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The Study on the Relationship between University Faculties' Job Stress and Organizational Commitment in China

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Abstract

With the global evolution of knowledge competition, university faculties play an important role in the development of knowledge and technology in colleges and universities, and multiple job responsibilities made faculty's job suffering from more demanding and stressful. University faculties are the backbone of the university, and high faculty turnover rate has detrimental effects on the development of university. This research obtain 209 questionnaires from university faculties of Zhejiang province, and the relationship among job stress, job satisfaction, job engagement and organizational commitment is analyzed by structural equation model system. The results show that the job stress of the university faculties has positive direct effect on the job satisfaction, but also has the negative indirect effect on the job satisfaction. The job engagement has positive direct effect on the job satisfaction. All of the job stress, job engagement and the job satisfaction have the effect on organizational commitment, job satisfaction has positive direct effect, job stress has a positive indirect effect, and job engagement has a positive direct effect indirect effect.

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Keywords: University Faculties; Job Stress; Job Engagement; Job Satisfaction; Organizational Commitment.

1. Introduction

China's higher education develops rapidly in recent years, and the number of university faculty is also increasing rapidly. From 2001 to 2014, the number of full-time teachers in higher education increased from 0.532 million to 1.56 million, and the young faculties are 0.9 million, accounting for 57.5%. University young faculties play more and more important role in higher education, and have more responsibilities in the same

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time. Under the high performance pressure environment, the university young faculties' job satisfaction deserves more attention [1]. The research of university young faculties' job satisfaction has important practical significance, it will drive the faculties forward change, improve the work environment and the universities performance [2]. In addition, high faculty turnover rate has detrimental effects on faculties' organization commitment and the development of university. Therefore, creating a high-quality work environment is a core element of universities' competitiveness.

Although there are some researches on the relationship between job engagement, job stress, job satisfaction and organizational commitment [3-7], there are many changes in the domestic higher education environment in recent years. University faculties face many new challenges, and the situation is difficult to be the same as that of foreign countries. Under different economic, cultural, social conditions, these issues are also worthy of more systematic analysis and empirical research in china.

2. Literature Review

2.1 Job stress, job engagement and job satisfaction

Job stress has attracted much attention in recent years, and the "Effort-Reward Imbalance" model is best able to streamline concepts and interpret the job stress of most occupational groups, such as public health and sociology [8, 9]. German sociologist Johannes Siegrist proposed the theory of "Effort-Reward Imbalance" in the 1990s, which argues that people are seeking to increase their reward and reduce their penalties, and when feedback and punishment are changed, their behavior will change. The effort-reward imbalance theory proposes that when the staffs enter into the organization, they will have money, respect, promotion, work support and other feedback expectations to the organization, they will assess the feedback expectation and job payout. If the effort and reward cannot be balanced, the original social reciprocity criteria will have a threat and imbalance, and employee psychological contract was destroyed [10]. In the labor market, employees can choose to balance themselves with self-regulation through rational career mobility, and if the job opportunity is scarce, the imbalance and negative pressure will continue [11]. Job satisfaction is the employee's perception of the particular work environment, the personal work response, and the specific view of the work [12-13]. Researchers apply the "Effort-Reward Imbalance" theory to Chinese medical personnel research, and find that is associated with job dissatisfaction [14]. Therefore, for the university faculties, the job stress will affect job satisfaction, we do the following hypothesis.

H1: The job stress has a significant impact on job satisfaction.

Job engagement represents the employee's psychological identity of the work [13], is the personal self-impression [15]. Researchers argue that the lower the job pressure, the higher the degree of job engagement, that is, the negative correlation between job engagement and job stress[16-18]. Bakker found that when an individual felt energy recovery on a working day, the amount of work that day could be regarded as the stress of the individual, and it was positively related to the degree of job engagement [19]. Therefore, the relationship between job stress and job engagement is difficult to judge from the literature, so this study assumes the following hypothesis:

H2: The job stress has a significant impact on job engagement.

