

# Research on the Factors Affecting Job Satisfaction Among Teachers in Qingdao Hengxing University of Science and Technology

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**Abstract:** With the rapid development of social economy and the deepening of higher education reform, college teachers in China are presenting increasingly complex and diverse characteristics. One of the main issues is that the phenomenon of job burnout is becoming increasingly rampant. Therefore, it is of great theoretical and practical significance to study the job satisfaction and burnout of university teachers to ensure effective development of universities and to improve the utilization of human resources, which will then enhance the competitiveness of universities. By analyzing the correlation between job burnout and job satisfaction, it is found that three factors of job burnout are negatively correlated with nine factors of job satisfaction, and the correlation coefficient was 0.01. It was found that the three dimensions of job burnout, which are emotional exhaustion, low achievement, and depersonalization of teachers has a direct negative predictive effect on the nine variables of job satisfaction of teachers, among which salary and welfare had the strongest predictive ability.

**Keywords:** University teachers; Job satisfaction; Job burnout

**Online publication:** February 28, 2023

## 1. Introduction

### 1.1. Work exhaustion

In 1982, a famous scholar Yang Jinfu defined job burnout as “the combination of emotional exhaustion, depersonalization, and low sense of accomplishment in interpersonal work”<sup>[1]</sup>. The concept of job burnout put forward by Farber includes the causes and influencing factors of job burnout<sup>[2]</sup>. Wang, a famous psychologist in China, believes that the main features of job burnout are as follows: bad mood, lack of enthusiasm, and low efficacy<sup>[3]</sup>. Farber divides teacher burnout into three dimensions: emotional exhaustion, depersonalization, and low sense of achievement<sup>[2]</sup>.

### 1.2. The concept of job burnout

Psychologists Tang and Peng believes that job satisfaction is a comprehensive concept, which is mainly composed of working environment, nature of work, and psychology<sup>[4]</sup>. Demerouti and Bakker believe that job satisfaction is an individual’s perception of the job itself<sup>[5]</sup>; Liu believes that job satisfaction is determined by the gap between the actual benefit and the expected benefit they get from a specific job<sup>[6]</sup>.

### **1.3. Qingdao Hengxing University of Science and Technology**

Qingdao Hengxing Institute of Science and Technology has 944 teachers and more than 10,000 students. Therefore, it was established as a full-time regular university in 2000. The school pays attention to engineering and management, covering nine disciplines including engineering, economics, law, education, management science, art, and literature. There are 470 in-service teachers with a master's degree or above, and 238 teachers with a bachelor's degree or professional and technical qualifications. In addition, 144 part-time teachers are employed. Experts and professors from many undergraduate colleges in and out of the province are hired to teach in the college. At the same time, industry elites and skilled workers are gathered to serve as practical teachers of related majors and participate in the compilation of special teaching materials.

### **1.4. Related research**

#### **1.4.1. Research status of job satisfaction among teachers**

Feng and Wang found that the factors that affect the job satisfaction among teachers are the wages and salaries, the relationship between colleagues, the relationship between teachers and students, the workload, and many more <sup>[7]</sup>. Su divided job satisfaction among teachers into internal and external parts <sup>[8]</sup>. Internal satisfaction is mainly brought by the job itself, such as personal achievements and career development. Zhu found that job dissatisfaction among teachers are caused by poor time management, heavy workload, non-teaching-related activities, uncooperative parents, and the low social status of teachers <sup>[9]</sup>. Based on an empirical investigation in 2014, Peng divided the job satisfaction into school standards and personal standards considering the particularity of their work <sup>[10]</sup>. Lu found through research that there is a significant correlation between job satisfaction and emotional labor of primary and secondary school teachers <sup>[11]</sup>.

#### **1.4.2. Research status of job burnout among teachers**

The research on job burnout at home and abroad can be divided into two categories, one is the research on the antecedent variables of job burnout, the other is the research on the outcome variables of job burnout. Hu conducted a survey on primary and secondary school teachers through empirical research methods <sup>[12]</sup>. The results show that there are differences the degree of burnout based on gender. Emotional exhaustion is more prevalent among female teachers compared to that of male teachers. Xu and Wang reported in an empirical study that there is a significant positive correlation between occupational stress and job burnout <sup>[13]</sup>, Qing took primary and secondary school teachers as the research subjects, and found that positive emotions were negatively correlated to burnout <sup>[14]</sup>, while negative emotions were positively correlated with burnout, and there was a significant difference between negative emotion and depersonalization.

