

Challenge–Hindrance Stressors and Employability: The Combined Role of the Energy–Motivation Process and Organizational Investment

Binyan Liu¹, Xun Xin², Xueyuan Gao³, Lili Gao²

¹School of Psychological and Cognitive Sciences, Peking University, Beijing, People's Republic of China; ²Business School, Southwest University of Political Science and Law, Chongqing, People's Republic of China; ³Department of Economics and Management, China University of Labor Relations, Beijing, People's Republic of China

Correspondence: Xun Xin, Business School, Southwest University of Political Science and Law, No. 301 Baosheng Road, Yubei District, Chongqing, 401120, People's Republic of China, Tel + 86–18911302529, Email xinxun0629@163.com

Purpose: This study investigates how challenge–hindrance stressors influence employability through the energy–motivation mechanism and explores the moderating role of pay satisfaction and perceived career opportunity based on the JD-R model.

Methods: Three-wave time-lagged longitudinal data of 206 employees are analyzed using latent structural equation modelling.

Results: First, challenge stressors have an indirect positive effect on employability, mainly through intrinsic motivation, while hindrance stressors have an indirect negative effect on employability, mainly through emotional exhaustion. Second, perceived career opportunity strengthens the positive effect of challenge stressors on intrinsic motivation, which further promotes employability. Third, pay satisfaction alleviates the negative effect of hindrance stressors on emotional exhaustion, which, in turn, inhibits the decline in employability.

Conclusion: The paper clarifies the specific mediating effects of the energy and motivation mechanisms in the association between challenge–hindrance stressors and employability and the moderating effects of pay satisfaction and perceived career opportunity, thus extending studies on the challenge–hindrance stressors to career field and filling the gap in the knowledge of the boundary conditions of the energy–motivation mechanism.

Keywords: challenge–hindrance stressors, employability, dual mechanism of energy and motivation, pay satisfaction, perceived career opportunity

Introduction

In the context of complex and ever-changing careers, employees will inevitably face greater work pressures, such as work intensity, increased workload, and so on, and their career development and competitiveness will greatly suffer due to these pressures. Accordingly, employability, described as the ability to obtain and maintain continuous employment, is important for employees, particularly in the boundaryless career filled with work pressures.¹ Since work stress is closely related to employees' work performance and physical and mental health,² employability may be constantly shaped under these stresses, resulting in either improvement or loss. Therefore, it is necessary to explore the mechanisms and boundary conditions linking stress with employability.

Considering such stress attributes, Cavanaugh, Boswell, Roehling, Boudreau³ propose the challenge–hindrance stressor framework (CHSF) to explore the effects of workplace stressors on individuals. Previous studies have focused on the relationship between CHSF and job results (eg, performance), but few has linked CHSF with career-related results. Although the extant studies have shown that challenge stressors have a promoting effect on employees' professional competence and development in career whereas hindrance stressors have the opposite effect,⁶ there is a lack of empirical testing the relationship between challenge–hindrance stressors and employability. The current study suggests that challenge stressors and hindrance stressors have different effects on job performance through the mediating effect of energy–motivation processes.⁴ A meta-study on the relationship between the CHSF and job performance indicates that

the energy and motivation mechanisms have a certain offsetting effect between challenge stressors and job performance, whereas consistent negative effects exist between hindrance stressors and job performance.⁵ Employability, as a remote variable of job results (ie, exemplified job performance), has the same characteristics as performance, that is, they both reflect the achievements of employees in their work for a period of time. At the same time, given that previous studies have shown that employability is affected by both individual intrinsic motivation and psychological state, we argue that the application of the energy-motivation mechanism can be extended from the stressor-job result to stressor-employability. However, employability, as a result of the extension of job performance to career performance, changes more stably over time than performance. Accordingly, the energy-motivation mechanism may act differently in stressor-employability than that in stressor-performance, but there is a paucity of research focusing on the effect of the stressor on career outcomes. Therefore, it's urgent to clarify how challenge-hindrance stressors affect employability through the energy-motivation mechanism in the new career context and which mechanism dominates this relationship. To fill these gaps, these questions need to be further explored.

In addition, the boundary conditions under which the energy-motivation mechanism mediates between challenge-hindrance stressor and work/career-related results have not been fully explored. However, in practice, managers generally believe that employees must develop themselves under pressure, but this may not work without preconditions, and employees will often weigh the benefits between the efforts required for dealing with stress and the return. Moreover, an organization's investment in employees, especially regarding compensation and perceived career opportunity, will play a pivotal role in employees' acceptance of or resistance to stresses. In short, compensation and perceived career opportunity may constitute the "energy supply depot" for employees to be more willing or able to actively deal with either positive or negative stresses. This can be exemplified by the expression, "generous rewards rouse one to heroism." In theory, compensation and perceived career opportunity are two key work resources provided by the organization. Based on the JD-R model, they can cushion the energy consumption caused by stress and improve employees' work motivation. Therefore, this study aims to examine how compensation and career opportunity—two forms of organizational investment in employees—can respectively moderate the energy-motivation mediating process through which challenge-hindrance stressors influence employability.

This study uses a longitudinal research design and latent structural equation modeling (SEM) to examine the impact of challenge-hindrance stressors on employability through the energy-motivation mechanism under perceived career opportunity and pay satisfaction. Results indicate that challenge stressors have an indirect positive effect on employability by increasing intrinsic motivation; hindrance stressors have an indirect negative effect on employability by increasing emotional exhaustion. The current study contributes to the literature in several ways. First, it links the CHSF to career outcomes by examining how and when the CHSF affects individual employability, thus extending the studies on the effect of challenge-hindrance stressors in career context. Second, we introduce the energy and motivation mechanisms in the association between challenge-hindrance stressors and employability and further examine the mediating role it plays. Therefore, our study deepens the understanding of how the challenge-hindrance stressors affect job results by identifying the mediating differences between the energy and motivation mechanisms. Finally, it provides evidence of the conditions related to organizational investment for the effectiveness of the energy-motivation process. Specifically, it identifies and examines the moderated indirect effects of perceived career opportunity and pay satisfaction on challenge-hindrance stressors and employability, thus filling the gap in the knowledge of the boundary conditions of the energy-motivation mechanism.

