptley et al., 2012). Negative rumination was positively correlated with weekday drinking, heavy drinking, and after-work drinking, while positive rumination was negatively correlated with heavy drinking and after-work drinking (Frone, 2015). It can be seen that affective rumination is positively related to negative behavior, and problem-solving pondering is negatively related or

not related to negative behavior. Research specific to the field of work has also found that only affective rumination predicted poor job role performance (Kinnunen et al., 2017; Kinnunen et al., 2019). In view of this, it can be inferred that after affective rumination, employees may show counterproductive behaviors (e.g., show up late, leave early, etc.) in the next day's work. In contrast, employees who ruminate on solving problems will not exhibit counterproductive behaviors, and may even inhibit the occurrence of those behaviors. In summary, this study proposes two research hypotheses:

H2a Affective rumination is positively related to counterproductive behavior

H2b Problem-solving pondering is negatively related or unrelated to counterproductive behavior

### **The Mediating Role of Self-control Resource**

All actions related to executive control drain self-control resource. Work involves a series of self-control processes such as focusing on the current task, protecting yourself from irrelevant information, and ensuring that the behavior effectively relates to the work goal. The smooth operation of these processes requires the support of self-control resource, which is domain-general and limited. The resource model of self-control indicates that the individual's self-control behaviors depend on limited psychological resources, which will be temporarily exhausted after continuous use, causing the individual to perform poorly in subsequent tasks (Baumeister et al., 2007).

Repetitive rumination keeps self-control resource occupied, which in turn

damages resources allocated to other tasks (Connolly et al., 2014). At the same time, in the process of affective rumination, negative information and feelings invade the individual's mind. The effects of these negative perceptions may lead the individual to try to suppress the negative and progressive progress, which will also inevitably consume self-control resource. In addition, due to the negative effect of affective rumination on sleep and other recovery processes, resources cannot be effectively restored (Weinberger et al., 2018). As it also involves consecutive thinking, the problem-solving pondering process can also consume self-control resource (Cropley & Zijlstra, 2011; Firoozabadi et al., 2018). But in this process, problems will undergo redefinition and exploration, and individuals can learn from trying to solve problems, which can be seen as a way of resource recovery (Firoozabadi et al., 2018). Moreover, problem-solving pondering causes less damage to recovery processes such as sleep, which is also conducive to the restoration of wasted resources. Based on the above, it can be inferred that self-control resource will be reduced after affective rumination, while self-control resource may not be lost or even be increased after problem-solving pondering.

Previous studies have found that individuals will show insufficient self-control ability or self-control failure under the condition of loss of self-control resource, which was manifested as deviance in the fields of cognition, emotion, and behavior (e.g. impulsive, lying, and deviant behaviors; Gino et al., 2011). Baumeister and Juola Exline (1999) even referred to self-control as “moral muscle” and believed that it represented the individual's ability to resist the selfish impulse and show the socially

approved behavior. Based on this knowledge, when self-control resource is damaged, employees may show negative production behaviors such as reducing work effort, loafing on the job, and leaving early.

Although individuals exhibit poor behavior in the context of impaired control, inhibition impairment is not always negative. Some scholars have proposed “creative people are characterized by a lack of both cognitive and behavioral inhibition” (Martindale, 1999). This view has been supported by objective reality and empirical findings. General observations show that creative people usually have increased impulsivity (Burch et al., 2006). Empirical evidence showed that high creative achievers were found to show decreased latent inhibition as compared to low creative achievers (Carson et al., 2003). All this shows a negative relationship between inhibition and creativity. In line with this view, Chiu et al. (2017) conducted experiments that verified that after consuming self-control resources, individual creativity was improved.

Based on the above, the present research was based on the speculation that self-control resource is an important internal mechanism through which WRR affects job role performance (work creativity and counterproductive behavior). Specifically, affective rumination should increase counterproductive behavior and promote creativity by depleting self-control resource (H3a). Self-control resource should not be affected by problem-solving pondering but may be increased to reduce counterproductive work and creativity (H3b).

