

Self-Undermining Behavior at Work: Evidence of Construct and Predictive Validity

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In this article, we conceptualize self-undermining at work and validate a measurement instrument. In a first study with 5 samples (total $N = 1256$), we examine the factorial validity and reliability of the instrument in China, the United States, Chile, Romania, and the Netherlands. The results of exploratory and confirmatory factor analyses show that the scale has a 1-factor structure that fits well with the data of each country. In addition, the scale reliability is sufficient for each country ($.70 \leq \alpha \leq .88$). In Study 2, we used 2 additional samples from China (total $N = 595$) and tested the convergent, discriminant, and predictive validity of the Self-Undermining Scale. The results indicate that self-reports of self-undermining are positively related to self-handicapping and supervisor ratings of self-undermining. Furthermore, as hypothesized, self-undermining is negatively related to (supervisor ratings of) job performance and positively related to burnout. Self-underminers are slightly less likely to be proactive, craft their jobs, and experience work engagement. Our findings illustrate the potential usefulness of the self-undermining construct. In addition, we conclude that the newly developed instrument is valid and reliable and can be used to trace self-undermining behaviors in the workplace to prevent potential job strain and burnout.

Keywords: burnout, JD-R theory, job crafting, job demands, self-undermining

Over the past 2 decades, research with job demands–resources (JD-R) theory has shown that when employees are continuously exposed to high job demands and a lack of job resources, they face the risk of job burnout—a work-related stress syndrome characterized by emotional exhaustion, cynicism, and reduced professional efficacy (Alarcon, 2011; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Maslach, Schaufeli, & Leiter, 2001). Those who suffer from burnout are chronically fatigued and have developed a negative, callous attitude toward work (Bakker, Demerouti, & Sanz-Vergel, 2014). Burnout is likely to have a negative impact on daily functioning and job performance because once employees are affected by the burnout syndrome, they lack the ability and motivation to perform well. Previous research has indeed shown that burnout is negatively related to job performance (Demerouti, Bakker, & Leiter, 2014; Taris, 2006). In addition, burnout is related to impaired concentration and health complaints (Ahola,

Väänänen, Koskinen, Kouvonen, & Shirom, 2010), as well as work-related mistakes (Van der Linden, Keijsers, Eling, & Van Schaijk, 2005).

These findings suggest that employees with higher levels of burnout function in a suboptimal way. They continuously need to invest effort into correcting their mistakes and thus may increase their own job demands over time. In the present research, we focus specifically on this phenomenon, called self-undermining behavior (Bakker & Costa, 2014). According to the latter authors, job stress may result in self-undermining behaviors, such as poor communication, mistakes, and conflicts—which are all new hindrance demands (Lepine, Podsakoff, & Lepine, 2005) that add up to already existing high job demands. Employees who experience job stress create obstacles because they lack the energy resources to address their job demands.

In this study, we develop and validate the concept of self-undermining behavior. We conducted studies in China, the United States, Chile, Romania, and the Netherlands to examine the factorial validity and reliability of an instrument to assess self-undermining. In two other studies carried out in China, we integrate self-undermining in JD-R theory (Bakker & Demerouti, 2017) and test the convergent, discriminant, and predictive validity of the Self-Undermining Scale.

Our research aims to make the following contributions. First, we develop a new instrument for the assessment of self-undermining behaviors at work. Researchers and practitioners can use this short, reliable, and validated tool to assess specific undesirable employee behaviors that should be targeted through workplace interventions to prevent job burnout. Second, we try to explain self-undermining behavior from the perspectives of self-regulation theory and JD-R theory. JD-R theory provides the nomological network for self-

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undermining and enables us to understand how self-undermining behaviors and burnout develop in a suboptimal work environment due to overwhelming job demands and a lack of resources. JD-R theory also helps to explain how self-undermining relates to and is different from other behaviors (e.g., job crafting and job performance).

Theoretical Background

Self-Undermining

The concept of self-undermining is inspired by—but different from—the concept of “self-handicapping.” Self-handicapping has been defined as a self-defending maneuver that refers to obstacles created, or claimed, by the individual in anticipation of failing at performance (Jones & Berglas, 1978). Self-handicapping is a strategy to protect one’s self-esteem in the event of failure. A person who engages in self-handicapping constructs obstacles to success (such as procrastination), so that if failure occurs, it can be attributed to the obstacles or handicap rather than to important personal characteristics (e.g., skills or intelligence). Extant research has identified consequences of self-handicapping, including reduced academic achievement, impaired performance, the protection of self-esteem, and low subjective well-being (Schwinger, Wirthwein, Lemmer, & Steinmayr, 2014).

Bakker and Costa (2014) argued that the term “self-undermining” should be reserved for “behavior that creates obstacles that may undermine performance” (p. 115). Employees who show self-undermining behaviors communicate poorly, make mistakes, and create conflicts, resulting in hindrance demands that add up to already existing high job demands. We posit that self-undermining is different from self-handicapping, in that it is not a conscious strategy to protect one’s self-esteem in the event of failure but rather is a set of undesirable reactive behaviors in the workplace without a functional purpose that undermines adequate functioning. Bakker and Costa used JD-R theory to argue that self-undermining is the consequence of high levels of job strain and may be the fuel of a vicious cycle of high job demands and burnout. Thus, self-undermining behavior is a stress response. In reaction to high levels of strain, individuals lose self-regulatory resources and thus consistently show undesirable behaviors that undermine their own effective functioning. When employees are too tired to invest the necessary effort into their work, they start making mistakes and create problems. Such self-undermining behaviors could endanger relationships with clients or put other people’s safety at risk. Importantly, people do not need to be fully aware of their self-undermining behaviors. Individuals under stress create obstacles because they lack energy resources and self-control (Vohs & Faber, 2007) to address the demands of working life.

