An Empirical Study Research of the Relationship between Stressors and Work Engagement in Hotel

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Abstract. This study explored the relationship between the stressors and the work engagement of hotel staff based on the psychological capital view. 319 valid questionnaires were retrieved and we used structural equations for statistical analysis. The findings show that: (1) Hindrance stressors perceived by hotel employees are significantly negatively correlated with employees' psychological capital and work engagement; the correlation between challenge stressors and employee psychological capital and work engagement are not significant. (2) Psychological capital and its sub-dimensions are positively correlated with the work engagement of employees, and the dimension resilience has a strongest predictive effect on the work engagement of hotel employees. (3) Psychological capital can fully mediate the negative impact of hindrance stressors on hotel employees' work engagement.

Introduction

Style who mentioned the concept of stress in the middle of the 20th century believed that stress should be classified as eustress and distress. After combining the cognitive interaction theory, Folkman and Lazarus proposed that the perception of stress stems from the interaction between its self-processing capacity and external requirements. When someone's ability matches the outside world's requirements, he is more likely to face challenging stress; if his ability does not match the outside world's requirements, it will promote the development of hindrance stress [1]. The challenge stressors are what the individuals believe can be overcome and have positive significance for future development and growth. The hindrance stressors are what difficult for individuals to overcome and hinder the realization and development of their work goals.

The results of the researches on challenge-hindrance stressors show that both types of stressors affect the individual's physical and mental health. The positive impact of challenging stressors on team performance and the opposing effects of hindrance stressors has also been proved at the team level [3]. We found that the adaptation of stressors’ concept and the impact on outcome variables under different cultural contexts need to be further explored. Outcome variables of existing researches focused on negative aspects instead of positive psychological states (such as psychological capital). This research is based on the perspective of positive organizational behavior. Through questionnaires and statistical analysis, the following topics are discussed: (1) The mediating role of psychological capital between stressors and work engagement in hotel; (2) The impact of stressors perceived on employees' psychological capital and work engagement in hotel.

Theory and Hypothesis

Positive psychology researches focus on the psychological factors that produce positive behaviors such as hope, optimism, courage, creativity, responsibility, altruism, etc [4]. American scholar Luthans studied the influence of positive psychological factors on organizational behaviors deeply, and proposed the concept of psychological capital firstly. As he said, psychological capital is a positive psychological state of the individual, including four dimensions: self-efficacy, optimism, hope, and resilience [5]. Kahn first proposed the concept of work engagement in 1990 [6]. Schaufeli et al pointed
out that work engagement and job burnout are not completely opposite, and work engagement is an individual's perfect state full of persistent, positive emotions and motivations[7].

Hotel employees believe that the physical or psychological resource consumption brought by the challenge stressors can bring positive significance to future growth and performance. On the other hand, hindrance stressors consume employees' psychological resources, but employees can not see any effective benefits in the foreseeable future. So it will have negative impact on work engagement. Based on this, we propose the hypothesis:

H1a: Challenge stressors have a significant positive impact on work engagement.
H1b: Hindrance stressors have a significant negative impact on work engagement.

Resource theory believes that work resources can help employees set goals and influence employees' attitudes and behaviors. In the past, scholars' understanding of resources in the work requirements-resource model tend to emphasize resources in the external working environment but ignore the positive psychological power of human beings [8]. Xanthopoulou et al. integrated the three individual resources of self-efficacy, optimism and organization-based self-esteem and found that these three individual resources can positively predict the increase of stateful work engagement [9]. The positive effects of other dimensions of psychological capital on work engagement have been empirically proved except for resilience. The interaction of the various dimensions contained in psychological capital, can make the high-order concept have a greater impact on the outcome variables. So we proposes the hypothesis:

H2: Psychological capital has a significant positive influence on work engagement.
H2a: Self-efficacy has a significant positive impact on work engagement.
H2b: Hope has a significant positive impact on the work engagement.
H2c: Resilience has a significant positive impact on work engagement.
H2d: Optimism has a significant positive impact on work engagement.