## **Method**

### ***Participants and Procedure***

The current study was approved by the University's Institutional review boards of the authors. Participants were employees from enterprises and public institutions in mainland China, covering 28 provinces. Using the "snowball sampling" methodology, the 18 research assistants distributed the online questionnaires to the participants by WeChat and QQ chat software, 1109 valid questionnaires were finally obtained. Participation in the study was voluntary and anonymous, and participants received an on-line gift certificate worth 25 Chinese Yuan (approximately 3.6 US dollars) at the end of the data collection. Of these 1109 participants, 497 (44.8%) were male and 612 (55.2%) were female, their ages ranged from 18 to 65 years ( $M = 34.02$ ,  $SD = 10.57$ ), average job tenure was 9.05 years ( $SD = 9.48$ ), and average working hours per week was 44.51 ( $SD = 10.35$ ). The participants worked in a range of settings, with 198 (17.9%) in state-owned enterprises, 357 (32.2%) in private enterprises, 37 (3.3%) in transnational enterprises, 361 (32.6%) in governmental agencies or public institutions, and 156 (14.1%) in other occupational settings. There was a wide range of education levels, in that 426 (38.4%) had a junior college degree or less education, 609 (54.9%) had a bachelor's degree, and 74 (6.7%) had a master's degree or above.

The Chinese version was available for counterproductive behavior measures. For other measures, the translation and back-translation method was used to translate the scales from English into Chinese. Discrepancies were resolved through discussion between the two translators and the study investigators.

## **Measures**

**Work-related rumination.** Affective rumination and problem-solving pondering were measured with a ten-item questionnaire developed by Cropley et al. (2012) on a five-point Likert scale from 1 (= *strongly disagree*) to 5 (= *strongly agree*). The example items are “Are you irritated by work issues when not at work?” (affective rumination). “I find solutions to work-related problems in my free time.” (problem-solving pondering). A preliminary study ( $N = 130$ ,  $Man = 53$ ) of the translated Chinese version of the scale was conducted, and the results of confirmatory factor analysis ( $\chi^2/df = 1.36$ , CFI = .99, TLI = .98, RMSEA = .05) showed that the factors agreed with the original ones. In the current study, Cronbach’s Alpha was .89 for affective rumination and .86 for problem-solving pondering. AVE was .63 for affective rumination and .56 for problem-solving pondering.

**Self-control resource.** Self-control resource was measured with the Inhibition Deficit Scale in Adult Executive Functioning Inventory (ADEXI; Holst & Thorell, 2017). With inhibition, individuals can focus on relevant information or processes and suppress irrelevant information or processes (Smith & Jonides, 1999). Inhibition deficit can be a good indicator of impaired self-control resources. The original scale has 5 items, but one of them (I sometimes have difficulty stopping an activity that I like; Holst & Thorell, 2017) has a similar factor loading for both the working memory deficit factor and the inhibition deficit factor, so it was deleted. Each item was scored on a 5-point Likert scale (1 = *definitely not true*, 5 = *definitely true*). In the current study, the Cronbach’s alpha of this scale was .75. The confirmatory factor analysis



results were  $\chi^2/df = 2.58$ , CFI = .99, TLI = .99, RMSEA = .04. AVE was .47 for the inhibition deficit scale, which is close to the lowest acceptable value .50 (Alarcón, Sánchez, & De Olavide, 2015). Comprehensive the Cronbach's alpha and confirmatory factor analysis results, the reliability and validity of the inhibition deficit scale in this study was good.

**Work creativity.** Employee creativity was assessed by four items, from Tierney, Farmer, and Graen (1999), on a 6-point scale from 1 (= *strongly disagree*) to 6 (= *strongly agree*). An example item is "I try new ideas or methods first." Previous studies in China showed that this scale had good reliability and validity (Cronbach's  $\alpha = .92$ ; Farmer et al., 2003). In the current study, the Cronbach's alpha of this scale was .91, the AVE was .73.

**Counterproductive behavior.** Counterproductive behavior was assessed by the Production Deviance Subscale of the Workplace Deviance Scale (Stewart et al., 2009) revised by Zhang (2012). It contained 5 items. Each item was scored on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). An example item is "I taking excessive breaks." Previous studies in China showed that this scale had good reliability and validity (Cronbach's  $\alpha = .86$ ; Zhang, 2012). In the current study, the Cronbach's alpha of this scale was .90, the AVE was .64.