It is important to indicate how self-undermining differs from conceptually related constructs such as workplace cognitive failures and counterproductive work behaviors. Cognitive failure is defined as “cognitively based error that occurs during the performance of a task that the person is normally successful in executing” (Martin, 1983; p. 97). Cognitive failure encompasses execution lapses in attention, memory, and actions (i.e., the performance of unintended actions, or action slips; Norman, 1981). Counterproductive work behavior (CWB) is defined as intentional employee behavior that is harmful to the legitimate interests of an organization (Grays & Sackett, 2003). Although self-undermining,

cognitive failure, and CWB have some commonalities (e.g., similar predictors such as exhaustion and negative impact on organizational performance), they are also different in several respects. Most notably, self-undermining is *unintentional* and not restricted to cognitive failures. Rather, self-undermining is a broader concept that includes a range of visible social and individual behaviors that potentially harm adequate functioning because of a lack of self-regulatory resources.

Previous research has provided some evidence for the contention that employees create more demands for themselves when they experience higher levels of stress, that is, engage in self-undermining. For example, Demerouti, Bakker, and Bulters (2004) found that employees of an employment agency who faced higher job demands were more likely to let their work interfere with their private life and to experience emotional exhaustion—the core dimension of burnout. Those who experienced the highest levels of exhaustion were most likely to confront new job demands. Similarly, Schaufeli, Bakker, and Van Rhenen (2009) found in a 1-year follow-up study that burned-out (vs. healthy) managers reported more job demands during the year after the first wave of data collection. The higher the levels of managers’ emotional exhaustion and cynicism, the higher their prospective workload and emotional job demands, suggesting that managers undermined their own well-being by creating working conditions that lead to burnout. Likewise, in their study among financial consultants, ten Brummelhuis, Ter Hoeven, Bakker, and Peper (2011) found that job burnout was a predictor and outcome of increasing job demands and decreasing job resources. These findings indicate that the quality of the job design was undermined by employees who suffered from burnout.

Taken together, the literature suggests that the relationship between job demands and exhaustion (or burnout) is reciprocal—job demands lead to more exhaustion, and exhaustion, in turn, leads to more job demands. In the most recent version of JD-R theory (Bakker & Demerouti, 2017), the abovementioned phenomenon is referred to as a “loss cycle” (cf. Hobfoll, 2002). In the present study, we focus specifically on the self-undermining concept, which is an integral part of the loss cycle. The positive relationship between burnout and later job demands may either indicate that those under stress *perceive* more demands or *create* more demands. Although there is indirect evidence supporting the idea that employees under stress engage in behaviors that impair their own functioning and worsen their working conditions, there is no readily available instrument to measure such dysfunctional behaviors.

Self-Undermining in JD-R Theory

JD-R theory proposes that although working conditions may be quite different for different organizations, all job characteristics can be either categorized as job demands or as job resources (Demerouti et al., 2001). Whereas job demands are aspects of work that cost considerable energy, job resources are aspects of work that motivate people and help them to reach work-related goals. More specifically, according to the health impairment hypothesis, job demands such as work pressure drain energy resources and may eventually result in health complaints. In contrast, job resources such as autonomy and skill variety are proposed to motivate employees and foster their work engagement and performance. Moreover, job resources function as buffers of the health

impairment process, implying that job demands have a reduced impact on exhaustion and health complaints when job resources are high (vs. low).

In recent expansions of JD-R theory, Bakker and Demerouti (2017) have argued and shown that employees are influenced by their working conditions but may also play an active role and use proactive strategies to optimize their work environment. This behavior is called job crafting (Tims, Bakker, & Derks, 2012; Wrzesniewski & Dutton, 2001). A central proposition is that employees who are engaged in their work (i.e., full with energy, dedicated, and absorbed in their work) are motivated to stay engaged and therefore proactively seek job challenges and resources (i.e., job crafting). This is called the gain cycle of job resources and engagement. In contrast, those who are exposed to high and persistent levels of job demands experience higher levels of job strain (e.g., exhaustion). Over time, job strain translates into self-undermining behavior, which creates new job demands that add to the already existing demands (Demerouti et al., 2004; Schaufeli et al., 2009). This is called the loss cycle of job demands and exhaustion.

Study 1

In Study 1, we investigated the factorial validity and reliability of a newly developed scale for the assessment of self-undermining. The items were developed using Bakker and Costa's (2014) definition. The scale was first administered to a sample of Chinese employees and subjected to an exploratory factor analysis. We then continued by cross-validating the factor structure in samples of employees from the United States, Chile, Romania, and the Netherlands.