Theoretical Framework and Hypotheses Development

The CHSF

Under the CHSF, challenge stressors refer to work requirements or conditions that are beneficial to individuals despite the potential stresses they may bring; for example, workloads, time pressures, job duties, responsibilities, and so on. Hindrance stressors refer to work requirements or conditions that thwart individual growth and bring no potential benefits; for example, role ambiguity, organizational politics, job insecurity, and so on. Many empirical studies on the CHSF have consistently concluded that challenge stressors positively affect work attitude, behavior, and performance, whereas hindrance stressors have the opposite effect. In short, results from the extant empirical studies have confirmed the rationality of the CHSF.⁴

Theoretical Explanation of the Energy and Motivation Mechanisms

Using the CHSF, cognitive transactional theory, and expectancy theory, LePine, Podsakoff, LePine⁵ theoretically explain that challenge–hindrance stressors impact job performance differently through the energy and motivation mechanisms. On one hand, LePine, Podsakoff, LePine⁵ draw on expectancy theory to explain the different associations between the challenge–hindrance stressors and motivation. The attribute of stress determines whether the effort required to deal with stress increases the likelihood of success (ie, expectancy) and whether the outcome of coping with stress is valuable to oneself (ie, valence). Moreover, because different stressors trigger different levels of work motivation in employees, when aligned with expectancy theory, employees' efforts will increase the likelihood of success and will ultimately help them to achieve high-value rewards when facing challenge stressors. Therefore, challenge stressors stimulate high work motivation. As such, when experiencing hindrance stressors, employees will perceive that their efforts to deal with such stressors will not lead to valuable rewards, and any effort spent may drain resources. Therefore, hindrance stressors will lower work motivation. On the other hand, LePine, Podsakoff, LePine⁵ draw on cognitive transactional theory to explain the relationship between the challenge–hindrance stressors and energy consumption. They suggest that when an employee experiences stress, their energy (eg, vigor, physical strength, and emotions), especially that related to emotion and cognition, will be consumed during the process of evaluating and dealing with such stress. Therefore, either challenge or hindrance stressors will cause energy loss. The energy–motivation mechanism framework is reasonable and effective for explaining the relationship between challenge–hindrance stressors and job performance-related outcomes.⁵ Therefore, this study draws on this framework to explain the relationship between the challenge–hindrance stressors and employability.

The Dual Mechanism of Challenge–Hindrance Stressors on Employability

According to the spillover effect, the impact of stress on an employee's work will spillover to their career development and success.⁷ In an uncertain employment environment, individual employability is the most critical factor for his/her career development and success.⁸ Employability refers to the possibility of an individual obtaining a suitable job or continuing his or her employment under social, economic, cultural, and technological backgrounds.⁹ Employability refers to an adaptation that enables an individual to identify and realize career opportunities, thus facilitating his or her job mobility both within and between organizations.⁹ Therefore, based on the CHSF, how do challenge–hindrance stressors affect employability?

This study introduces the energy and motivation mechanisms to explain the different effects of challenge–hindrance stressors on employability for two reasons. First, the rationality of such mechanisms has been verified in the relationship between the challenge–hindrance stressors and job performance-related outcomes.⁵ Second, job performance, as an important job result, reflects an employee's current employability to a certain extent. Moreover, the extension of job performance to career performance represents an employee's career development and success, of which employability is a key indicator. Further, it is argued that job performance has a long-term impact on employability. In short, employability is a remote result of job performance. Therefore, the energy and motivation mechanisms may also exist in the relationship between the challenge–hindrance stressors and employability.

The motivation mechanism specifically refers to work motivation⁵ and is defined as “the direction, intensity, and duration of an individual's efforts toward a work goal”.¹⁰ Work motivation can be divided into intrinsic and extrinsic types.¹¹ Intrinsic work motivation represents engagement in work that is built on personal interests rather than external rewards, and is based on the positive value experience that employees directly obtain from work tasks. Conversely, extrinsic work motivation represents engagement in work in order to expect external rewards, such as money and bonuses. The current study suggests that intrinsic work motivation is a crucial factor that affects employability because it is associated with career success.¹² Employability is conceptualized as work adaptability,⁹ which highlights person-centered active adaptation and proactivity.¹³ Fugate, Kinicki, Ashforth⁹ further argue that proactive efforts are manifestations of employability and suggest three components of employability as career identity, personal adaptability, and social and human capital. Employees with strong intrinsic work motivation tend to take positive actions to realize (or create) personal aspirations of “who I want to be”, prefer to engage in interpersonal communication to facilitate work completion, and are willing to improve their ability by making behavioral and cognitive changes. Accordingly, these positive actions increase employees' professional identity and social and human capital. Therefore, the current study believes that employees' intrinsic work motivation can promote their employability. Regarding challenge stressors,

employees are willing to spend time and effort on meeting such challenges, which stimulates their intrinsic work motivation and prompts them to show more adaptation and proactivity behaviors, thereby improving their employability. Meanwhile, hindrance stressors do the opposite. Hence, this study proposes that:

H1: Intrinsic work motivation significantly mediate the relationship between challenge stressors and employability, and challenge stressors promote the level of employability by increasing employees' intrinsic work motivation.

H2: Intrinsic work motivation significantly mediate the relationship between hindrance stressors and employability, and hindrance stressors reduce employees' intrinsic work motivation, thereby reducing their employability.

The energy mechanism refers to strain,⁵ such as anxiety, exhaustion, depression, and burnout.¹⁴ An individual uses increased energy to deal with stressful situations. This particularly corresponds to their emotional energy levels, which leads to emotional exhaustion. Emotional exhaustion refers to emotional overstretching and exhaustion due to work and manifests as physical and mental fatigue, irritability, depression, and a decline in interest.¹⁵ In short, the depletion of employees' emotional energy makes them feel incapable of exerting effort on a psychological level. Owing to the universality and persistence of emotional exhaustion, the long-term depletion of employees' emotional energy spent on dealing with challenge and hindrance stressors makes them exhausted, dissatisfied, and powerless.¹⁶ To reduce resources loss, employees must take some negative actions, such as absenteeism and withdrawal behavior; however, these actions sacrifice their long-term best interests, such as job retention,¹⁷ and ultimately threaten their employability. Therefore, this study proposes that:

H3: Emotional exhaustion significantly mediate the relationship between challenge stressors and employability, and challenge stressors reduce employees' employability by increasing their emotional exhaustion.

H4: Emotional exhaustion significantly mediate the relationship between hindrance stressors and employability, and hindrance stressors increase employees' emotional exhaustion, which, in turn, decreases employability.

The Moderating Roles of Pay Satisfaction and Perceived Career Opportunity

Employees who seek development under pressure need stability. The demand for progress while maintaining stability requires organizations to provide both compensatory and development resources. Compensatory resources mainly refer to remuneration in the form of compensation and incentives.¹⁸ Development resources are perceived as career opportunities that promote employees' growth, learning, and development.¹⁹ Therefore, compensation and perceived career opportunity are resources that employees care about the most and directly benefit from, and constitute organizational investment in employees. Only when employees perceive and are satisfied with the compensation provided by an organization (ie, pay satisfaction) will they perceive the work and opportunities to be highly compatible with their career interests and goals (ie, perceived career opportunity). This, in turn, makes them feel respected and recognized by their organization. In this case, the function of compensation and perceived career opportunity can be maximized. Therefore, this study uses pay satisfaction and perceived career opportunity as two indicators of organizational investment.