Brooke proposes that the high level of employee' job engagement cannot represent there are pleasure in the work, unhappy staff and happy work staff may have the same degree of job engagement [13]. Browns propose the job engagement is an antecedent variable of job satisfaction [20].

H3: The job engagement has a significant impact on job satisfaction.

2.2 Job engagement, job satisfaction and organizational commitment

Organizational commitment usually refers to the individual's identity and values of the organization, willing to work for the organization and hope to stay in the organization. In general, individuals with high job engagement tend to have higher organizational commitments, and vice versa; but sometimes people can have higher job engagement and lower organizational commitments, or have lower job engagement and but higher organizational commitment [21]. Demerouti shows that there is a significant positive correlation between job engagement and organizational commitment [22]. Dai Ying's research of organizational commitment and job engagement shows that there is a close relationship between the two variables [23].

H4: The job engagement has a significant negative impact on the organizational commitment.

Job satisfaction and organizational commitment are important research fields in management domain. Huang & Hsiao explores the structural equation model of job satisfaction and organizational commitment and find that their relationship is reciprocally strong [24].

H5: The job satisfaction has significant positive impact on the organizational commitment.

Fig. 1. The theoretical model

3. Research Design

3.1 Data collection and measurement

In order to ensure the smooth progress of the interview, this study takes the telephone appointment of the college teachers in Ningbo City, Zhejiang Province (under the age of 35). The investigation time is in 2015. In order to ensure the smooth progress of the visit, In mid-October to early December, formal research took one and a half months, a total of 223 questionnaires were distributed. After deleting some invalid questionnaires, 211 valid questionnaires were obtained, and the questionnaire was 93.72% effective. The statistical analysis of the survey sample is shown in the following table:

Table 1. Sample description of statistical analysis

Respondents gender	Frequency	Percentage	Whether has an administrative part-time job	Frequency	Percentage
Male	105	49.8	Yes	71	22.0
Female	106	50.2	No	252	78.0
Age	Frequency	Percentage	Teach age	Frequency	Percentage
28	44	20.9	2years and below	54	25.6

29-32	81	38.4	3-6 years	100	47.4
33-35	86	40.8	6-10 years	57	27.0
Total	211	100.0	Total	211	100.0
Education	Frequency	Percentage	Positional titles;	Frequency	Percentage
Ph.D.	60	28.4	Primary title	14	6.7
Master degree	117	55.5	Middle title	121	57.3
Bachelor degree	34	16.1	Vice-senior Title	76	37.0
Total	211	100.0	Total	211	100.0

The research variables in this paper include job stress, job engagement, job satisfaction and organizational commitment, using the Likert 5-point scale for measurement. In order to ensure that the measurement tool meets the reliability and validity criteria, the measurement of each variable will be based on the scale of the relevant literature combined with the specific circumstances of China to adjust and modify the use. Job stress scale is based on the ERI scale established by the theory of feedback imbalance. Job engagement use Kanungo scale [25]. Job satisfaction scale is base on the two-factor theory of MSQ Minnesota job satisfaction scale. This study uses Porter, Steers & Mowday organizational commitment scale [26].

3.2 Reliability and validity

Reliability analysis: The Cronbach's α coefficients of each scale are all higher than 0.6, and mostly above 0.7, according to Nunnally[27] on the Cronbach's α coefficient of the critical point of view, the scales have a good reliability.

Validity analysis: In this study, AMOS software was used to analyze the main research constructs in this paper, and the standardized factor load of each item was obtained. Then, the AVE value and the CR value can be calculated. Some scholars have pointed out that when the standard factor load of each item is greater than 0.5 and the AVE value of each latent variable is greater than 0.5 and the CR value is greater than 0.7, then the measure of the potential variable has good convergence validity [28]. The results show that the scale used in this study has good convergence validity. All authors must Transfer the Online licence before the article can be published. This transfer agreement enables Elsevier to protect the copyrighted material for the authors, but does not relinquish the authors' proprietary rights. The copyright transfer covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microfilm or any other reproductions of similar nature and translations. Authors are responsible for obtaining from the copyright holder permission to reproduce any figures for which copyright exists.