Method

Procedure and participants. Ten items were formulated using Bakker and Costa's (2014) definition of self-undermining. The items were first constructed in Dutch and Chinese by the first and second author and then translated and back-translated into English, Spanish, and Romanian. During item construction, we asked 10 experts to critically examine the items and then reformulated an item if the meaning of the item was unclear. We used only

negatively worded items because previous research has indicated that including reverse-coded items may reduce the validity of questionnaire responses and may introduce systematic error to a scale (Hinkin, 1995). The scale was administered in China, the United States, Chile, Romania, and the Netherlands. The data collected in China and Chile were collected with the help of the management teams of the organizations where the participants worked. In the United States, we collected data using Mechanical Turk (MTurk; Buhrmester, Kwang, & Gosling, 2011). In our research, we followed the ethics principles of the Declaration of Helsinki, and the university research ethics committee approved the studies. Students who followed an international master's program acted as research assistants and collected data in Romania and the Netherlands using network sampling. This data collection technique entails students who, based on their contacts or snowball sampling, recruit respondents from the working adult population (Demerouti & Rispens, 2014). Furthermore, respondents were recruited through announcements in social media. Table 1 summarizes the sample characteristics.

Measures. The 10 items of the Self-Undermining Scale all measure behaviors that hamper individuals' functioning at work, for example, "I make mistakes," "I create confusion when I communicate with others at work," and "I tend to put things off until the last moment." Participants were kindly requested to respond to each statement using a 5-point answer format in the Dutch, Chilean, and Romanian versions, where 1 = *never*, 2 = *sometimes*, 3 = *regularly*, 4 = *often*, and 5 = *very often*. In the Chinese and English versions, we used a 7-point scale, ranging from 1 (*never*) to 7 (*always*).

Results and Discussion

Because the Dutch data set was too small for an *exploratory* factor analysis, we started our analysis by using the Chinese data. These data were subjected to an exploratory factor analysis (extraction method: maximum likelihood; varimax rotation). This resulted in a one-factor solution, with the factor explaining 54.57% of the variance. All items loaded higher than .62 on the latent factor, and the internal consistency of the scale was good, with Cronbach's $\alpha = .92$. We nevertheless decided to remove four

Table 1
Demographic Characteristics of the Participants in the Five Samples in Study 1, Total $N = 1,256$

Demographic	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Country	China	United States	Chile	Romania	The Netherlands
Sector	Heterogeneous	Information	Consultants	Heterogeneous	Heterogeneous
N	303	355	202	312	84
Response	76%	100%	57%	75%	93%
Age	38.46 (6.43)	33.68 (7.04)	37.96 (8.67)	40.98 (11.67)	44.20 (12.08)
Job tenure	28.37 (5.63)	5.14 (5.28)	4.33 (4.27)	11.44 (11.67)	12.02 (10.52)
Gender					
Male	43%	46%	38%	47%	63%
Female	57%	54%	62%	53%	37%
Type of contract					
Full-time	100%	100%	96%	89%	86%
Part-time	0%	0%	4%	11%	14%
Education					
University degree	24%	34%	81%	79%	29%
Higher vocational training	22%	44%	14%	5%	51%
High school	54%	22%	5%	16%	20%

items from the scale because the scale seemed unnecessarily long. More importantly, close inspection of the item functioning showed some clustering of items that did not refer to behaviors, but rather to attribution style, coping, inclination to procrastinate, and sleeping problems. The four items that were removed were “When I do something wrong, I blame circumstances,” “I admit that I am tempted to rationalize when I don’t live up to others’ expectations,” “I tend to put things off until the last moment,” and “I stay awake at night.” Although these items may indirectly indicate self-undermining, we chose to only include the items that were active and behavioral. We then subjected the remaining six items to a new exploratory factor analysis. The one-factor solution had a factor explaining a similar amount of variance in the total score (54.30%) as the original set of items. Moreover, all items loaded higher than .66 on the latent factor, and Cronbach’s α remained high with a value of .88. See Appendix for a description of the items.

We continued the data analysis by running a multigroup confirmatory factor analysis on the data from the United States, Chile, Romania, and the Netherlands. We used the Amos 18.0 software package (Arbuckle, 2009). As demonstrated in Table 2, the proposed freely estimated one-factor model fits well to the data. The mean factor loading was .61 across the four countries, although in Chile there was one factor loading of .33 and in the Netherlands there was one factor loading of .35. This suggests that the items functioned slightly differently in the four countries. Indeed, the freely estimated model fits marginally better to the data than a model in which the factor loadings were constrained to be equal, $\Delta\chi^2(15) = 63.84, p < .001$ (Table 2 for the fit indices). In addition, the freely estimated model fits substantially better to the data than a model in which all variances were constrained, $\Delta\chi^2(18) = 1131.45, p < .001$. This suggests that the items are interpreted slightly differently in the various countries. The reliability of the Self-Undermining Scale was acceptable in each country: United States $\alpha = .87$, Chile $\alpha = .70$, Romania $\alpha = .79$, the Netherlands $\alpha = .73$.

To summarize, these findings offer evidence for the factorial validity and reliability of the Self-Undermining Scale. The scale has a clear one-factor structure, which is sufficiently reliable across cultures. Apparently, employees from various occupational backgrounds and in countries as culturally diverse as China, the United States, Chile, Romania, and the Netherlands show highly similar response patterns regarding self-undermining behaviors.