Studies have shown that pay satisfaction can both alleviate the negative impact of stress²⁰ and improve employees' work motivation.²¹ Meanwhile, perceived career opportunity can advance employees' career satisfaction.²² Employees who perceive greater career opportunity are more willing to exert extra effort and mobilize their working enthusiasm to learn and grow, which, in turn, amplifies their potential abilities. Yet how do pay satisfaction and perceived career opportunity moderate the effect of the challenge–hindrance stressors on the energy and motivation mechanisms? The job demands-resources (JD-R) model²³ may provide a credible explanation.

According to the JD-R model, job characteristics include job demands and job resources that show different effects through the following two distinct mechanisms. The first is the energy depletion mechanism, which states that when job demand remains high and is not compensated by resources, employees' physical and psychological resources will be constantly depleted during their work. This results in energy exhaustion and eventually harms both employees and organizations. The second is the motivation mechanism, which states that abundant job resources have motivational potential. It can stimulate employees'

motivation, improve their work engagement, and produce positive outcomes. Interaction effects exist between job resources and job demands, known as the buffering and facilitating hypotheses.²⁴ The buffering hypothesis argues that job resources can buffer the energy consumption caused by job demand. In short, job resources can alleviate the negative impact of job demand on employees.^{25,26} The facilitating hypothesis states that employees can better turn high job resources into positive work outcomes when they are in a challenging environment. This means that the combination of high job demands and job resources can promote employees' work enthusiasm, so employees can use a large amount of extant work resources to achieve work goals.²⁷

In sum, pay satisfaction and perceived career opportunity can both alleviate employees' energy loss and enhance their work motivation during the process of the challenge–hindrance stressors on the energy and motivation mechanisms. Therefore, this study proposes that:

H5: Pay satisfaction alleviates the negative effect of hindrance stressors on emotional exhaustion, thereby inhibiting the decline in employability.

H6: Perceived career opportunity alleviates the negative effect of hindrance stressors on emotional exhaustion, thereby inhibiting the decline in employability.

H7: Perceived career opportunity enhances the positive effect of challenge stressors on intrinsic motivation, thereby promoting employability.

H8: Pay satisfaction enhances the positive effect of challenge stressors on intrinsic motivation, thereby promoting employability.

Figure 1 shows the research model.

Methodology

Participants and Procedure

We obtained our data via questionnaire. To reduce the common method bias,²⁸ we longitudinally measured all variables. Meanwhile, to ensure the representativeness of the sample, we randomly selected enterprises from different regions in China. Enterprises are from various industries such as financial, technology, service and so on.

First of all, we contacted 30 HRs via personal relationships. Each HR comes from different enterprises in China, covering various industries such as finance, science and technology, service, etc., which forms our sampling frame. Subsequently, we explained the purpose of our study and the according rewards to each HR. After getting the approval of the workers' committee of each enterprise and the unit, to better meet the convenience of each participant, we referred to suggestions from the HRs and adopted the online questionnaire. Before questionnaire distribution, we trained all HRs on

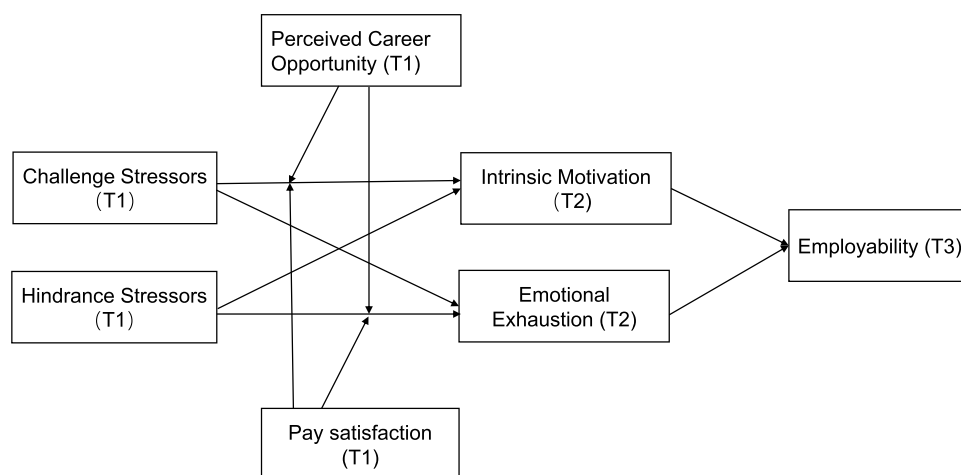


Figure 1 The hypothesized model.

the process of distributing and collecting of the copies to ensure that samples conform to the random sampling. Later, each HR randomly sent the survey link to about 10 full-time employees in the enterprise. Each copy includes a cover letter, explaining the purpose of the study and assuring employees that the survey is completely voluntary, and the data is strictly confidential, which merely used for academic research.

We collected our data at three time points with two months intervals. To match subjects' answers in each round of survey, all participants filled in their ID numbers and phone numbers in each copy. In the first round of data collection (time 1), we measured the subjects' challenge-hindrance stressors, perceived career opportunity, pay satisfaction and demographics. Two months later (time 2), we measured the subjects' emotional exhaustion and internal work motivation. In the third round of data collection (time 3), we measured the employability of the subjects. At time 1, 310 surveys were distributed, and got 292 valid copies after excluding the questionnaires with responses submitted in less than the minimum expected time or missing data. At time 2, 292 surveys were distributed, and 277 valid copies were obtained. At time 3, 277 questionnaires were distributed, and 267 valid questionnaires were obtained. By matching the data recovered at the three time points, 206 valid matching data were finally obtained, and the final valid matching rate was 71%. To investigate the potential impact of attrition, differences in age ($t = -0.52$, ns), education ($t = -1.32$, ns), and gender ($\chi^2 = 1.14$, ns) were tested between the unmatched and matched questionnaire. There were no significant differences among these variables.

Finally, the valid sample comprised of 206 participants, of which 49.03% were male. The average age was 29.58 years ($SD = 6.62$), 1.94% had completed high school education or below, 12.62% had a junior college degree, 85.44% had a bachelor's degree or above, 62.62% had signed labor contracts with a company, and the remainder were other types of employees (eg, permanent staff, labor dispatching worker personnel, or temporary workers). Table 1 shows the detailed sample information.

Measures

All questionnaires used in our study were adopted from published literatures. According to the suggestion of Brislin,²⁹ we complied with the "translation and back-translation" procedure to ensure the consistency of the meaning between the Chinese and English scales. Specifically, we first invited three masters who are majored in management to translate the English scale into Chinese. Then we invited other three doctoral candidates, also majored in management, to translate the scale back into English. Finally, a PhD with organizational behavior background was invited to compare the three versions of all scales for further revision.