The psychological capital can compensate the resource consumption caused by the work stress through the "energy supplement" process, which will have a certain mitigation effect on the individual's stress response. However, the resource consumption caused by the challenge stressors can make the individual get the expected compensation, so it can improve the employee's hope level. So we proposes the hypothesis:

H3: Challenge stressors have positive effect on employees' psychological capital.

The pressure brought by hindrance stressors is what individuals cannot change with their own efforts. As a high-level core construct, the change of mental capital's individual mental ability will definitely affect the individual's overall psychological capital level. Therefore, this study proposes the hypothesis:

H4: Hindrance stressors have a negative impact on employees' psychological capital.

According to cognitive interaction theory, cognitive evaluation can influence the formation of stress and the subsequent stress response. As an individual's psychological resources, individuals with higher level of psychological capital are more likely to form challenging perceptions of challenging stressors and tend to make more positive evaluations of stress because they have more resources, and then have a positive impact on work engagement. The existence of long-term hindrance stressors will inevitably reduce the psychological capital level of hotel staff, so that the psychological characteristics of employees' resilience and optimism will be reduced, and it is easier for hotel employees to generate behaviors such as turnover intentions and negatively affect their work engagement. This study considers psychological capital as a whole and proposes its role in the stressors model:

H5a: Psychological capital plays a mediating role between challenge stressors and work engagement.
H5b: Psychological capital plays a mediating role between hindrance stressors and work engagement.
Research Methods

Research Measures

In order to ensure the reliability and validity of the scale, this paper tends to use the mature scale which has been generally verified by scholars at home and abroad in the selection of the scale, and partially corrects the scale in combination with the actual situation of the hotel industry. All scales were measured using the Likert 7-point scale.

The challenge-hindrance stressors were measured using the English version of the stressor questionnaire compiled by Cavanaugh et al, which was adapted from the translations of domestic scholars. The measurement of psychological capital uses the Chinese version of the PCQ questionnaire translated by Li Chaoping. The work engagement was measured using a simple work scale developed by Shaufeli et al. According to the research purpose of this paper, it is considered as a single dimension variable.

Research Framework

According to the theoretical basis and research hypothesis of the previous article, we propose the research framework shown in Figure 1. The model assumes that both challenge stressors and hindrance stressors have an impact on employees' psychological capital and work engagement. The challenge stressors are positively related to the psychological capital of hotel employees, while the hindrance stressors are negatively related to the psychological capital of hotel employees. Challenge stressors are positively related to the work engagement of hotel staff, and the hindrance stressors are negatively correlated with the work engagement of hotel staff. Psychological capital is positively related to work engagement, both as a whole and its four sub-dimensions. Psychological capital can mediate the impact of challenge-hindrance stressors on work engagement.

Pre-study Analysis

140 questionnaires were distributed in the pre-study, and 119 valid questionnaires were collected. The effective recovery rate was 85%. We used the Cronbach’s α coefficient and CICT as key indicators to measure the internal consistency of the item. And the KMO coefficient was used as the measurement index to do the validity analysis. After the analysis, we delete three items (B31, B42 and B45) of the Psychological capital scale whose CICT values are 0.211, 0.022, and 0.235 respectively. The pre-research was used to analyze the validity and reliability of the recovered data, and the initial questionnaire was revised in combination with the data analysis. Finally, the final questionnaire for this study was established.

Data Analysis and Hypothesis Testing

Questionnaire Recovery and Sample Characteristics Analysis

The hotel enterprises selected in this study specifically refer to the profitable organizations that mainly provide room rentals and provide catering and other comprehensive services to guests. A total of 400 questionnaires were distributed and 357 questionnaires were returned. The recovery rate was
89.25%. Among them, 319 valid questionnaires were collected after the invalid questionnaires were eliminated, with an effective rate of 79.75%.