Study 2

After establishing the factorial validity and reliability of the Self-Undermining Scale, the next step was to examine the convergent, discriminant, and predictive validity of the instrument. In terms of convergent validity, the first question was whether self-undermining correlates positively with behavioral self-handicapping as originally conceptualized by Jones and Berglas (1978). Both constructs refer to dysfunctional behaviors that hinder good performance. Despite the conceptual overlap of the two constructs, self-undermining is different from self-handicapping, as it does not focus on finding excuses for one’s impaired performance; instead, self-undermining focuses on how concrete undermining behaviors hamper performance at work because individuals have lost important regulatory resources. It should further be noted that self-undermining here focuses specifically on work behaviors, whereas self-handicapping is context-free and is applicable to all life domains. For example, previous research investigated schoolchildren and their handicapping behaviors (Midgley & Urdan, 1995). In addition, several studies have investigated how professional athletes use self-handicapping strategies to explain their performance (Prapavessis, Grove, Maddison, & Zillmann, 2003; Sagar, Busch, & Jowett, 2010). We thus predict the following:

Hypothesis 1: Self-undermining is positively related to self-handicapping.

Because self-undermining behaviors are visible work behaviors (e.g., making mistakes and creating conflicts), we expected that important others in the workplace would be able to observe self-undermining behaviors of the target person. We focused on immediate supervisors who are formally responsible for each of the subordinates on their team. The reason to choose immediate supervisors as a reference person is that they interact with their subordinates on a regular basis, and, therefore, they are able to see a reliable pattern of behaviors (Van Dyne & LePine, 1998). Supervisors are usually also expected to formally evaluate their employees’ job performance. We thus predict the following:

Hypothesis 2: Self-reports of self-undermining are positively related to supervisor ratings of self-undermining.

In the present study, we also examine the link between self-undermining and job performance as an indication of convergent validity. Job performance refers to employees’ behaviors that are supposed to contribute to the effectiveness of the organization and

Table 2

Results of Multi-Group Confirmatory Factor Analyses for Four Samples (United States, Chile, Romania, and the Netherlands): Fit Indices of Competing Factor Models, Standardized Maximum Likelihood Estimates, Total $N = 953$

Model	χ^2	<i>df</i>	GFI	RMSEA	TLI	CFI	IFI
Model 1: One-factor Model Proposed, freely estimated	156.24	36	.95	.06	.89	.93	.93
Model 2: One-factor Model, Factor loadings constrained	220.08	51	.93	.06	.89	.90	.91
Model 3: One-factor model, variances constrained	1287.69	54	.71	.16	.22	.30	.30
Null model	1825.59	60	.51	.18	—	—	—

Note. *df* = degrees of freedom; GFI = goodness-of-fit index; RMSEA = root mean square error of approximation; TLI = Tucker–Lewis Index; CFI = comparative fit index; IFI = incremental fit index; $\Delta\chi^2 = \chi^2$ difference.

to overall organizational performance (Campbell, 1990). We argue that self-undermining is similar to self-handicapping in the sense that it undermines employees' personal functioning at work. Those who create backlogs in their work are also more likely to create problems and continuously make mistakes. Self-underminers are therefore less likely to perform well and reach their targets. Such behaviors are observable at work and thus will be evident to employees themselves and to their supervisors as well (Van Dyne & LePine, 1998). Hence, we predict the following:

Hypothesis 3: Self-reported self-undermining is negatively related to (a) self-reports of job performance and (b) supervisor ratings of job performance.

Using JD-R theory, Bakker and Costa (2014) argued that engaged employees show proactive behaviors to stay engaged at work. In contrast, employees who are exposed to high job demands become exhausted and eventually enter a loss spiral fueled by self-undermining behaviors. Whereas self-undermining is characterized by making mistakes and creating confusion, problems, and conflicts, personal initiative refers to a positive, active, and self-starting approach to work that goes beyond what is formally required in a given job function (Frese, Fay, Hilburger, Leng, & Tag, 1997). Employees who take personal initiative are proactive. They are more likely to engage in job crafting by actively searching for job resources to optimize their performance and stay engaged (Tims et al., 2012). This means that proactive employees actively create their own motivators; they seek support, feedback, and opportunities for growth to stay motivated and engaged at work. Personal initiative and job crafting are posited to be weakly negatively related to self-undermining because JD-R theory proposes that the abovementioned motivational process is largely independent from the health impairment process that starts with job demands (Bakker & Demerouti, 2017; Hakanen, Schaufeli, & Ahola, 2008). Stated formally, we predict the following:

Hypothesis 4: Self-undermining is negatively related to (a) personal initiative and (b) job crafting.

In terms of predictive validity, we argue that self-undermining is positively related to burnout. Burnout refers to a chronic state of exhaustion and a negative, cynical attitude toward work (Maslach et al., 2001). There is considerable evidence for the contention that burnout is the result of prolonged exposure to high job demands and a lack of job resources (Bakker et al., 2014). However, several studies have suggested that burnout can also be a predictor of (higher) job demands over time (Bakker, Schaufeli, Sixma, Bosveld, & Van Dierendonck, 2000; Demerouti et al., 2004; ten Brummelhuis et al., 2011). Bakker and Costa (2014) argued that people who are at risk for burnout engage in self-undermining behaviors and create a vicious cycle of job demands and burnout, resulting in poor performance.