The variables of consequences of burnout can be divided into three dimensions: intention of resigning and poor mental health and job performance. The research of Wang shows that the higher the degree of burnout, the higher the physical and mental exhaustion of employees, and the lower their job performance <sup>[15]</sup>. In addition, the employees' mental health can be estimated using these three dimensions of a burnout. In fact, the intention of resigning can be predicted through the degree of emotional exhaustion. Su believes that job satisfaction can be improved through playing games and expression of emotions, and hence reduce the intention of resigning among employees <sup>[16]</sup>.

## **2. Research method**

### **2.1. Research design**

The following technical route is used in this paper.

#### **2.1.1. Independent variables**

Personal characteristics: gender, age, educational background, tasks given, position, period of employment.

#### **2.1.2. Dependent variable**

Job satisfaction: salary, promotion, supervision, marginal benefits, contingent rewards, work environment, colleagues, nature of work, communication.

Job burnout: emotional exhaustion, depersonalization, individual fulfillment

### **2.2. Research hypothesis**

Hypothesis 1: Job satisfaction among teachers is not related to personal attributes.

Hypothesis 2: There is a significant negative correlation between burnout and job satisfaction among teachers.

### **2.3. Population and sample group**

The research subjects of this paper are full-time teachers in Qingdao Hengxing Institute of Science and Technology. In order to obtain a large number of survey data, a systematic sampling method was adopted, and online questionnaires were sent to teachers in the form of emails, in which they replied and sent them as attachments, with a total of 300 emails sent.

### **2.4. Research tools**

The two questionnaires used in this study are Qingdao Hengxing Institute of Science and Technology Teachers' Job Satisfaction Scale and Job Burnout Scale. This scale is designed according to the Job Satisfaction Scale of University Teachers compiled by Cao <sup>[17]</sup>. This study preliminarily summarized three dimensions of teachers' job burnout: emotional exhaustion, depersonalization, and low sense of achievement. A total of 22 items were included, including 8 items in the personal achievement subscale, 5 items in the depersonalization subscale and 9 items in the emotional exhaustion subscale.

### **2.5. Data collection**

The questionnaire was sent to 300 teachers via email, and the data were collected by "Questionnaire Star" (*Wenjuanxing*) data collection software to eliminate invalid questionnaires and obtain the actual sample size.

## **3. Data analysis results**

A total of 212 valid questionnaires were collected in Qingdao Hengxing University of Science and Technology. Then, the influence of job burnout on job satisfaction among teachers were analyzed. All the collected data were processed by SPS 23.0.

### **3.1 Reliability test of questionnaire**

#### **3.1.1. Reliability analysis**

From the perspective of psychometrics, the reliability of data determines whether the measured data and conclusions are credible. The higher the reliability, the more stable the data. Based on a paper by Woo, a reliability coefficient between 0.65 and 0.70 is the minimum acceptable value <sup>[18]</sup>, 0.70 to 0.80 is good, and

around 0.80 to 0.90 is excellent.

In this paper, the correlation coefficient of each dimension is high, which indicates that the results of the questionnaire is reliable and valid. Generally, there are significant differences among teachers of different genders and teaching years. The total happiness score of male teachers is significantly higher than that of female teachers; besides, young teachers are more prone to burnout than middle-aged and older teachers.

### 3.1.2. Validity analysis

Content validity indicates the degree of intention and purpose of the test, which aims to express and elicit the expected response. The items of this research questionnaire are all based on a comprehensive scale, so its content is highly valid. Before the factor analysis, the suitability of factor analysis is first tested. In this study, Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were conducted using the same method, and the results are shown in **Figures 1 and 2**.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	235.842
	df	10
	Sig.	.000

Figure 1. KMO and bartlett sphericity test of teacher job satisfaction scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.707
Bartlett's Test of Sphericity	Approx. Chi-Square	216.615
	df	3
	Sig.	.000

Figure 2. KMO and bartlett sphericity test

A paper by Freudenberger states that when the value of KMO is less than 0.5, it is not suitable for factor analysis<sup>[19]</sup>. The results show that the KMO values are all higher than 0.7, which indicates that the factor analysis in this study is acceptable, and the values of the significance tests are 0.000, which is lesser than 0.001, which indicates that the correlation matrix is not identity matrix, so factor analysis can be carried out.

### 3.2. Descriptive statistical analysis of each research variable

The research subjects of this paper are full-time teachers in Qingdao Hengxing Institute of Science and Technology. In order to obtain a large sample of survey data, an online questionnaire is distributed via email and the teachers replied in the form of attachments. The online survey lasted for 30 days, with 300 emails sent and 212 valid results, which is a recovery rate of 70.67%. The following are descriptive statistics of sample demographic characteristic, burnout and job satisfaction.

