The Relationship between Emotional Labor and Mental Health of College Teachers: the Mediate Effect of Emotional Exhaustion

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Abstract. This study explores the relationship between emotional labor and mental health and the mediate effect of emotional exhaustion. Emotional Labor Scale, Mental Health Scale and Emotional Exhaustion Scale for teachers are used to investigate a survey of 710 college teachers in Shandong province. The results show that college teacher is a profession required high level of emotional labor, the most frequently used strategy is automatic acting and then the deep acting. Surface acting positively correlates with emotional exhaustion and has negatively effect on the mental health. Deep acting and automatic acting negatively correlate with emotional exhaustion and have positive effect on mental health respectively. Emotional exhaustion mediates the relationship between emotional labor and mental health. Emotional exhaustion fully mediates the relationship between surface acting and mental health and the relationship between automatic acting and mental health. Emotional exhaustion partially mediates the relationship between deep acting and mental health.

Introduction

Emotional labor refers to individuals’ management of emotional displays in order to actively portray socially and organizationally desired emotions during job-related interactions.[1] Although emotional labor was originally regarded as a phenomenon in the service industry, emotional labor research has been conducted among a broad range of occupations, such as customer service center [2], health care workers [3], tourism industry [4] and so on. Currently, although most of researches are still concentrated on the management of enterprises, some scholars begin to pay close intention to public administration [5]. College teacher is a job about "person" and emotion is one of the essential elements. College teachers have also been endowed a variety of responsibilities, such as teaching the knowledge and educating students, setting up examples with both precept and practice. Teachers who devote a lot to their students and work are more likely to gain social approval. When college teachers are requested to meet individual and organizational expectations with their own emotion, emotional labor occurs. Employees who involved in emotional labor have more chance to gain more praise, reward, respect and the opportunity to improve the achievement and job satisfaction. Emotional labor can increase the predictability and controllability of interpersonal communication, then to improve employee’s sense of job security. [6].The positive emotional feedback induced by emotional labor can enhance the sense of self-confidence and ability to cope with complexity and challenging work [7]. However, according to the display rules, employee are requested to subject to organizational norms if the internal emotion is inconsistent with the external expressed emotion. Employees need to suppress their own emotions, or disguise the due emotions facing this kind of conflict, which may lead to more destructive behavior, such as poor mental health and job dissatisfaction [8]. As the special public institutions, colleges and universities put forward higher career requirements to teachers who should set examples to guide and educate college students. In the same time, teachers are requested to keep good relationship with managers, colleagues and students’ parents, and try to be in their best shape. What is the negative impact if college teachers continually manage their emotions at work? What about the relationship between...
emotional labor and mental health and job burnout, especially in relation to emotional exhaustion, has become an important issue.

**Literature Review and Hypotheses Development**

Emotional labor was first introduced by Hochschild in his study of organizational behavior, which refers to expressing emotions expected to be shown during professional interactions in occupations involving providing services. Its purpose is to evoke specific emotions in clients, most often positive ones, and consequently, to achieve objectives set out by an organization or company[9]. Hochschild pointed out that emotional labor may involve surface or deep acting. Surface acting refers to the strategy of pretending to feel unfelt emotions or hiding felt emotions to display the appropriate emotions required by work. Deep acting, on the other hand, is considered to be the process by which individuals attempt to modify their inner feelings to express the organizationally desired emotions. Hochschild later proposed another emotional labor strategy known as passive deep acting. Sometimes employees behave as they naturally feel without feeling obliged to conform their behaviors in line with display rules. This is exactly what the person experiences and expresses spontaneously without having to act. Researchers then presented a strategy similar to Hochschild’s, i.e. automatic acting [10]. The essential difference among the three strategies is that the internalization of the behavior is different. There is no internalization of the behavior when employee using the surface acting. Automatic acting, however, is involved in a deep internalization and involvement. As to the deep acting, the degree of it internalization is between surface acting and automatic acting. Surface acting and deep acting play different roles in individuals’ mental health because of the differences in their effects on psychological resources. Specifically, surface acting is significantly associated with low mental health and high stress and exhaustion levels because it consumed more resources, whereas deep acting is positively correlated with mental health because it contributed more resources than it consumed. Few researchers focus on the effect of automatic acting, however, when employees using automatic acting, they can maintain the internal consistency and meet the work requirements, and don’t need spend too much physical and cognitive resources. It is likely that automatic acting has the positive effect on the individual mental health. Based on the above analysis, we propose the following hypothesis.

