

An Empirical Study of the Impact of Work Stress on Work Performance of University Teachers: a Qualitative and Quantitative Analysis

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Abstract. With the reform of the teacher performance management system in many colleges and universities in China, the pressure of college teachers has invariably increased, and it has become a hot topic to explore in depth the causes of work stress and the relationship between work stress and work performance of college teachers. This study randomly selects university teachers from different regions as research samples, and uses empirical research methods to analyse the causes of work stress and work performance of university teachers. This paper finds that the work stress of university teachers is high, and aspects such as heavy workload, high pressure on career development and insufficient job security make university teachers feel more pressure. Based on the analysis results, this paper proposes countermeasures for stress management of university teachers.

Keyword: work stress; work performance; university teachers; data analysis

1. Introduction

In recent years, with the implementation of a series of national policies and the continuous promotion of the reform work of the university teaching system, university teachers are no longer treated well and with good benefits. They are facing increasing work pressure, especially young university teachers, and even more so some of them are experiencing psychological anxiety and other conditions. It is well known that work stress has a relatively large impact on university teachers, and that how well stress is handled directly affects their work performance .

Increasing work stress is prevalent among the current university teaching staff, especially since the implementation of the university teaching system reform process, which has resulted in unprecedented levels of stress. This has led to some university teachers being reluctant to work, their motivation and enthusiasm for work diminishing, and even the idea of leaving, all of which can have a relatively large impact on the performance, quality and efficiency of university teachers' work. Therefore, this paper is based on a study of the issue of stress on work performance among university teachers.

2. Literature Review and Research Theory

2.1 Work Stress and Work Performance

Stress is often defined as "the reaction of an individual who realises that the demands placed on him or her are more than he or she can cope with". Research stress is a combination of physiological and psychological reactions of university teachers who are aware that the demands of their research are beyond their capacity to cope with.

Lodahl and Kejner et al. suggest that research stress refers to the physical or psychological effects of certain factors on the researcher in a given research situation. [1] There are different views on the relationship between stress and performance, with Gilboa and Shirom et al. suggesting that stress has a negative effect on performance. [2] Some scholars, however, believe that different

types of stress have different effects on performance. For example, Ji Xiaoli and Chen Jianwen categorised stress as endogenous or exogenous, and believes that endogenous stress positively affects performance, while exogenous stress negatively affects performance. [3]

2.2 Stress Perception Assessment Theory

The stress perception assessment theory explains how performance stress can cause employees to behave in two very different ways at work. When individuals are faced with stress, they will evaluate the stressors they undertake to different degrees in terms of their education, upbringing and cultural perceptions, and the end result will lead to different ways of handling and attitudes. Studies have shown that when employees are faced with performance pressure, they may develop negative emotions for their own reasons, which eventually lead to withdrawal behaviour at work. [4]

However, some studies have also confirmed that performance pressure creates a fighting spirit in employees, making them cope positively and be more proactive in their work to solve difficulties and meet the performance requirements of the organization. [5] Therefore, this paper proposes that in the process of performance pressure's impact on employees' work engagement, it leads to two very different effects. Performance pressure can both cause employees to develop a positive mindset and increase their proactive work behaviour, which in turn increases their level of and also to negative behavior such as withdrawal from work ultimately leading to lower levels of work engagement.

3. Data Sources and Research Methods

The data for this study were obtained from the Work Stress Survey of College Teachers, and the questionnaire was divided into a scale based on the Work Stress Scale revised by Li Hong. [6] The sampling frame was the teachers in the Ministry of Education's Annual Report on Science and Technology Statistics in General Higher Education Institutions, including full-time teachers and management staff. The sampling scheme was stratified, with the primary sampling unit (PSU) being universities, selected in four provinces and cities combining universities in Beijing, Shandong, Shaanxi and Sichuan. The secondary sampling unit (PSU) was teachers, selected in proportional probability sampling (PPS).

The sample size of the survey was 1000, 508 questionnaires were returned and 303 valid responses were confirmed. The profile of the respondents is as follows. The ratio of male to female was 48:52, with 76% and 24% of full-time teachers and management staff. The proportion of doctoral degree holders was 66% and 34% of master's degree holders. The distribution of titles is 39% for senior, 52% for intermediate and 9% for junior and below.

The proportion of teachers with study or visiting experience abroad or in Hong Kong, Macau and Taiwan is 35%. The proportion of teachers with overseas study experience and degrees was 13.5%. The teachers surveyed were distributed among 28 disciplines, with those in the fields of science, agriculture, medicine and humanities and social sciences being included in the sample.

In general, the demographic characteristics and the distribution of titles and disciplines of the survey respondents are somewhat representative of the university teachers.

4. Data Analysis

4.1 Work Stress on University Teachers

The stress scale consists of 25 questions and the stress level is scored on a 4-point Likert scale: 1=no stress, 2=somewhat stressful (mild), 3=stressful (moderate) and 4=very stressful (severe). From the survey data, the mean value of teachers' overall stress was 2.23, which was between mild and moderate, with teachers feeling more stress in terms of workload, job demands and job responsibilities, and less stress in terms of teacher-student relationships.