### ***Assessment of Common Method Variance***

The data in the present study were collected via self-administered questionnaires. Therefore, common method variance could inflate the strength of observed

relationships (Podsakoff et al., 2003). Two methods were used to reduce the impact of common method variance. First, each variable was measured with multiple items, and not all measures used the same rating scale. Second, Harman's single-factor test was used to determine whether each measure explained unique variance in the data.

Exploratory Factor Analysis showed there were 5 factors ( $\lambda > 1$ ) when there was no rotation. The first factor explained 24.87% of the variance, which could not account for the majority of the covariance among the measures. In sum, results in this study cannot be solely attributed to common method variance.

## **Results**

### ***Preliminary Analyses***

Means, standard deviations, and correlations are presented in Table 1. The results showed that inhibition deficit was positively correlated with the other four variables, affective rumination was positively correlated with counterproductive behavior and negatively correlated with work creativity, problem-solving pondering was positively correlated with work creativity and negatively correlated with counterproductive behavior. This provided some preliminary support for hypotheses 1a, b, and 2a, b.

**[Insert Table 1 Here]**

### ***Hypothesis Testing***

The deviation correction percentile Bootstrap method was used for hypothesis testing with 1000 iterations of bootstrapping. The overall model was a good fit ( $\chi^2 = 972.13$ ,

$df = 343$ ,  $p < .001$ ; CFI = .96, TLI = .95, RMSEA = .04, ARMR = .04). The result from Mplus 7.0 is shown in Figure 1.

**[Insert Figure 1 Here]**

Affective rumination was negatively associated with creativity ( $\beta = -.18$ ,  $p < .001$ ) and counterproductive behavior ( $\beta = .41$ ,  $p < .001$ ). Hypothesis 1a and 2a were therefore supported. Problem-solving pondering was positively related to creativity ( $\beta = .40$ ,  $p < .001$ ) and counterproductive behavior ( $\beta = -.19$ ,  $p < .001$ ). Hypothesis 1b and 2b were therefore supported. Affective rumination was positively associated with inhibition deficit ( $\beta = .33$ ,  $p < .001$ ), inhibition deficit was positively associated with counterproductive behavior ( $\beta = .30$ ,  $p < .001$ ). Hypothesis 3a was partly supported. However, the mediating effect of inhibition deficit between problem-solving pondering and outcome variables was not valid.

The results of controlled variables on work creativity showed, gender ( $\beta = .04$ ,  $p = .533$ ), age ( $\beta = .00$ ,  $p = .700$ ), education ( $\beta = .13$ ,  $p = .017$ ), job type ( $\beta = -.01$ ,  $p = .558$ ), tenure ( $\beta = .00$ ,  $p = .971$ ) and weekly work time ( $\beta = -.00$ ,  $p = .195$ ). The results of controlled variables on counterproductive behavior showed, gender ( $\beta = -.11$ ,  $p = .070$ ), age ( $\beta = .00$ ,  $p = .966$ ), education ( $\beta = .06$ ,  $p = .260$ ), job type ( $\beta = -.01$ ,  $p = .671$ ), tenure ( $\beta = .00$ ,  $p = .530$ ) and weekly work time ( $\beta = .00$ ,  $p = .360$ ).

Follow-up analyses tested the indirect effect and 95% confidence interval (CI) for the mediation model with the PROCESS macro for SPSS developed by Hayes (2013). Table 2 shows the results.

**[Insert Table 2 Here]**

## **Discussion**

With the increasing demands of work in various industries, more and more employees are still concerned about work after hours. Studies have found that how employees think about work-related content during non-work hours has different effects on their creativity at work (Vahle-Hinz et al., 2017; Weinberger et al., 2018). Through a large sample survey, this study further demonstrated that the effect of WRR on creativity is universal across occupational types. In addition, this study also found that for negative job performance-counterproductive behavior, the two types of WRR also showed completely opposite valence effects. This suggests that future research should pay more attention to the effect of WRR on employee job performance. In particular, it should strengthen the analysis of possible ways to reduce employees' negative rumination and enhance their positive rumination. In other words, it may be more practical to help employees achieve strategic disengagement when it is difficult to achieve complete disengagement from their non-working hours.