Table 1 The Sample Characteristics

	Characteristic	Frequency	Percentage
Gender	Male	101	49.03%
	Female	105	50.97%
Age (years)	20–25	34	16.50%
	26–30	130	63.11%
	31–40	26	12.62%
	41 or above	16	7.77%
Education level	High school education or below	4	1.94%
	Junior college degree	26	12.62%
	Bachelor's degree or above	176	85.44%
Types of labor relations	Labors who have signed labor contracts with a company	129	62.62%
	Permanent staff	58	28.16%
	Labor dispatching worker personnel	7	3.40%
	Temporary workers and others	12	5.82%

Notes: n=206.

Challenge–Hindrane Stressors

At Time 1, this study assessed the challenge–hindrance stressors using the scale developed by Cavanaugh, Boswell, Roehling, Boudreau.³ The scale contained 12 items, of which 6 items measured challenge stressors (eg, “The amount of responsibility I have”) and 6 items measured hindrance stressors (eg, “The lack of job security I have”). Each item was rated on a 5-point Likert scale ranging from 1 (no stress) to 5 (a lot of stress). Cronbach’s alphas of the two dimensions were 0.86 and 0.83, respectively.

Intrinsic Motivation

At Time 2, this study assessed intrinsic motivation using the 4-item scale developed by Grant.³⁰ A sample item was “My motivation for the job is because it is fun.” Each item was rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). Cronbach’s alpha was 0.81.

Emotional Exhaustion

At Time 2, this study assessed using the emotional exhaustion sub-scale of the Burnout scale developed by Li for Chinese, which has been published publicly in the *Handbook of Management Research Scales*.^{31,32} According to this book, we know that the scale was developed on the basis of referring to the literature concerning the well-known MBI and the case interviews in 2003, which has been tested for good reliability and validity and has been successfully applied to several occupational fields.^{31,33,34} This sub-scale contained five items. A sample item was “I feel emotionally drained from my work.” All items were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s alpha was 0.89.

Perceived Career Opportunity

At Time 1, this study assessed perceived career opportunity using the 3-item scale developed by Kraimer, Seibert, Wayne, Liden, Bravo.³⁵ A sample item was “There are job opportunities available within this company that are of interest to me.” All items were rated on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Cronbach’s alpha was 0.81.

Pay Satisfaction

At Time 1, this study assessed pay satisfaction using the 4-item scale developed by Farh, Earley, Lin.³⁶ Pay satisfaction included four dimensions: current salary, annual bonus, most recent pay raise, and overall level of pay. All items were rated on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Cronbach’s alpha was 0.79.

Employability

At Time 3, this study measured employability using the 4-item scale developed by De Witte.³⁷ A sample item was “I feel confident that I could quickly get another job.” This scale has been used widely in different countries and employment situations with high reliability.³⁸ All items were rated on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Cronbach’s alpha was 0.78.

Control Variables

To make the study model more accurate, this study controlled for the participants’ age, gender (1 = male, 2 = female), and education (1 = middle school or below, 2 = high school level, 3 = junior college degree, 4 = bachelor’s degree or above), since these variables can influence emotional exhaustion and intrinsic motivation.^{3,39} This study assessed all demographic variables at Time 1.

Results

Testing Measurement Model

Before testing the SEM, this study performed a validation factor analysis using Mplus7.0 to verify whether the measured structure was distinguishable. The results show that the 7-factor model (ie, challenge stressors, hindrance stressors,

intrinsic motivation, emotional exhaustion, pay satisfaction, perceived career opportunity, employability) fits the data well ($\chi^2(474) = 546.69$, RMSEA = 0.03, SRMR = 0.05, CFI = 0.97, TLI = 0.97). The measurement model fits the data better than other measurement models (see Table 2). The results provide support for the hypothesized measurement model.

Preliminary Correlation Analyses

Preliminary correlation analyses were conducted with SPSS 26.0. Table 3 shows the means, SDs, and correlations among the variables. As expected, challenge stressors and intrinsic motivation ($r = 0.16$, $p < 0.05$) and hindrance stressors and emotional exhaustion ($r = 0.34$, $p < 0.01$) are all positively correlated. Intrinsic motivation is positively correlated with employability ($r = 0.25$, $p < 0.01$) and emotional exhaustion is negatively correlated with employability ($r = -0.28$, $p < 0.01$). However, the relationships between challenge stressors and emotional exhaustion and between hindrance stressors and intrinsic motivation are not significant ($r = 0.13$, ns; $r = 0.04$, ns). Moreover, there is no significant correlation between the challenge–hindrance stressors and employability ($r = -0.02$, ns; $r = -0.13$, ns), which is consistent with this study's expectations and illustrates a distal relationship between both stressor types and employability.

Mediation Analyses

This study used Mplus 7.0 to test the mediation hypotheses. Figure 2 shows the mediation model and the standardized path coefficients. The fitting indices of the SEM all show acceptable levels ($\chi^2(292) = 338.35$, $\chi^2/df = 1.16$, CFI = 0.98, TLI = 0.97, RMSEA = 0.03, SRMR = 0.05), suggesting that the hypothesized model fits the data.

Figure 2 shows that challenge stressors increase employees' intrinsic motivation ($\gamma = 0.18$, $p < 0.05$), which, in turn, promotes their employability ($\gamma = 0.29$, $p < 0.01$). Hindrance stressors increase employees' emotional exhaustion ($\gamma = 0.39$, $p < 0.01$), which, in turn, leads to a decrease in employability ($\gamma = -0.33$, $p < 0.01$). Unexpectedly, the negative effect of

Table 2 Confirmatory Factor Analysis Results

Model	χ^2	df	RMSEA	SRMR	CFI	TLI
Seven-factor model	546.69	474	0.03	0.05	0.97	0.97
Six-factor model	889.27	480	0.06	0.09	0.83	0.81
Five-factor model	1162.38	485	0.08	0.11	0.72	0.69
Four-factor model	1324.09	489	0.09	0.11	0.65	0.62
Two-factor model	1727.82	494	0.11	0.13	0.48	0.45

Notes: Seven-factor model: CS + HS + PS + PCO + IM + EE + E. Six-factor model: (CS + HS) + PS + PCO + IM + EE + E. Five-factor model: (CS + HS) + (IM + EE) + PS + PCO + E. Four-factor model: (CS + HS) + (IM + EE) + (PS + PCO) + E. Two-factor model: (CS + HS) + (IM + EE + PS + PCO + E).

Abbreviations: CS, challenge stressors; HS, hindrance stressors; PS, pay satisfaction; PCO, perceived career opportunity; IM, intrinsic motivation; EE, emotional exhaustion; E, employability.