4. Results

For the theoretical model proposed in this paper, the structural equation model is a suitable test tool. The structural equation model can be used to test the interrelationship between potential theoretical variables. For this reason, the structural equation model is a more effective test method for the hypothesis presented in this paper.

4.1 Evaluation of goodness of model

In the evaluation of whether the measurement model and the data is fitted, the main observation parameters of the standard error, T value, standardized residuals, correction index and a series of your preferred degree of statistics. In this paper, we choose the chi-square free ratio (GFI), the approximate error root mean square (RMSEA), the provincial fidelity goodness index (PGFI), and the province (PNFI), normalized fitting index (NFI), and comparison fitting index (CFI). They include three categories of indices ,such as absolute fitting index, relative fitting index and simple fitting index.

Table 2 Structural Equation Model Results

Index	Absolute goodness-of-fit			Simple goodness-of-fit		Add value goodness-of-fit	
	χ^2/df	GFI	RMSEA	PNFI	PGFI	NFI	CFI
Evaluation standard	< 3	>0.9	<0.08	>0.5	>0.5	>0.9	>0.9
Results	2.396	0.904	0.079	0.580	0.592	0.906	0.903

4.2 Results of hypothesis testing

Figure 2 is the model results of the work stress, Job Engagement, job satisfaction, and organizational commitment that we have obtained as described above.

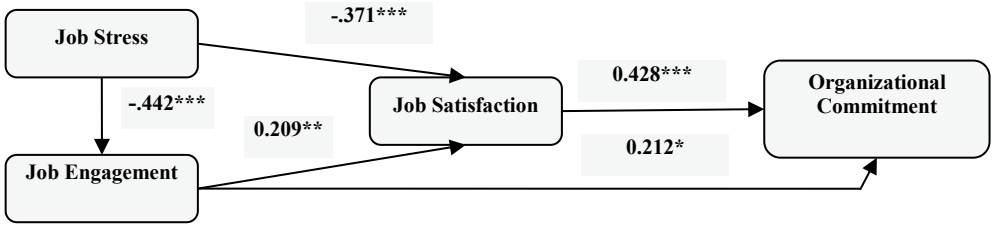

Fig. 2. The result of structural equation model

Note: *, **, ***, respectively, in the 0.1, 0.05, 0.01 level on the two-tailed test significantly.

It can be seen from the above figure that H1-H5 is tested by significance, but it is also important to note that H3 only has a significance test with a significance level of 0.1, with no significance test with a significance level of 0.05.

Table 3 The direct effect and indirect effects of University faculties' job stress on organizational commitment

Dependent variable	Independent variable	Direct effect	Indirect effect	Total effect
Job Engagement	Job Stress	-.442		-.442
Job Satisfaction	Job Stress	-.413	-.092	-.505
	Job Engagement	0.209		0.209
Organizational Commitment	Job Satisfaction	0.428		0.428
	Job Engagement	0.212	0.190	0.401
	Job Stress		-.132	-.132

Combining Figures 2 and table 3, we obtained the following findings: University faculties' job stress has a significant negative impact on job satisfaction (-505), H1 is established. The job stress has a significant negative impact on job engagenment (-.431), that is, H2 is established. The job engagement has a significant positive impact on job satisfaction (0.209), that is, H3 is established. University faculties' job satisfaction has a significant positive impact on organizational commitment (0.428), that is, H4 was established. The university faculties' job engagement has a significant positive impact on organizational commitment (0.401), that is, H5 is established.

5. Conclusion and implication

This research reconstructs the theoretical framework of job stress, job engagement, job satisfaction and organizational commitment. Specifically, the conclusions of this paper include three aspects: greater job stress in colleges and universities will reduce the job satisfaction of university teachers; the greater job stress in colleges and universities will lead to the reduction of university teachers' job engagement; The higher level of job engagement of university teachers has positive significance for improving their job satisfaction; the higher the degree of job satisfaction of university teachers, the higher the level of organizational commitment.

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