Several issues may focus on a particular dimension as a source of stress, and conducting a correlational analysis based on dimensions can make the chain of events clearer and easier to analyse and understand. Therefore, an exploratory factor analysis modelling was conducted in this study, which resulted in the classification of work stress into six factors, which can be summarised as: career development, management system, workload, teaching practice, work security and interpersonal relationships. According to Table 1, the data showed that workload was the most stressful factor and the other five factors were, in descending order, management system, work security, career development, interpersonal relationships and teaching practice.

Table 1 Work Stress Assessment of University Teachers

Influencing factors	stress level
Career Development	2.27
Management System	2.41
Workload	2.79
Teaching Practice	1.85
Work Security	2.39
Interpersonal Relationships	2

4.2 Analysis of Work Stress and its Correlation with Work Performance

In order to explore the relationship between work stress and work performance of university teachers, a pearson correlation analysis was conducted between the six factors of work stress and the total work performance scores of university teachers. The results of the analysis are shown in Table 2. All six factors of work stress were significantly and positively correlated with teacher performance ($p < 0.01$). However, the above table shows that the correlation coefficients are all relatively low, which means that a certain amount of work stress can improve the quality of teachers' teaching and research output, thus improving the overall work performance of university teachers. However, too much work stress can produce anxiety, pessimism, slackness and even a tendency to leave the profession, which to a certain extent limits the quality of teachers' teaching and research output.

Table 2 Correlation Coefficients between Work Performance and Work Stress (N=81)

Coefficients	Total Points of Work Performance	P Point
Career Development	-0.25	0.004
Management System	-0.34	0.000
Workload	-0.16	0.004
Teaching Practice	-0.26	0.003
Work Security	-0.21	0.002
Interpersonal Relationships	-0.27	0.003
Total Points of Work Stress	-0.24	0.001

An analysis of work stress among teachers with different personnel attributes showed that there was no significant difference in the level of work stress among groups of teachers with different gender, age and title groupings. It is evident that the above findings are of a general nature. Therefore, both universities and teachers themselves should pay attention to the issue of teachers' work stress, and be aware of and respond to stressful situations.

5. Conclusion

Firstly, the work stress of the university teachers interviewed was between moderate and severe stress levels, with the main sources of stress being heavy loads, high demands and inadequate security. The data show that teaching is not the main source of stress, but rather the quality and quantity of work required of university teachers in scientific research or social services makes them feel more stressful.

The current research pressure on university teachers can have a negative impact on overall work performance. Stress is not always detrimental, and moderate stress can even be an important factor

in improving performance, but the amount of research stress currently experienced by university teachers is beyond moderate and can have a negative impact on performance. Firstly, excessive pressure over a long period of time can dampen the motivation for research. Secondly, higher research pressure tends to make teachers' research tend to be "utilitarian" and "heavy on quantity but light on quality", leading to academic mediocrity and even some academic misconduct.

Secondly, between the stress factors, career development and job security all reflect a clear correlation with interpersonal relationships. In their work, especially in teaching and research practice, university teachers very often need an environment of independent thinking and innovation. However, in the context of an increasingly interdisciplinary trend, teachers need more interpersonal relationships to maintain good interaction with colleagues, peers, supervisors or academic authorities, whether from the perspective of promoting teaching and research enhancement or from the perspective of integration into the objective environment.

6. Suggestions

Career development has the greatest impact on the work pressure of university teachers, and the establishment of a fair and reasonable appraisal and incentive mechanism and performance management system would be an effective response to alleviate this core pressure. For full-time teachers, the limited number of senior titles means that they are often faced with comparisons and competition with colleagues and peers on their career paths. Title assessment is more a matter of choosing the best from the best, so it is difficult to have a clear quantitative threshold. At this point, performance needs to be defined scientifically, so that teachers are under moderate pressure. An assessment and incentive mechanism that gives full play to motivation but is also fair and reasonable might be one way to try this.

The first way to manage work performance is to categorise it. Managers can make certain combinations of the three core jobs of teaching, research and social service, and set up different types of positions, such as teaching-oriented and research-oriented, research-oriented and social service-oriented, etc., and implement classification management in terms of assessment content and criteria.

The second way of managing work performance is multiple appraisal. Outputs in terms of teaching effectiveness, research output and decision-making and consultancy results are recognised in the system, and the evaluation process and conversion relationship for the recognition of different types of contributions are set at the operational level.

Thirdly, a comprehensive career development system is established and career development is included as a priority in the development of the teaching staff. The university's organisation, personnel, research and teaching departments collaborate fully to make performance management and scientific and reasonable evaluation the core key to management, and to build fair and reasonable evaluation methods and clear career development paths with a clear vision.

The literature also demonstrates that social support can be effective in reducing teachers' work stress. It has also been documented that there is a positive correlation between the social support received by teachers in higher education and their performance in higher education, with teacher performance increasing as teachers receive more social support. [7]

Currently, some organisations are expressing the importance of social support through employee assistance programmes, which not only create a positive working atmosphere for teachers, but also allow teachers to feel valued and increase their motivation to work, so that staff are more actively engaged in their work and fully realise the value of teachers. Therefore, universities should strengthen the stress relief mechanism for teachers to help them reduce the stress caused by the environment and other things, improve their work pressure, improve the working environment and strengthen the team building of university teachers.

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