Table 3 Descriptive Statistics, Reliability, and Intercorrelations Among Variables

variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Gender (T1)	1.51	0.50	—									
2. Age (T1)	29.58	6.62	0.12	—								
3. Education (T1)	3.83	0.42	-0.04	-0.39**	—							
4. Challenge stressors (T1)	2.58	0.95	0.01	0.14*	-0.09	(0.86)						
5. Hindrance stressors (T1)	2.59	0.91	-0.01	0.02	-0.16*	0.24**	(0.83)					
6. Pay satisfaction (T1)	3.21	1.10	-0.11	-0.02	-0.05	0.03	0.03	(0.79)				
7. Perceived career opportunity (T1)	3.74	1.17	-0.23**	-0.11	0.09	0.01	-0.01	-0.03	(0.81)			
8. Intrinsic motivation (T2)	4.18	1.05	-0.03	0.02	-0.07	0.16*	0.04	0.08	-0.05	(0.81)		
9. Emotional exhaustion (T2)	3.39	1.12	-0.04	-0.01	-0.01	0.13	0.34**	-0.10	-0.06	-0.07	(0.89)	
10. Employability (T3)	4.36	1.01	-0.05	0.09	0.01	-0.02	-0.13	0.02	-0.02	0.25**	-0.28**	(0.78)

Notes: n=206; * $p < 0.05$, ** $p < 0.01$.

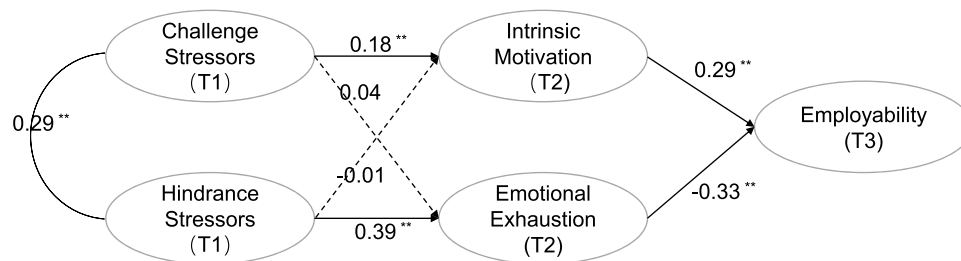


Figure 2 Standardized path estimates of the model.

Notes: Dashed lines represent nonsignificant relations; Solid lines represent significant relations. ** $p < 0.01$.

hindrance stressors on employees' intrinsic motivation ($\gamma = -0.01$, ns) and the promotion effect of challenge stressors on emotional exhaustion are not significant ($\gamma = 0.04$, ns).

In Table 4, the bootstrap analysis results confirm that the indirect effects of both the challenge stressors through intrinsic motivation ($\beta = 0.05$, 95% bootstrap CI = 0.01, 0.11) and of the hindrance stressors through emotional exhaustion ($\beta = -0.13$, 95% bootstrap CI = -0.21, -0.07) are significant. Thus, H1 and H4 are supported. However, the indirect effects of both the hindrance stressors through intrinsic motivation and of the challenge stressors through emotional exhaustion are not significant. Thus, H2 and H3 are not supported.

In sum, the challenge stressors have an indirect positive affect on employability through intrinsic motivation, whereas the hindrance stressors have an indirect negative affect on employability through emotional exhaustion.

Moderated Mediation Analyses

This study first tested the moderating effects of pay satisfaction and perceived career opportunity. Following Sardeshmukh and Vandenberg's⁴⁰ latent moderated structural equation procedure (LMS), this study used the maximum likelihood method to estimate the latent interaction effects.⁴¹ The Akaike information criterion index of the latent SEM (AIC = 20845.73) was lower than the AIC index of the baseline model (AIC = 20873.41), indicating that the latent SEM was acceptable.

Figure 3 shows that the interaction between challenge stressors and perceived career opportunity significantly and positively predicts intrinsic motivation ($\gamma = 0.43$, $p < 0.01$), while the interaction between hindrance stressors and pay satisfaction significantly and negatively predicts emotional exhaustion ($\gamma = -0.29$, $p < 0.01$). Therefore, the moderation effects of both perceived career opportunity on the relationship between challenge stressors and intrinsic motivation and of pay satisfaction on the relationship between hindrance stressors and emotional exhaustion are significant. However, the path estimates from the interaction (hindrance stressors and perceived career opportunity) to emotional exhaustion ($\gamma = 0.06$, ns) and from the interaction (challenge stressors and pay satisfaction) to intrinsic motivation ($\gamma = -0.10$, ns) are not significant. Therefore, H5 and H7 are supported while H6 and H8 are not supported.

This study then estimated simple slopes to further describe the two significant moderating effects shown above (see Figures 4 and 5). Specifically, when perceived career opportunity is high, the simple slope is very significant (simple slope = 0.74, $p < 0.001$; see the dashed line in Figure 4), suggesting that challenge stressors positively and more closely relate to intrinsic motivation. When perceived career opportunity is low, the simple slope is not significant (simple slope = -0.25, $p > 0.1$; see the

Table 4 Mediating Effects of Intrinsic Motivation and Emotional Exhaustion on the Relationship Between Challenge-Hindrance Stressors and Employability

Paths	Indirect Effect	SE	Bootstrap CI
Challenge stressors→ intrinsic motivation→ employability	0.053 [†]	0.031	[0.011, 0.113]
Hindrance stressors→ Intrinsic motivation→ employability	- 0.003	0.030	[- 0.052, 0.044]
Challenge stressors→ emotional exhaustion→ employability	- 0.014	0.026	[- 0.058, 0.024]
Hindrance stressors→ emotional exhaustion→ employability	- 0.125**	0.039	[- 0.212, - 0.068]

Notes: [†] $p < 0.10$, ** $p < 0.01$. CI = confidence interval. Bootstrap (Boot) = 2000.

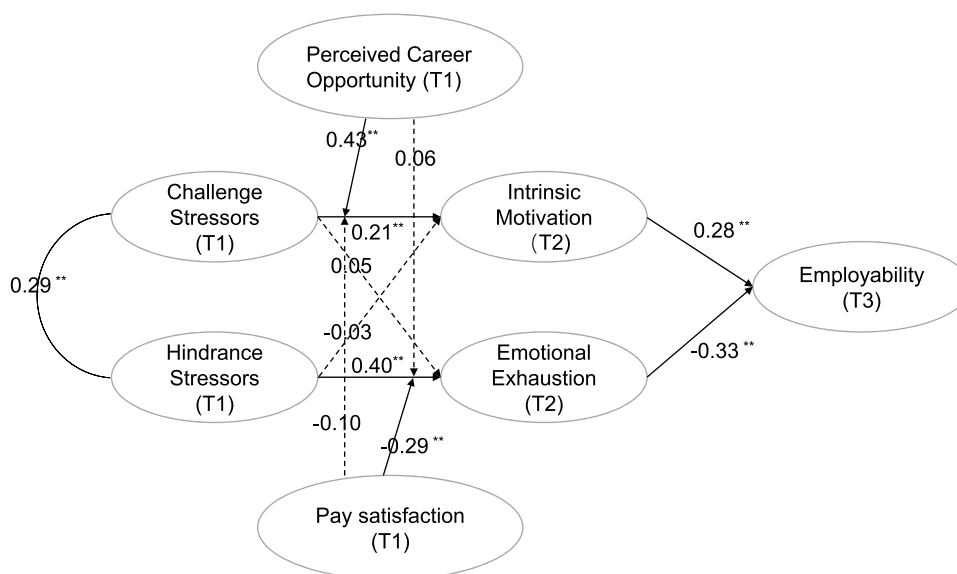


Figure 3 Standardized path estimates of latent Structural Equation Model.