Our study found that inhibition only played a mediating role between affective rumination and counterproductive behavior, which provided partial evidence that the damage of self-control resource is the internal mechanism linking WRR and job performance. However, problem-solving pondering was not significantly correlated to the depletion of self-control resource, which further validates the idea that problem-solving pondering has little impact on the depletion of individual resources. Impaired inhibition was positively associated with creativity but did not reach significant levels. It may be because creativity has different dimensions, which can be expressed as

divergent thinking, where individuals can propose multiple or unique solutions for a problem or task (Chiu et al., 2017). For example, the speed and flexibility to generate original new ideas. It can also be embodied as convergent thinking, proposing the optimal solution to a specific problem, manifested as critical thinking, reasoning, and grammatical transformation of logical propositions (Chiu et al., 2017). Chiu and colleague's study (2017) showed that the impairment of self-control resource significantly promoted divergent thinking, but the promotion of convergent thinking must be achieved under the influence of moderating variables. The measure of creativity in our study did not specifically reflect whether it is divergent thinking or convergent thinking, or it may be a mixture of the two, which may be the reason why the results did not reach a significant level. Consistent with expectations, inhibition deficit was positively relevant to counterproductive behavior, with employees being more likely to reduce their commitment or effort at work. From the perspective of conservation of resources theory, this can be seen as a way for employees to save resources (Hobfoll, 1989). In addition, inhibition has the effect of trying to align the individual's words and deeds with external requirements, and its damage will inevitably reduce the individual's efforts to achieve the goal. These results indicated that the impairment of inhibition resources is one of the internal mechanisms of affective rumination affecting counterproductive behavior. The positive role of problem-solving pondering is not only reflected in no significant consumption of self-control resource, but it was also positively linked to the creative performance of employees and negatively associated with the occurrence of their counterproductive

behaviors.

### ***Contribution***

Firstly, this study provided more evidence for the positive role of problem-solving pondering. Thus, it helps us to further understand how the positive role of problem-solving pondering is exerted. Previous studies have focused on the effects of WRR on health and well-being. They often find that problem-solving pondering has a non-significant effect (e.g., Cropley, et al., 2012). Our research found that problem-solving pondering not only directly promoted employees' creativity at work but also reduced their counterproductive behaviors. This suggests that the significant effects of problem-solving pondering may be positive in the workplace.

In addition, this study showed that inhibition resources played an important mediating role between counterproductive behavior and affective rumination. Earlier studies have begun to explore the role of resources in WRR influencing job role performance. But these studies did not identify specific resources that reflect the mediating role. Our results clarified the type of resources, thus providing a new way of thinking for the follow-up research and analysis of the internal mechanism linking rumination and job performance.

Much attention has been paid to the importance of employee creativity and counterproductive behavior in organizational and personal development. However, little existing research has looked at how employees' consecutive thinking about their work affects their performance during the workday. Our study suggests that more

attention should be given to rumination in future research. Especially in the face of the same work pressure, people who think about it in different ways may fulfill different job role performances.

### ***Practical Implications***

Consistent with previous researches, our study found that affective rumination has a very significant negative effect, which cannot only consume individual resources but also reduce employees' creativity and increase their counterproductive behavior. Previous studies have found that negative work experience is the main cause of affective rumination (Kinnunen et al., 2017). This further reminds managers to pay close attention to the harmful nature of negative work experience, because it will not only cause immediate reactions in the employees but may also have long-term adverse effects on employees' subsequent work through negative rumination after work.

This study demonstrated a mediating role of self-control resource, which suggests that researchers can start from the perspective of improving employees' self-control ability in future research so that employees can effectively complete tasks while consuming fewer resources, so as to reduce the negative effects of affective rumination.

### ***Limitations and Future Research***

There are some limitations in the present study that should be addressed. The first has to do with the research method. Although cross-sectional studies with large samples can better reflect the relationship between variables to some extent, it is difficult to

make direct causal inferences. Future research would benefit from using longitudinal designs or daily measurement designs in order to establish causality. In addition, the data were collected from self-report questionnaires. Although Harman's single-factor test showed that common method variance did not significantly inflate the correlations among variables, future studies should collect data from additional sources (e.g., supervisor evaluations of employees' creativity and counterproductive behavior) to improve external validity.