H1: Surface acting negatively correlates with mental health and has negative effect on mental health.

H2: Deep acting positively correlates with mental health and has positive effect on mental health.

H3: Automatic acting positively correlates with mental health and has positive effect on mental health.

Burnout refers to the state in which individuals experience physical and mental fatigue after working under heavy pressure [11]. Such concept was first defined in 1974 by Freudenberger[12], who found a series of symptoms in young workers who were volunteers in a clinic. They were gradually becoming emotional exhausted, losing motivation, and commitment towards work. After series studies on social services staff Maslach[13] suggested that staff’s indifference and irrespective to the clients were important problems in burnout. According to Maschcl burnout is “a psychological syndrome of emotional exhaustion, depersonalization and a feeling of reduced professional accomplishment that can occur among individuals working with other people in some capacity”. The exhaustion component represents the basic individual stress dimension of burnout. It refers to feelings of being overextended and depleted of one’s emotional and physical resources. Since job burnout is seriously negative behavior, researchers make effort to find the antecedents, such as job stress[14], to prevent or reduce it. After the theory of emotional labor, scholars began to explore the emotional exhaustion problem of employees from the perspective of emotional labor. College teachers, who play a key role in nurturing highly school students, are faced with an increasing amount of challenges and emotional labor. Long working hours, frequent multitasking, and relatively high burden coming from the nature of higher vocational college teachers’ job make them tend to suffer from job burnout. It has a direct influence on teachers’ mental health,
interpersonal relationships, work attitude, job performance, and so on, thus essentially wastes the limited education resources in our country. So this study proposes the following hypothesis.

H4: Emotional exhaustion has negative effect on mental health.
H5: Emotional exhaustion mediates the relationship between emotional labor and mental health.

Methods

Sample

A total of 750 college teachers from 10 colleges and universities in Shandong province participated in this study. A total of 742 questionnaires were returned, of which 710 were effective, the effective response rate was 95.7%. Numbers of male teachers are 376 (53%) and females are 334 (47%). Academic degree in the sample included bachelor degree (n =57, 8%) and master’s degree (n=518, 73%), doctor’s degree (n=135, 19%). As to the professional ranks and titles, Numbers of lecturer, teaching assistant, associate professor and professor are respectively as follows: 305 (43%), 85 (12%), 213 (30%) and 107 (15%). Respondents reported their work experience was divide into 4 level, 1-5 years (n=78, 11%), 5-10 years (n=242, 34%), 10-20 years (n=220, 31%), and over 20 years (n=170, 24%).

Measures

Emotional Labor. Emotional labor scale was developed and validated by Diefendorff. There are 14 items in the questionnaire and three subscales, of which surface acting subscale has 7 items and deep acting subscale has 7 items and automatic subscale has 4 items. The coefficients for each subscale were 0.91, 0.82 and 0.75[10]. A five-point Likert scale was used with responses ranging from strongly disagree (1) to strongly agree (5).The subjects mark the point according to their first response to the items. They were told to answer the questions carefully and truthfully. A back-translation method was used, with the items being translated back into English by another bilingual scholar of Mandarin and English to ensure that the versions of the items in both languages had a high degree of similarity in meaning.

Mental Health. It was measured using mental health questionnaire developed by Gaigai Pei[15]. It composed of 5- item scale, such as “I feel restless and depressed for no reason on weekdays”. The internal consistency coefficient of the scale is 0.74. A six- point Likert scale was used with always (1) and never (4), and the lower score showing that the lower level of mental health.

Emotional Exhaustion. Burnout scale for teachers was developed by Xinchun Wu from Beijing Normal University[16]. The emotional exhaustion subscale was used in this study to measure the level of exhaustion, and the internal consistency coefficient of the scale is 0.91. A five-point Likert scale was used with responses ranging from strongly disagree (1) to strongly agree (5).