Notes: Dashed lines represent nonsignificant relations; Solid lines represent significant relations. ** $p < 0.01$.

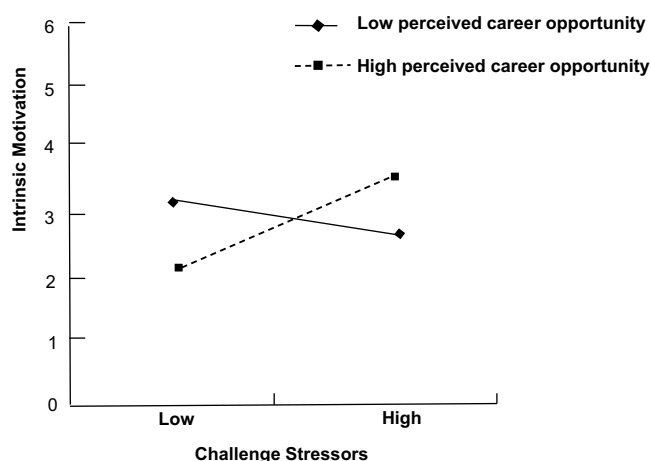


Figure 4 The moderation effect of perceived career opportunity on the relationship between challenge stressors and intrinsic motivation.

solid line in Figure 4), suggesting that challenge stressors have no significant effect on intrinsic motivation. Regarding the association between hindrance stressors and emotional exhaustion, the slopes are significantly positive for employees with low pay satisfaction (simple slope = 0.91, $p < 0.001$; see the solid line in Figure 5) but are not significant for employees with high pay satisfaction (simple slope = 0.16, $p > 0.1$; see the dashed line in Figure 5), suggesting that hindrance stressors significantly relate to emotional exhaustion only when pay satisfaction is low.

Finally, Table 5 shows the conditional indirect effects that the challenge–hindrance stressors have on employability via intrinsic motivation and emotional exhaustion at various levels of perceived career opportunity and pay satisfaction. The results reveal that the conditional indirect effect is significant when perceived career opportunity is 1 SD above the mean (estimate = 0.167, SE = 0.072; 95% CI [0.065, 0.377]), at the mean (estimate = 0.056, SE = 0.031; 95% CI [0.009, 0.132]), and 1 SD below the mean (estimate = -0.056, SE = 0.044; 95% CI [-0.188, -0.002]).

The indirect effect of hindrance stressors on employability via emotional exhaustion is significantly negative when pay satisfaction is low (1 SD below the mean) (estimate = -0.221, SE = 0.066; 95% CI [-0.373, -0.118]) and at an average level (at the mean) (estimate = -0.130, SE = 0.042; 95% CI [-0.229, -0.064]). At a high level of pay satisfaction



Figure 5 The moderation effect of pay satisfaction on the relationship between hindrance stressors and emotional exhaustion.

(1 SD above the mean), hindrance stressors have no significant indirect effect on employability via emotional exhaustion (estimate = -0.038 , SE = 0.039 ; 95% CI [-0.136 , 0.028]).

Discussion

This study applies the CHSF to the career context and utilizes a longitudinal research design and latent SEM to examine how challenge–hindrance stressors influence employability via intrinsic motivation and emotional exhaustion, and how challenge–hindrance stressors combined with pay satisfaction and perceived career opportunity influence the mediating process. The results indicate that challenge stressors have an indirect positive effect on employability by increasing intrinsic motivation; hindrance stressors have an indirect negative effect on employability by increasing emotional exhaustion. The results also support the moderated mediation effect of pay satisfaction between challenge stressors and employability and the moderated mediation effect of perceived career opportunity between the challenge–hindrance stressors. These findings

Table 5 Moderated Mediation Results

Bootstrap results for conditional indirect effect of challenge stressors on employability via intrinsic motivation at PCO = $M \pm 1\text{ SD}$			
	Effect	Boot SE	Boot 95% CI
– 1 SD (–1.00)	– 0.056	0.044	[–0.188, –0.002]
M (0.00)	0.056	0.031	[0.009, 0.132]
+ 1 SD (1.00)	0.167	0.072	[0.065, 0.377]
Bootstrap results for conditional indirect effect of hindrance stressors on employability via emotional exhaustion at PS = $M \pm 1\text{ SD}$			
	Effect	Boot SE	Boot 95% CI
– 1 SD (–1.00)	–0.221	0.066	[–0.373, –0.118]
M (0.00)	–0.130	0.042	[–0.229, –0.064]
+ 1 SD (1.00)	–0.038	0.039	[–0.136, 0.028]

Notes: Bootstrap (Boot) = 500.

Abbreviations: PCO, perceived career opportunity; PS, pay satisfaction; CI, confidence interval.

suggest that challenge stressors may foster more employability via intrinsic motivation, especially when employees have high pay satisfaction, while the negative effect of hindrance stressors on emotional exhaustion can be alleviated when perceived career opportunity is high, thereby inhibiting the decline in employability.

Theoretical Implications

This study has several theoretical implications. First, it applies the CHSF to the career context to explore the relationship between the challenge–hindrance stressors and employability, which responds to the call for researchers to assess the impact of the CHSF on individuals' career growth, besides job performance.⁴² Accordingly, the current study advances the research on the effects of the challenge–hindrance stressors on individual growth variables and enlightens the subsequent related research that combines the CHSF with career outcomes.

Second, this study extends the energy–motivation mechanism by explaining the different effects of challenge–hindrance stressors on job performance and on individual growth variables. It is noteworthy that the results reveal that the impact of the challenge–hindrance stressors on the energy–motivation mechanism displays a parallel pattern, which differs from the double-cross pattern proposed by LePine, Podsakoff, LePine.⁵ That is, the current study's findings reveal that challenge stressors increase intrinsic motivation but not emotional exhaustion. Similarly, hindrance stressors increase emotional exhaustion but do not decrease intrinsic motivation. A possible explanation for the former finding can be exemplified through the expression, “everything is difficult at the beginning”; therefore, when facing challenge stressors, emotional exhaustion levels may change from high to low. In the first stage, employees may be afraid of the difficulties and challenges that arise from challenge stressors; accordingly, their loss of emotional energy may be high. However, in the second stage, intrinsic motivation plays a leading role. During this time, employees feel more enthusiasm for their work and expect challenge success; naturally, emotional exhaustion does not seem obvious. A possible explanation for the latter finding is that intrinsic motivation emphasizes employees' engagement in certain activities because of interest rather than external reward. This study argues that hindrance stressors may not reduce employees' interest in the job itself; that is, although hindrance stressors are “bad” and have negative effects on employees' physical and mental health, hindrance stressors may not damage employees' interests and enthusiasm for their work itself. In sum, these inconsistent findings indicate that the theoretical explanation for the energy–motivation mechanism must be repeatedly examined via more CHSF-related empirical research.