In addition, we posit that self-undermining is negatively related to work engagement. Work engagement is defined as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). Engaged employees are energetic and enthusiastic about their work. High levels of job resources boost engagement, particularly when challenge job demands are high (Tadić, Bakker, & Oerlemans, 2015). Because self-undermining is

assumed to drain self-regulatory resources and cause an increase in hindrance job demands (as opposed to challenge job demands, such as conflicts with colleagues and role ambiguity; Lepine et al., 2005), we argue that persistent self-undermining behavior will facilitate burnout and undermine work engagement of the working individual. Indeed, a meta-analysis has indicated that the hindrance demands that logically result from self-undermining are positively related to burnout and negatively related to work engagement (Crawford, LePine, & Rich, 2010). Hence, we predict the following:

Hypothesis 5: Self-undermining is (a) positively related to burnout and (b) negatively related to work engagement.

Method

Procedure and participants. Participants in Study 2 are Chinese employees from service-related and information technology (IT)-related industries who are working predominantly with people (e.g., sales persons) or information (e.g., programmers). The second author contacted the management teams of the targeted organizations. The responsible persons distributed questionnaires to the employees in the morning and collected the completed questionnaires before the lunch break. The response rates were high in both samples, most likely as a consequence of the direct contact with the participants and the close collaboration with the management teams. In total, 300 questionnaires were distributed among employees in the service sector, and 297 were collected for final data analysis. The response rate for Sample 1 (working with people) was 99%. Similarly, 300 questionnaires were distributed to employees in the IT sector, and 298 completed questionnaires were collected. Thus, the response rate for Sample 2 (working with things) was also 99%. The questionnaire included the Self-Undermining Scale as well as other scales to establish the validity of the new construct. All items in the questionnaire were translated from English to Chinese and back-translated to English to ensure item equivalence. Participants responded to the Chinese version of the questionnaire. In addition, the immediate supervisors of the employees in Sample 1 were kindly requested to complete a short questionnaire to rate their subordinates' self-undermining behaviors and job performance.

The majority of the sample working with people ($N = 297$) was female (80%). The age distribution was as follows: 20 to 24 years (3.0%), 25 to 29 years (11.5%), 30 to 34 years (19.6%), 35 to 39 years (20.3%), 40 to 44 years (23.3%), 45 to 49 years (14.9%), 50 to 54 years (6.4%), and 50 to 59 years (1.0%). The mean organizational tenure was 6.75 years ($SD = 5.29$). All participants were employed full time. In terms of educational level, 16.2% completed middle school (i.e., three years of secondary education) without any further education, 39.4% completed high school, 27.6% completed higher vocational training, and 16.8% completed a university degree. The sample working with information ($N = 298$) included an equal number of males (50%) and females (50%). Most participants were relatively young: 20 to 24 years (3.7%), 25 to 29 years (20.1%), 30 to 34 years (24.8%), 35 to 39 years (16.1%), 40 to 44 years (9.7%), 45 to 49 years (12.8%), 50 to 54 years (9.1%), and 50 to 59 years (3.7%). The mean organizational tenure was 7.49 years ($SD = 6.62$). All participants were employed full time. In terms of educational level, 4.1% completed middle

school, 22.3% completed high school, 24.3% completed higher vocational training, and 39.3% held a university degree.

Measures.

Self-undermining. Employees' self-undermining behaviors were assessed by the Self-Undermining Scale validated in Study 1 (Appendix). In addition, their immediate supervisors filled out the same scale with their employee as the reference person. The items were slightly modified so that they captured the perspective of the supervisor. Examples are "This employee makes mistakes" and "This employee creates confusion when he/she communicates with others at work" (1 = *never*, 7 = *very often*).

Self-handicapping. Employees' self-handicapping behaviors were assessed by the Behavioral subscale of the Self-Handicapping Scale developed by Jones and Berglas' (1978). The scale includes eight items, such as "I tend to put things off until the last moment" and "I always try to do my best, no matter what" (reversed; 1 = *strongly disagree*, 6 = *strongly agree*). Previous studies provided evidence for the reliability and validity of this scale, with reliability coefficients ranging between .65 and .70 (McCrea, Hirt, Hendrix, Milner, & Steele, 2008; Strube, 1986).

Personal initiative. Personal initiative was assessed by the seven-item scale developed by Frese and his colleagues (Frese et al., 1997). Example items are "I actively attack problems" and "Whenever something goes wrong, I search for a solution immediately". Participants responded on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Fay and Frese (2001) have shown that personal initiative has strong psychometric features in terms of convergent, divergent, and predictive validity. Additionally, Cronbach's α ranges between .74 and .84.

Job crafting. Job crafting was assessed using six items of Tims et al.'s (2012) Job Crafting Scale. All items referred to "increasing job resources." Three of the six items were taken from the Increasing Social Job Resources subscale (e.g., "I ask others for feedback on my job performance"). The other three items were taken from the Increasing Structural Job Resources subscale e.g., "I try to learn new things at work" (1 = *never*, 7 = *always*). Previous research has shown that job crafting in the form of increasing social and structural resources can be reliably assessed, with α coefficients ranging between .73 and .82 in four independent studies (Tims et al., 2012; Tims, Bakker, & Derks, 2013).