The proportion of male and female employees is basically the same, and the proportion of males is slightly higher. In terms of age, the number of employees under the age of 25 is the highest, accounting for 49.2% of the total effective sample. In terms of education level, the number of undergraduate students is the highest, 151, accounting for 47.3% of the total number of valid samples, reflecting the increasing academic qualifications of hotel practitioners in China. The sample distribution characteristics are basically in line with the actual situation of the hotel industry.

Reliability and Validity Tests

The reliability test takes Cronbach's alpha coefficient as the measure index. SPSS 22.0 was used to test the reliability of the variables involved in the paper. The results showed that the Coefficient of Cronbach's alpha of all the scales in this study was greater than 0.7, which had good reliability.

Validity includes content validity and structure validity. We adopts the maturity scale of scholars at home and abroad and further revises the questionnaire through pre-survey, which guarantees the validity of the content. In terms of structural validity, 90 samples were randomly selected for exploratory factor analysis, and the remaining 229 samples were used for confirmatory factor analysis.

| Fitting index          | X2/df | GFI   | CFI   | TLI   | RMK   | RMSEA | NFI   |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| Challenge-hindrance   | 2.743 | .941  | .950  | .935  | .072  | .074  | .925  |
| hindrance stressors   |       |       |       |       |       |       |       |
| Psychological capital | 2.658 | .873  | .916  | .903  | .079  | .072  | .873  |
| Work engagement       | 3.498 | .941  | .969  | .955  | .060  | .089  | .957  |

The results of exploratory factor analysis show that the construct validity of the scale is good, and the confirmatory factor analysis is performed on this basis. The result is shown in Table 1.

The summary table shows that the progressive residual root mean square of the work engagement is 0.89 greater than the ideal level of 0.8, and other indicators indicate that the model fits better.

Model and Hypothesis Testing

|                | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
|----------------|-------|-------|-------|-------|-------|-------|-------|
| Challenge      | ---   | ---   | ---   | ---   | ---   | ---   | ---   |
| stressors      | .310**| ---   | ---   | ---   | ---   | ---   | ---   |
| hindrance      |       | .310**| ---   | ---   | ---   | ---   | ---   |
| stressors      |       |       |       |       |       |       |       |
| self-efficacy  | .028  | -.182**| ---   | ---   | ---   | ---   | ---   |
| hope           | -.068 | -.291**| .727**| ---   | ---   | ---   | ---   |
| resilience     | -.091 | -.214**| .741**| .782**| ---   | ---   | ---   |
| optimism       | -.121*| -.244**| .577**| .629**| .682**| ---   | ---   |
| Work engagement| .178  | -.282**| .615**| .686**| .661**| .5928*| ---   |
| mean           | 4.582 | 4.0740| 5.0522| 4.8135| 4.957 | 4.9898| 4.9279|
| Standard       | 1.18846| 1.38811| 1.02863| 1.02721| 1.03653| 1.12596| 1.07298|
| deviation      |       |       |       |       |       |       |       |
Correlation Analysis of Statistical Variables. As can be seen from Table 2, the correlation between challenge stressors and psychological capital and work engagement is not statistically significant. The challenge stressors perceived by hotel staff are not related to the employee's work engagement and psychological capital level, so the H1a and H3 are not supported. Because the independent variables, mediator variables and dependent variables must be related to each other to prove the mediating role of the mediators in the overall model, the H5a is not supported. The positive impact of challenge stressors on work engagement has not been widely verified by domestic scholars. Therefore, based on the results of the data analysis and the actual situation of the hotel industry, we will delete the challenge stressors variables in the subsequent analysis.