Third, by integrating the energy–motivation mechanism framework and the JD-R model, this study reveals organization-related boundary conditions for the energy–motivation mediating process; that is, organizational investment can increase motivation under pressure and decrease energy loss. Specifically, this study suggests that pay satisfaction and perceived career development opportunity—two types of organizational investment most valued by employees—show different moderating roles. Pay satisfaction can weaken the negative effect of reducing the pressure on energy loss, while perceived career development opportunity can strengthen the positive effect of challenging pressure on intrinsic motivation. Therefore, this study reveals the complexity of organizational investment as a moderating variable and reminds organizations to adopt problem-oriented strategies for employees who face different pressures.

Practical Implications

This study proves that stress not only affects employees' current work attitude, behavior, and performance, but also influences personal growth in the long term (exemplified through employability). Accordingly, employees are advised to value the role of stressor evaluations in shaping employability, recognize the nature of stress in the work environment, and treat the impact of different types of stress by different attitudes. That is, to improve their employability, employees can accept challenge stressors bravely, since these stressors can stimulate their work motivation, and then make them be vitality and develop. At the same time, it is important for employees to focus special on hinderance stressor and avoid it, because it may trigger energy drain impacting negatively on employability.

This study suggests that managers' stress management should interact with organizational investment in employees' development. Regarding organizations, managers should recognize that their organizations' investment in employees can both alleviate the negative consequences of stress on employees and promote positive results, such as innovation and emotional commitment.⁴³ Therefore, a variety of support and development resources should be promptly provided

according to the different stressful situations that employees face. For example, when employees face greater hindrance stressors, organizations can provide supportive resources to reduce the negative impact of hindrance stressors on employees to some extent. When employees face challenge stressors, organizations can provide development resources (eg, opportunities for promotion, training, etc.) to promote employees' work motivation and tap their potential. In addition, employees are suggested that actively seeking external resources that are suited to their different pressures, so as to develop a work environment.

Research Limitations and the Future Study Prospects

This study has the following limitations. First, the sample size was relatively small. This study collected three-round longitudinal data and matched 206 valid data. Because the SEM analyzing method used herein had strict requirements on sample size,⁴⁰ the study's small sample size might have affected the results. Therefore, this study recommends the future studies to appropriately increase the sample size. Second, all reported variables herein were self-assessed. Although three-round longitudinal data were used to reduce common method bias to a certain extent, it could not be eliminated.²⁸ Therefore, this study suggests the future research to combine self-assessment with other assessment approaches and to use subjective and objective methods as much as possible for data collection. Third, although three-round longitudinal data were collected herein, the data were not fully utilized. Only the role of static challenge–hindrance stressors was discussed, and the amount of stress variation was not investigated. On one hand, the stress level, in the long term, is a dynamic process, so exploring the direction and magnitude of stress-level change and the impact of the change on employees may provide more information.⁴⁴ On the other hand, the change process of energy and motivation caused by stress is also dynamic, and the change of the intermediary mechanism can better reflect employees' long-term response to stress. This study suggests the future research to adopt a dynamic research perspective to investigate the changes and effects of challenge–hindrance stressors and further explore its internal mechanism.

Ethics Approval and Informed Consent

This study was adhered to the Declaration of Helsinki and approved by the Ethic Committee of Business School, Southwest University of Political Science and Law. In the questionnaire, we introduced this study purposes and explained that this study welcomed voluntary participation and the data, complying with the principle of confidentiality, is only used for research purposes. All participants gave their informed consent for inclusion before they participated in the study.

Funding

This work was supported by the National Natural Science Foundation of China (71902166), the China Postdoctoral Science Foundation (2018M643786XB) and the Scientific research project of Southwest University of political science and Law (2021xzndyb-06).

Disclosure

The authors declare no conflicts of interest in this work.

References

1. Naderiadib AN, Arasli H. Can hindrance stressors change the nature of perceived employability? An empirical study in the hotel industry. *Sustainability*. 2020;12(24):10574. doi:10.3390/su122410574
2. Igic I, Keller AC, Elfering A, Tschan F, Kälin W, Semmer NK. Ten-year trajectories of stressors and resources at work: cumulative and chronic effects on health and well-being. *J Appl Psychol*. 2017;102(9):1317. doi:10.1037/apl0000225
3. Cavanaugh MA, Boswell WR, Roehling MV, Boudreau JW. An empirical examination of self-reported work stress among US managers. *Journal of applied psychology*. 2000;85(1):65.
4. O'Brien KE, Beehr TA. So far, so good: up to now, the challenge–hindrance framework describes a practical and accurate distinction. *J Organ Behav*. 2019;40(8):962–972. doi:10.1002/job.2405
5. LePine JA, Podsakoff NP, LePine MA. A meta-analytic test of the challenge stressor–hindrance stressor framework: an explanation for inconsistent relationships among stressors and performance. *Acad Manag Ann*. 2005;48(5):764–775. doi:10.5465/amj.2005.18803921