Burnout. Burnout was assessed using the Maslach Burnout Inventory-General Survey (Schaufeli, Leiter, Maslach, & Jackson, 1996). The instrument consists of three subscales: Tapping Exhaustion, Cynicism, and Professional Efficacy. We removed the latter dimension because previous research clearly indicated that the development of professional efficacy is largely independent from exhaustion and cynicism (Schaufeli et al., 2002). Exhaustion and Cynicism are each measured with five items. Examples are "I feel tired when I get up in the morning and have to face another day on the job" (Exhaustion) and "I have become less interested in my work since I started this job" (Cynicism). Participants were asked to indicate the frequency of each statement (0 = *never*, 6 = *every day*). All items were summed to create one overall index of burnout.

Work engagement. Work engagement was assessed with the nine-item version of the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006). This version includes three items for each engagement dimension: *vigor* (e.g., "At my work, I feel like I am bursting with energy"), *dedication* (e.g., "My job inspires me"), and *absorption* (e.g., "I get carried away when I am

working"). Participants scored the items with anchors ranging from 0 *never* to 6 (*always*). The answers were summed so that higher scores referred to higher levels of work engagement.

Job performance. Job performance was measured with the six-item scale developed by Staples, Hlland, and Higgins (1999). We used two sources of information, namely, employees and their immediate supervisors (in Sample 1). Examples of the employee version are "Among my work group, I would rate my performance in the top quarter" and "I am a highly productive employee." The items were slightly modified for the supervisors so that they could rate job performance. One example for the supervisor version is "This is a highly productive employee" (1 = *strongly disagree*, 6 = *strongly agree*).

Results and Discussion

Descriptive statistics. The means, standard deviations, and correlations between the variables are presented in Table 3. The table includes the correlations for both samples: the sample of employees working with people (above) and the sample of employees working with information (below). Furthermore, we used Amos 18.0 software (Arbuckle, 2009) to conduct a multigroup confirmatory factor analysis to test the factor structure of the Self-Undermining Scale. The results offered additional evidence for the one-factor structure of the Self-Undermining Scale because the one-factor model fit very well to the data, $\chi^2(18) = 59.04$, $p < .001$, goodness-of-fit index = .97, root mean square error of approximation = .06, Tucker-Lewis Index = .95, comparative fit index = .97, and incremental fit index = .97. All factor loadings were higher than .53 in both samples, and Cronbach's α was .78 (working with people) and .88 (working with information).

To answer the question of whether the self-undermining construct can be empirically discriminated from the other variables in our research, we built a multigroup structural equation model using Amos 18.0 (Arbuckle, 2009). The model included the various variables included in the second study and used latent variables for self-undermining, burnout, job crafting, work engagement, and job performance. This model showed a very reasonable fit to the data, $\chi^2(290) = 730.86$, $p < .001$, goodness-of-fit index = .89, root mean square error of approximation = .05, Tucker-Lewis Index = .91, comparative fit index = .93, and incremental fit index = .93, indicating that all items loaded on the intended factors and showing that self-undermining can be empirically distinguished from the other variables.

Construct and predictive validity. According to Hypothesis 1, self-undermining is positively related to self-handicapping. In addition, Hypothesis 2 posited that self-reports of self-undermining are positively related to supervisor ratings of self-undermining. Note that we used the study by Cohen (1988) to interpret the strength of the correlations. Cohen set the benchmarks for classifying correlations of $|r| = .10$, .30, .50 as small, medium, and large, respectively. The correlations in Table 3 offer support for both hypotheses. More specifically, self-undermining is moderately strong and positively related to self-handicapping in both samples included in Study 2 ($r = .30$ and $r = .28$, $ps < .01$). This finding offers evidence for the convergent validity of the new Self-Undermining Scale. The correlation is moderately strong as the two constructs are distinctive despite the conceptual overlap. Furthermore, self-reports of self-undermining are positively and strongly related to supervisor ratings of self-undermining in the sample of employees working primarily with people, $r = .51$, $p < .01$.

Table 3
Means, Standard Deviations, Intercorrelations, and Reliabilities (Cronbach's α on the Diagonal) for All Study Variables in Study 2

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Self-ratings											
1. Self-undermining	2.14	.76	(.78, .88)								
2. Self-handicapping	2.59	1.04		(.71, .61)							
	2.61	.71	.30**								
	2.90	.65	.28**								
3. Personal initiative	3.81	.56	-.17**	-.38**	(.82, .84)						
	3.67	.65	-.06	-.45**							
4. Job crafting	4.37	1.03	-.15**	-.36**	.38**	(.86, .86)					
	4.21	1.08	.04	-.39**	.52**						
5. Burnout	3.11	.90	.34**	.27**	-.03	-.05	(.81, .84)				
	3.48	.98	.43**	.25**	-.14*	-.04					
6. Work engagement	3.98	1.01	-.22**	-.28**	.40**	.25**	-.13*	(.90, .91)			
	3.84	1.03	.06	-.37**	.67**	.50**	-.11				
7. Job performance	4.42	.89	-.26**	-.41**	.62**	.36**	-.11	.53**	(.90, .91)		
	4.38	.90	-.14*	-.46**	.65**	.51**	-.07	.65**			
Supervisor ratings (Sample 1)											
8. Self-undermining	2.42	1.00	.51**	.11	-.14*	-.03	.21**	-.12*	-.12*	(.87)	
9. Job performance	4.74	.84	-.37**	-.19**	.29**	.12*	-.21**	.26**	.36**	-.71**	(.93)

Note. Sample 1 (above) includes employees working with people ($N = 297$). Sample 2 (below) includes employees working with information ($N = 298$). * $p < .05$. ** $p < .01$.