Multi-hypothesis Overall Model Test. This study uses psychological capital as the research focus and incorporates it into the stressor model to verify the mediating role of psychological capital as a whole in the stressor model and the positive impact of its sub-dimensions on work engagement. In this paper, the fitting situation is judged from three aspects: absolute fitness index, value-added fitness index and simple fitness index. The final result is shown in Table 4-3:

| index | CMIN/DF | GFI | RMSEA | NFI | RFI | IFI | TLI | CFI | PGFI | PNFI |
|-------|---------|-----|-------|-----|-----|-----|-----|-----|------|------|
| standard | <5     | >0.9 | <0.08 | >0.9 | >0.9 | >0.9 | >0.9 | >0.9 | >0.5 | >0.5 |
| modelM1 | 4.366  | 0.896 | 0.078 | 0.901 | 0.893 | 0.932 | 0.899 | 0.917 | 0.554 | 0.593 |
| modelM2 | 2.329  | 0.956 | 0.065 | 0.971 | 0.959 | 0.983 | 0.976 | 0.983 | 0.556 | 0.690 |

It can be seen from Table 3 that the overall mediation effect model M2 is more ideal than the sub-dimension mediation model M1.

| Relationship between latent variables | Parameter estimate | Standard error | C.R. | P |
|--------------------------------------|--------------------|----------------|------|---|
| self-efficacy<--hindrance stressors  | -.256              | .069           | -3.099 | .002     |
| Hope<--hindrance stressors           | -.333              | .069           | -4.251 | ***     |
| resilience<--hindrance stressors     | -.311              | .057           | -4.006 | ***     |
| optimism<--hindrance stressors       | -.245              | .055           | -1.988 | .047     |
| Work engagement<--self-efficacy      | .254               | .071           | 3.438 | ***     |
| Work engagement<--hope               | .203               | .074           | 2.503 | .012     |
| Work engagement<--resilience         | .364               | .089           | 4.511 | ***     |
| Work engagement<--optimism           | .267               | .114           | 4.233 | ***     |
| Work engagement<--hindrance stressors| -.052              | .050           | -1.664 | .096     |

From Table 4, the hindrance stressors are significantly negatively correlated with the level of hope and resilience of hotel employees. The negative correlation between hindrance stressors and self-efficacy and optimistic variables is significant at the P<0.05 level. Except for the positive correlation between the hope dimension and the hotel staff's work engagement is significant at the level of P<0.05, the positive correlation between the self-efficacy, resilience and optimism dimensions and the hotel staff's work engagement reached a significant level of P < 0.001. Influenced by the intermediary role, the direct impact of the hindrance stressors on the work engagement of hotel employees is not significant.

| Relationship between latent variables | Parameter estimate | Standard error | C.R. | P |
|--------------------------------------|--------------------|----------------|------|---|
| Psychological capital<--hindrance stressors | -.269              | .036           | -4.457 | ***     |
| Work engagement<--Psychological capital | -.774              | .066           | 13.981 | ***     |
| Work engagement<--hindrance stressors | -.071              | .031           | -1.664 | .096     |

As can be seen from Table 5, the hindrance stressors are significantly negatively correlated with the overall psychological capital of the hotel staff. There is a significant positive correlation between
Results Discussion and Inspiration

Research Results Discussion

Discussion of Higher-order Core Constructs of Psychological Capital. In the process of confirmatory factor analysis of psychological capital, we can see that the correlation coefficient between the four sub-dimensions of psychological capital has reached a significant level above 0.7, indicating that there is a strong correlation between the four sub-dimensions. Through the confirmatory factor analysis of the hypothetical models M1 and M2, it is found that the mediating role model of the psychological capital as a whole (model M2) has a better fit than the mediating model of the psychological capital dimension (model M1). The results of the data analysis in this paper further support the high-order core construct theory of psychological capital and verify the validity of its four-dimensional structure. It is shown that the variable group composed of the overall psychological capital and its sub-dimensions can completely mediate the influence of the hindrance stressors faced by hotel employees on the work engagement, and the mediating role of the psychological capital as a whole is more significant.