### 3.2.1. Descriptive statistics of job burnout among teachers

**Table 1.** Descriptive statistics of job burnout among teachers ( $n = 212$ )

	<b>M</b>	<b>SD</b>	<b>Median</b>	<b><i>t</i></b>
Emotional exhaustion	3.215	0.869	3	4.640***
Individual fulfillment	2.733	0.629	3	-7.960**
Depersonalization	2.890	0.823	3	-2.500*
<b>Average score</b>	<b>2.966</b>	<b>0.600</b>	<b>3</b>	<b>-1.061</b>

Note: \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$

From **Table 1**, the average value of emotional exhaustion was higher than the theoretical median value of 3, and the other two items are lower than the median value of 3. The rate of burnout among teachers in Qingdao Hengxing Institute of Science and Technology was still relatively low, which was consistent with the relatively high average job satisfaction score.

### 3.2.2. Descriptive statistics of job satisfaction among teachers

**Table 2.** Descriptive statistics of teacher job satisfaction and various dimensions ( $n = 212$ )

	<b>M</b>	<b>SD</b>	<b>Median</b>	<b><i>t</i></b>
Supervision	3.849	1.292	4	-2.191*
Work environment	3.305	1.143	4	-11.405***
Marginal benefits	3.403	1.381	4	-8.115***
Contingent reward	3.647	1.531	4	-4.318***
Relationship with colleagues	3.764	1.266	4	-3.506**
Nature of job	4.816	1.514	4	10.114***
People network	4.163	1.288	4	2.370***
Salary	2.931	1.319	4	-15.205***
Career development	3.928	1.457	4	-0.924
<b>Average score</b>	<b>3.948</b>	<b>0.823</b>	<b>4</b>	<b>-1.178</b>

Note: \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$

Based on the results shown in **Table 2**, median scores for all items were 4, which means a relatively high job satisfaction, with the score of “nature of job” being the highest at 4.816.

## 3.3. Variance analysis of demographic variables of job satisfaction among teachers

### 3.3.1. The impact of gender on job satisfaction

The result shows that gender had no significant impact on the first four items of job satisfaction, with almost equal scores among men and women. However, in terms of interpersonal relationship, the satisfaction score of female teachers was higher than that of male teachers.

### 3.3.2. The influence of age on job satisfaction

Age has a significant impact on all factors of job satisfaction, especially in three aspects: leadership, nature of job and rules and regulations, with a significance of 0.01. A survey of teachers aged 56–65 showed that teachers under 30 years old scored higher than those in other five age groups in four aspects: leadership ability, salary and welfare, nature of work, and relationship with colleagues.

### 3.3.3. Influence of education status on job satisfaction

Those with a bachelor's degree or lower levels of education had the lowest degree of satisfaction, while those with doctor's degree or above had the highest job satisfaction degree. There were significant differences in terms of salary and welfare satisfaction, especially in leadership positions. The main reason for this difference is that the higher the education level of teachers in Qingdao Hengxing Institute of Science and Technology, the more opportunities they have to further study and improve themselves, and their welfare will be increased accordingly.

### 3.4. Correlation analysis between job burnout and job satisfaction

Through data analysis, the following conclusions were drawn: the higher the job satisfaction, the lower the possibility or degree of job burnout, the lower the degree of emotional exhaustion. In this paper, Pearson product-moment correlation method was used to investigate the relationship between nine factors of job satisfaction and three factors of burnout. There was a negative correlation between job burnout and job satisfaction among teachers ( $R = -0.469^{**}$ ), and the correlation was significant, which is consistent with the results of other studies. There were also significant numerical expressions between the three dimensions of job burnout, job satisfaction and emotional exhaustion. However, there were individual irrelevance or common significant correlation among each dimension. The correlation coefficient between job nature and emotional exhaustion and job satisfaction was the largest, and the partial regression analysis coefficient was 0.500. Lastly, the results showed that teachers with low job satisfaction were more likely to experience job burnout.

## 4. Conclusion

A total of 212 valid questionnaires were obtained, and SPSS23.0 software was used to input data and perform statistical analysis. The reliability and usability of the questionnaire was tested by factor analysis and reliability analysis, and then the research hypothesis is verified by descriptive statistics, variance analysis, correlation analysis and regression analysis. Therefore, the following conclusions were obtained:

- (1) Organizational justice and leadership behavior were the most important factors that affect the job satisfaction among college teachers, followed by the teaching environment and colleagues' relationship, and salary and benefit. In addition, gender, teaching experience, and educational background also affected their job satisfaction.
- (2) The differences between job satisfaction and job burnout among teachers in demographic variables were reflected in the following aspects: gender, age, educational background, and professional titles.

The results show that there was a negative correlation between job satisfaction and job burnout among teachers. Therefore, future research should emphasize on teacher burnout based on intervention, in order to obtain more reliable research conclusions.

## Disclosure statement

The authors declare no conflict of interest.

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