Hypothesis 3 posited that self-undermining is negatively related to job performance. Table 3 shows small negative correlations for both samples between self-reports of self-undermining and self-reports of job performance ($r = -.26, p < .01$, and $r = -.14, p < .05$) but a medium correlation between self-undermining and supervisor-ratings of job performance (Sample 1: $r = -.37, p < .01$). These findings support Hypothesis 3 and show the convergent validity of the self-undermining construct.

Hypothesis 4 stated that self-undermining is negatively related to (a) personal initiative and (b) job crafting. As shown in Table 3, self-undermining is indeed (weakly) negatively related to personal initiative, $r = -.17, p < .01$, and job crafting, $r = -.15, p < .01$ in the sample of employees working with people. However, self-undermining is unrelated to both proactive behaviors in the sample of employees working with information ($r = -.06$ and $r = .04$, both *ns*). These findings indicate that Hypothesis 4 is only partly supported and offer evidence for the discriminant validity of the new Self-Undermining Scale.

Hypothesis 5 stated that self-undermining is positively related to burnout and negatively related to work engagement. The correlational pattern in Table 3 is generally consistent with these hypotheses. More specifically, employees who reported more self-undermining behavior also showed higher scores for burnout ($r = .34$ and $r = .43, p$'s $< .01$)—they were more likely than their counterparts to report higher levels of exhaustion and cynicism regarding their work. However, they were only slightly less engaged, as only one of the two samples produced a significant negative correlation, yet this correlation was small ($r = -.22, p < .01$ and $r = .06, ns$). It seems that self-undermining is particularly related to the health impairment process proposed by the JD-R theory and less involved in the motivational process. JD-R theory proposes that the health impairment process and the motivational process function rather independently from each other. Therefore, this finding further confirms the dual processes proposition of JD-R theory (Bakker & Demerouti, 2017).

General Discussion

The present research offers evidence for the validity and reliability of the newly developed Self-Undermining Scale. In Study 1, five samples provided evidence for the factorial validity and reliability of the scale. In Study 2, two other samples showed that the Self-Undermining Scale has convergent, divergent, and predictive validity. In what follows, we will discuss the most important contributions.

The main contribution of the present research is the development of a new concept and scale for the assessment of self-undermining behaviors at work. Whereas previous research focused on self-handicapping (Elliot & Church, 2003; Schwinger et al., 2014), the new construct of self-undermining focuses on specific behaviors that undermine employees' job performance. The Self-Undermining Scale aims to register those behaviors at work that incapacitate the individuals' overall performance. Self-undermining includes the creation of problems, mistakes, and confusion, which is supposedly predictive of increased job demands over time. Theoretically, self-undermining is positively related to self-handicapping because both behaviors involve the creation of obstacles to successful performance. However, self-undermining is different from self-handicapping, in that the latter involves the creation of obstacles to successful performance to protect self-esteem (e.g., staying up late the evening before an important test). Individuals engage in self-handicapping behaviors so that subsequent failures can be blamed on the handicap instead of their work abilities and skills (Jones & Berglas, 1978). Self-undermining, however, does not involve the claiming of obstacles but rather refers to the creation of obstacles as a consequence of reduced self-regulatory resources and impaired self-control (Vohs & Faber, 2007).

The results of our research demonstrate that self-undermining is negatively related to job performance and positively related to burnout, which provides evidence for the construct validity and

predictive validity of the scale. When employees are too tired to invest the necessary effort in their work, they start making mistakes and create problems (cf. Bakker & Costa, 2014). Such self-undermining behaviors could endanger relationships with clients or put other people's safety at risk. Therefore, we argued that these self-undermining behaviors will ultimately have repercussions for employees. Indeed, in Study 2, the results show that self-undermining is negatively related to job burnout and supervisor ratings of job performance. Whereas job performance refers to an evaluation of an individual's in-role performance at work (an outcome), self-undermining refers to behaviors that potentially obstruct adequate job performance, such as conflicts, the creation of confusion, and poor communication (the process).

Previous research has shown that job demands facilitate exhaustion and burnout, which can lead to an increase in job demands (Schaufeli et al., 2009; ten Brummelhuis et al., 2011). The results of Study 2 tentatively suggest that self-undermining is the behavioral correlate of burnout and reduced performance. In addition, the correlational analyses indicate that self-undermining is largely unrelated to the elements of the motivational process in JD-R theory (i.e., proactive behaviors and work engagement). Furthermore, these findings seem to suggest that whereas job crafting is the link between work engagement and job resources in the motivational process (Bakker et al., 2014), self-undermining may be the link between burnout and job demands in the health impairment process of JD-R theory (cf. Bakker & Costa, 2014). In future research, it would be interesting to test both processes simultaneously with longitudinal designs. It is particularly interesting to see whether self-undermining exacerbates the loss cycle of job demands and exhaustion. Future longitudinal studies may investigate whether self-undermining is the cause and consequence of high job demands and burnout. However, it should be noted that employees are not the only actors who influence the working environment. There is overwhelming evidence that management plays a central role in the structural characteristics of the work environment and may thus indirectly influence burnout (Dollard & Bakker, 2010; Maslach et al., 2001). Thus, managers and employees need to collaborate when trying to prevent burnout and foster work engagement.