Secondly, specific types of creativity were not analyzed. As mentioned earlier, there are differences in the sensitivity of different forms of creativity to some influencing factors. Therefore, future research can further refine creativity to further understand the significant effect of WRR on different dimensions of creativity. The same is true for counterproductive behavior. The present study only analyzed productive counterproductive behavior, but there are many other manifestations, such as financial counterproductive behavior and interpersonal aggression counterproductive behavior (Stewart et al., 2009; Zhang, 2012). Whether and how these counterproductive behaviors are affected by rumination at work needs to be investigated in future studies.

Finally, the present research found that problem-solving pondering had no significant effect on self-control resource. That is to say, the internal mechanism of the positive role of problem-solving pondering needs to be explored in future research. For example, problem-solving pondering is an iterative exploration of problem-solving methods. It can be understood as a process of cognitive training. This



process may enable individuals to obtain cognitive resources and positive feelings, which may be the medium through which problem-solving pondering exerts positive effects. In addition, the results of this study suggest that researchers should pay more attention to the positive role of problem-solving pondering. Although some research is beginning to analyze ways to reduce negative rumination, it is of great practical significance to improve employees' problem-solving pondering or to help employees achieve problem-solving rumination instead of affective rumination.

### **Conflict of Interest**

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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**Table 1** Means, standard deviations, and correlations among study variables

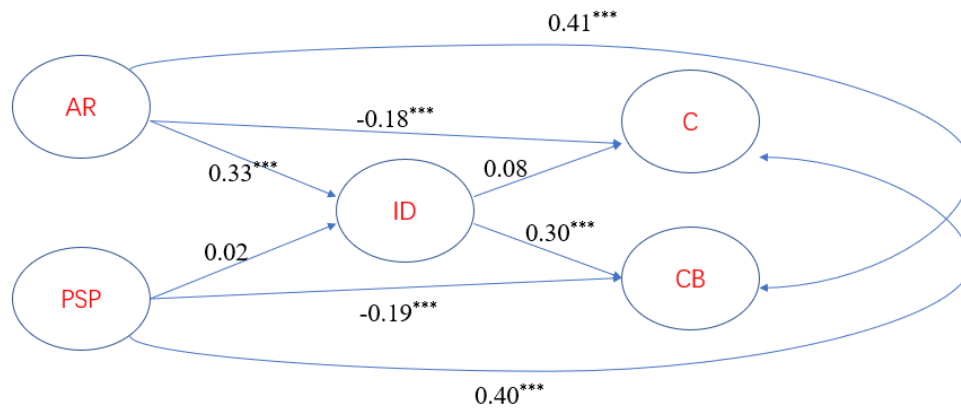
Variables	1	2	3	4	5
1 ID	1				
2 AR	0.270**	1			
3 PSP	0.152**	0.308**	1		
4 CB	0.328**	0.399**	-0.003	1	
5 C	0.074*	-0.015	0.316**	-0.144**	1
<i>M</i>	10.17	13.29	15.30	10.09	16.36
<i>SD</i>	3.30	3.99	3.64	4.11	4.03

*Note*<sup>a</sup>. *N* = 1109. ID = inhibition deficit, AR = affective rumination, PSP = problem-solving pondering, CB = counterproductive behavior, C = creativity; \**p* < .05, \*\**p* < .01.

**Table 2** *Bootstrapping indirect effect and 95% confidence interval (CI) for the mediation model*

PV	MV	OV	IEV	Boot SE	95% CI lower limit	95% CI upper limit	RITE
AR	ID	CB	0.06	0.01	0.04	0.09	16.2%

*Note<sup>b</sup>*.  $N = 1109$ . The results are based on 5000 bootstrap samples. PV= Predictive Variable, MV= Mediating Variable, OV = Outcome Variable, IEV = Indirect Effect Value, CI = Confidence Interval, RITE=Ratio of Indirect to Total Effect, AR = Affective Rumination, ID= Inhibition Deficit, CB = counterproductive behavior.



**Figure 1.** Standardized regression coefficients for the mediation model of inhibition deficit

*Note<sup>c</sup>.*  $N = 1109$ . AR = Affective Rumination, PSP = Problem-Solving Pondering, ID = Inhibition Deficit, CB = Counterproductive Behavior, C = Creativity; \*\*\* $p < .001$ .

The paths between controlled variables (i.e., gender, age, education, job type, tenure, weekly work time) and main variables in the models were not displayed.