6. Podsakoff NP, LePine JA, LePine MA. Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis. *Am J Appl Psychol*. 2007;92(2):438. doi:10.1037/0021-9010.92.2.438
7. Ng TW, Feldman DC. Subjective career success: a meta-analytic review. *J Vocat Behav*. 2014;85(2):169–179. doi:10.1016/j.jvb.2014.06.001
8. Tien H-LS, Wang Y-C. Career adaptability, employability, and career resilience of Asian people. In: *Psychology of Career Adaptability, Employability and Resilience*. Springer; 2017:299–314.
9. Fugate M, Kinicki AJ, Ashforth BE. Employability: a psycho-social construct, its dimensions, and applications. *J Vocat Behav*. 2004;65(1):14–38. doi:10.1016/j.jvb.2003.10.005
10. Kanfer R, Ackerman PL. Motivation and cognitive abilities: an integrative/aptitude-treatment interaction approach to skill acquisition. *Am J Appl Psychol*. 1989;74(4):657. doi:10.1037/0021-9010.74.4.657
11. Deci EL. The intrinsic motivation of behavior. In: *Intrinsic Motivation*. Springer; 1975:93–125.
12. Quigley NR, Tymon WG. Toward an integrated model of intrinsic motivation and career self-management. *Career Dev Int*. 2006;11(6):522–543. doi:10.1108/13620430610692935
13. Crant JM. Proactive behavior in organizations. *J Manage*. 2000;26(3):435–462. doi:10.1177/014920630002600304
14. Jex SM, Beehr TA. Emerging theoretical and methodological issues in the study of work-related stress. *Res Pers Hum Resour Manag*. 1991;9(31):1–365.
15. Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Ann Rev Psychol*. 2001;52:397–422. doi:10.1146/annurev.psych.52.1.397
16. Blokker R, Akkermans J, Tims M, Jansen P, Khapova S. Building a sustainable start: the role of career competencies, career success, and career shocks in young professionals' employability. *J Vocat Behav*. 2019;112:172–184. doi:10.1016/j.jvb.2019.02.013
17. Bolton LR, Harvey RD, Grawitch MJ, Barber LK. Counterproductive work behaviours in response to emotional exhaustion: a moderated mediational approach. *Stress Health*. 2012;28(3):222–233. doi:10.1002/smi.1425
18. WorldatWork. *The WorldatWork Handbook of Compensation, Benefits and Total Rewards: A Comprehensive Guide for HR Professionals*. Wiley; 2015.
19. Schaufeli WB. *Engaging Leadership in the Job Demands-Resources Model*. Career Development International; 2015.
20. Hung L-M, Lee Y-S, Lee D-C. The moderating effects of salary satisfaction and working pressure on the organizational commitment to turnover intention. *Int J Bus Soc*. 2018;19:1.
21. Ghazanfar F, Chuanmin S, Khan MM, Bashir M. A study of relationship between satisfaction with compensation and work motivation. *Int J Bus Manag Soc Sci*. 2011;2:1.
22. Barnett BR, Bradley L. The impact of organisational support for career development on career satisfaction. *Career Dev Int*. 2007;12:1
23. Bakker AB, Demerouti E, Taris TW, Schaufeli WB, Schreurs PJ. A multigroup analysis of the job demands-resources model in four home care organizations. *Int J Stress Manag*. 2003;10(1):16. doi:10.1037/1072-5245.10.1.16
24. Van den Broeck A, Van Ruysseveldt J, Smulders P, De Witte H. Does an intrinsic work value orientation strengthen the impact of job resources? A perspective from the job demands-resources model. *Eur J Work Organ Psychol*. 2011;20(5):581–609. doi:10.1080/13594321003669053
25. Bakker AB, Demerouti E, Euwema MC. Job resources buffer the impact of job demands on burnout. *J Occup Health Psychol*. 2005;10(2):170. doi:10.1037/1076-8998.10.2.170
26. Tadić M, Bakker AB, Oerlemans WG. Challenge versus hindrance job demands and well-being: a diary study on the moderating role of job resources. *J Occup Organ Psychol*. 2015;88(4):702–725. doi:10.1111/joop.12094
27. Bakker AB, Van Veldhoven M, Xanthopoulou D. Beyond the demand-control model: thriving on high job demands and resources. *J Pers Psychol*. 2010;9(1):3. doi:10.1027/1866-5888/a000006
28. Podsakoff PM, MacKenzie SB, Lee J-Y, Podsakoff NP. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Am J Appl Psychol*. 2003;88(5):879. doi:10.1037/0021-9010.88.5.879
29. Brislin RW. Translation and content analysis of oral and written materials. *Methodology*. 1980;111:389–444.
30. Grant AM. Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Am J Appl Psychol*. 2008;93(1):48. doi:10.1037/0021-9010.93.1.48
31. Li YX. Job burnout. In: Li CP, Wang Z, Mao KX, editors. *Chinese Handbook of Management Research Scales*. Beijing: China Renmin University Press; 2016:364–365.
32. Li YX. Chinese maslach burnout inventory. Job burnout and measurement. *J Psychol Sci*. 2003;105(03):556–557. Chinese.
33. Maslach C, Jackson SE. *MBI: Maslach Burnout Inventory Manual (Research Edition)*. 1st ed. Palo Alto, CA: Consulting Psychologists Press; 1986.
34. Maslach C, Jackson SE, Leiter MP. *Maslach Burnout Inventory Manual*. 3rd ed. Palo Alto, CA: Consulting Psychologists Press; 1996.
35. Kraimer ML, Seibert SE, Wayne SJ, Liden RC, Bravo J. Antecedents and outcomes of organizational support for development: the critical role of career opportunities. *Am J Appl Psychol*. 2011;96(3):485. doi:10.1037/a0021452
36. Farh J-L, Earley PC, Lin S-C. Impetus for action: a cultural analysis of justice and organizational citizenship behavior in Chinese society. *Adm Sci Q*. 1997;42:421–444. doi:10.2307/2393733
37. De Witte H. *Tussen Optimisten En Teruggetrokken: Een Empirisch Onderzoek Naar het Psychosociaal Profiel van Langdurig Werkloos En Deelnemers aan de Weer-Werkactie in Vlaanderen*. Leuven: HIVA; 1992.
38. De Cuyper N, Baillien E, De Witte H. Job insecurity, perceived employability and targets' and perpetrators' experiences of workplace bullying. *Work Stress*. 2009;23(3):206–224. doi:10.1080/02678370903257578
39. Dietzel LC, Coursey RD. Predictors of emotional exhaustion among nonresidential staff persons. *Psychiatr Rehabil J*. 1998;21(4):340. doi:10.1037/h0095290
40. Sardeshmukh SR, Vandenberg RJ. Integrating moderation and mediation: a structural equation modeling approach. *Organ Res Methods*. 2017;20(4):721–745. doi:10.1177/1094428115621609
41. Klein A, Moosbrugger H. Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika*. 2000;65(4):457–474. doi:10.1007/BF02296338
42. LePine MA. The challenge-hindrance stressor framework: an integrative conceptual review and path forward. *Group Organ Manag*. 2022;47(2):223–254. doi:10.1177/10596011221079970
43. Percy C, Dodd V. The Economic Outcomes of Career Development Programmes. In: *The Oxford Handbook of Career Development*. Oxford University Press; 2021:35.
44. Cropanzano R, Rupp DE, Byrne ZS. The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *J Appl Psychol*. 2003;88(1):160. doi:10.1037/0021-9010.88.1.160

Psychology Research and Behavior Management

Dovepress

Publish your work in this journal

Psychology Research and Behavior Management is an international, peer-reviewed, open access journal focusing on the science of psychology and its application in behavior management to develop improved outcomes in the clinical, educational, sports and business arenas. Specific topics covered in the journal include: Neuroscience, memory and decision making; Behavior modification and management; Clinical applications; Business and sports performance management; Social and developmental studies; Animal studies. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/psychology-research-and-behavior-management-journal>