Discussion of the Relationship between Challenge-hindrance Stressors and Work Engagement. Through the questionnaire survey of hotel companies of different natures, the work stressors faced by hotel employees in China can be divided into two types: challenge and hindrance, but there is no obvious correlation between the “challenge stressors” perceived by hotel employees and the employees’ psychological capital and work engagement. In terms of specific industry attributes, the hotel is a labor-intensive service-oriented enterprise. The employees are under-educated, the average age is small, and the working years are short. At the same time, hotel industry management education started late, and its development lagged behind the speed of hotel development. Employees said that the hotel's salary level is low, and there is little hope of promotion. The low level of education makes employees more inclined to pay attention to the difficulties brought about by the current pressure, so they can’t foresee the returns and benefits of future promotion and career development. And thus have a negative impact on work engagement. So H1a is not supported.

Relationship between Challenge-hindrance Stressors and Psychological Capital. At present, the empirical research on the pre-factors of psychological capital is still lacking. Based on the theoretical analysis, this paper puts forward the hypothesis H3 and H4. Through structural equation modeling analysis, this paper finds that the positive impact of the challenge stressors of employees on psychological capital is not significant, while the hindrance stressors can have a significant negative impact on the psychological capital of hotel employees. Because the hindrance stressors not only brings no benefits and rewards in the foreseeable future, but also causes more consumption of employees' psychological resources, The physiological or psychological resources consumed by hotel staff cannot be compensated as expected in the face of hindrance stressors. In the long run, the psychological capital of employees will be exhausted, leading to a decrease in psychological capital. The negative correlation between the hindrance stressors of hotel staff and their work engagement passed the significant test. After controlling the impact of demographic variables, the standardized path value was -0.216, supporting H1b.

Discussion of the Relationship between Psychological Capital and Work Engagement. The results of data analysis show that the overall psychological capital of the hotel staff and its sub-dimensions have a significant positive impact on the work engagement. According to the job requirements-resource model and resource preservation theory, as the individual's positive psychological resources, the higher the psychological capital level of hotel employees, the more confident they can be to complete challenging tasks through challenging efforts. Thus a higher level
of work engagement is shown. The positive correlation between psychological capital as a whole and work engagement passed the significance test, and the standardized path value was 0.774. The positive correlation between self-efficacy, hope, tenacity, and optimism and work engagement passed the significance test, the standardized path values were 0.254, 0.203, 0.364, and 0.267 respectively, supporting H2, H2a, H2b, H2c and H2d.

**The Mediating Role of Psychological Capital.** The data analysis results of this study show that the psychological capital of hotel employees plays a full mediating role between the hindrance stressors and the employees' work engagement. Through this paper, it can be speculated that psychological capital can alleviate the negative impact of hindrance stressors through the “energy supplementation process” on the one hand, and positively promote individual work engagement through the “motivation stimulation process” on the other hand. Through empirical research, this paper finds that the hindrance stressors perceived by hotel employees, the psychological capital of employees and the work engagement of employees are closely related. Psychological capital plays a mediating role between the hindrance stressors and the work engagement. H4b is supported.

**Management Inspiration**

**Establish a Sound Incentive and Promotion Mechanism.** As a service-oriented industry, the hotel industry must maintain a good working attitude. The imperfections of the hotel industry management, training and promotion system further weaken the positive impact of challenge stressors and strengthen the negative impact of hindrance stressors. Therefore, hotel managers should pay more attention to weakening or reducing the hindrance stressors faced by employees, establishing a fair competition mechanism, improving the safety of hotel employees, and ensuring employees’ good state of working engagement.

**Pay Attention to the Cultivation and Development of Psychological Capital.** In the context of economic globalization, the psychological capital of employees is gradually surpassing human capital and social capital as an important source for organizations to gain competitive advantage. Managers can combine the reality of the hotel industry to increase the cultivation and development of psychological capital, and improve the psychological capital level of employees through targeted guidance and training.

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