Finally, the present study focused on situational predictors of self-undermining. However, self-undermining may also be a function of personality. For example, individuals high in neuroticism and psychoticism (Eysenck & Eysenck, 1994) may be more likely to exhibit self-undermining behaviors because of the lack of emotional stability and recklessness that are indicative of these traits. Neuroticism and psychoticism may foster inappropriate responses to high job demands (e.g., reacting with irritation to complaining customers), which could lead to conflicts and mistakes—thus adding to existing job demands. For similar reasons, self-undermining could be a function of (low) self-control, which is defined as the exertion of control over the self by the self (Murrain & Baumeister, 2000).

In addition, based on the JD-R theory, we argued that self-undermining might be more likely when employees experience high levels of job demands and exhaustion. However, other possible situational determinants of self-undermining should not be excluded. Likely candidates are social stressors such as bullying (i.e., the systematic mistreatment of a worker, which, if continued, may cause severe social, psychological, and psychosomatic problems in the victim; Einarsen, Hoel, Zapf, & Cooper, 2011), as well

as physical health complaints that may cause employees to be less focused when at work, reduce their ability to deal with their job demands, and increase the risk of mistakes. Future research may investigate these and other possible predictors of self-undermining to expand the nomological network related to self-undermining.

Strengths and Limitations

There are several strengths of our research. The use of seven samples from five different countries can be seen as a strong feature. By replicating the factor structure across countries, we are confident that the scale for the assessment of self-undermining behaviors at work has considerable external validity. However, despite these positive findings, the results of multigroup analyses indicate that the factor loadings and variances of the items are slightly different in the various countries. This suggests that the scale behaves somewhat differently in different cultures, which is a common problem many measurement instruments face, for example, the Maslach Burnout Inventory–General Survey (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). We expect that the minor differences in item functioning are due to the use of different languages, although we also used two different response formats for the self-undermining items in the different countries. However, Spector and Nixon (2019) have shown that response format has little effect on correlations, means, standard deviations, and internal consistencies and is not a method variance concern.

The two studies conducted in China show that self-undermining is only weakly related to self-reports of job performance. Although the mean score of self-undermining is relatively low in all the samples, the scores do seem to represent true variance, as indicated by the medium correlation between self-undermining and supervisor ratings of job performance. This is an important observation, given that leader perceptions are critical determinants of feedback, promotions, transfers, and merit increases (Van Dyne & LePine, 1998). The relatively weak relationship between self-undermining and performance may also be because self-undermining is part of the loss cycle—that performance is more strongly influenced by the gain cycle—the cycle of job resources, work engagement, and job crafting behaviors (Bakker & Demerouti, 2017). Moreover, self-undermining has an effect on job performance through increased job demands and increased burnout, which implies that performance is a more distal outcome.

One other limitation of this research is that it remains unknown how self-undermining is related to cognitive failures and CWB. Although we reason that self-undermining differs from CWB in that the former is *unintentional*, future research still needs to ascertain the discriminant validity of self-undermining vis-à-vis comparable constructs. A final potential limitation of our study is the use of convenience samples. For three of the seven samples, we relied on MTurk and student assistants for data collection. Such procedures may lead to biased samples. Nevertheless, previous research has suggested that such convenience samples also have some advantages, for example, the inclusion of employees from various occupational backgrounds. In addition, many researchers that have relied on MTurk for data collection have reported high quality data sets and have published their research in high-impact journals (Buhrmester et al., 2011).

Practical Implications

Monitoring and reducing self-undermining may be a crucial intervention to prevent burnout. To date, burnout interventions have not been very successful (Leiter, Bakker, & Maslach, 2014). One reason could be that organizations and managers often wait until job stress related problems reach critical levels. By monitoring self-undermining behaviors that are observable to others, managers and leaders may be able to correct these behaviors in a timely way. They could intervene by providing the needed individual consideration and by providing sufficient job resources, such as performance feedback, social support, and autonomy (Breevaart et al., 2014). Such a top-down approach could help prevent burnout and improve individuals' work effectiveness as well as overall organizational performance. In addition, organizations could monitor employee job stress and self-undermining and help their employees optimize their job design through job crafting—proactive behaviors aimed at optimizing job demands and resources so that the job is a better fit with the individual employee's preferences and abilities (Tims et al., 2013).

Conclusion

In this research, we developed and validated a new instrument for the measurement of behavioral self-undermining at work. The instrument has adequate psychometric properties. First, we found evidence for the factorial validity of the scale as well as the reliability of the scale. Second, self-undermining is particularly strong and positively related to job burnout and negatively related to (supervisor ratings of) job performance. These findings offer evidence for the construct and predictive validity of the scale. Third, self-undermining behaviors develop largely independent from proactive behaviors. Researchers and practitioners can use the new instrument to trace concrete self-undermining behaviors in the workplace that are warning signs for future job strain and burnout.

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Appendix

The Self-Undermining Scale

- (1) I make mistakes. (5) I run into problems at work.
- (2) I admit that I create stress at work. (6) I admit that I create conflicts.
- (3) I create confusion when I communicate with others at work.
- (4) I create a backlog in my tasks.

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