Procedure

The investigation was arranged at the time of the meeting. Three of the authors met with all the respondents in person (in groups), to brief them about the purposes of the study and to explain the procedures of the survey. The questionnaires were recovered as soon as they were finished, all the questionnaires were finished anonymously to make sure the authenticity of data.

Data Analysis and Results

Common Method Biases

All variables are answered by the same subject, thus it is necessary to test the Common Method Bias. This paper use the automatic acting Harman’s single fact test, i.e. all variables were automatic acting into an exploratory factor analysis. The results show that the variance of the first principal component is 21.09%, which indicates that there is no serious common method bias in this study.
Confirmatory Factor Analysis

To statistically discriminate the four key variables (emotional labor, emotional exhaustion and mental health), we conducted a CFA. Furthermore we verify the data fitting by $\chi^2 / df$, RMSEA, GFI, NFI, CFI and other indicators. The results showed that the three-factor model ($\chi^2 / df = 2.13$, RMSEA = 0.069, GFI = 0.965, NFI = 0.953, CFI = 0.968) yielded a better fit than other nested models (the two-factor model: emotional labor, emotional exhaustion, FEA = 0.132, GFI = 0.764, NFI = 0.775, CFI = 0.783; the single factor model: emotional labor, emotional exhaustion and mental health, $\chi^2 / df = 9.02$, RMSEA = 0.217, GFI = 0.663, NFI = 0.681, CFI = 0.680).

Descriptive Statistics and Correlation

The means, standard deviations, and zero-order Pearson correlations of all the key variables are presented in Table 1.

The results show that the scores of automatic acting is the highest and then the deep acting, the score for surface acting is the lowest one. However, the overall average scores are above the median which illustrates that college teachers are suffering from emotional labor. It also shows that college teachers can express the emotions that meet the requirements of colleges and universities by using a variety of expression strategies, and the most commonly used emotional expression strategy is the automatic acting strategy.

Table 1. Mean, Standard Deviation and Correlation Coefficient of Emotional Labor, Emotional Exhaustion and Mental Health.

<table>
<thead>
<tr>
<th></th>
<th>M±SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 surface acting</td>
<td>3.49±0.69</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 deep acting</td>
<td>3.81±0.52</td>
<td>—</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 automatic acting</td>
<td>4.31±0.73</td>
<td>—</td>
<td>—</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 emotional exhaustion</td>
<td>3.58±0.62</td>
<td>0.361**</td>
<td>-0.406**</td>
<td>-0.307*</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>5 mental health</td>
<td>4.05±0.83</td>
<td>-0.387**</td>
<td>0.326*</td>
<td>0.353*</td>
<td>-0.403**</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Note: * significant at p <0.05, ** significant at p <0.01.

The Relationship between Emotional Labor, Mental Health and Emotional Exhaustion

In order to test the mediate effect of emotional exhaustion on the relationship between emotional labor and mental health, we analyze from three aspects: surface behavior, deep behavior and automatic acting. The standardized estimates of regression equation coefficient ($\beta$) for proposed hypotheses and the corresponding p values as well as the F value and adjusted R square for regression models were provided as follows. Mediation analysis involves three steps (Baron & Kenny, 1986): First, test the regression effect of the mediator variable on the dependent variable, and second, examine the regression effect of the independent variable on the dependent variable. The Regression Effect of Both Dependent and Intermediate Variables on Dependent Variables. In the first step regression, the independent variable must have a significant effect on the mediating variable; in the second step, the independent variable must have a significant effect on the dependent variable; in the third step regression, Independent variables and intermediate variables into the regression equation, the influence of the dependent variable on the dependent variable must reach a significant level. At the same time, when the mediating variable is controlled, the effect of the independent variable on the dependent variable should be reduced, and if the influence of the independent variable on the dependent variable becomes not significant at this time, it is a complete mediating effect. This method has been adopted by many studies. In this study, the relationship meet the standard of mediate effect between the 3 independent variable (surface acting, deep acting, the automatic acting), the dependent variable (mental health) and the mediator variable (emotional exhaustion). In Kinman's study, the effect have a statistical significant from gender, age, and other demographic variables to mental health [17], so the variability of these variables is controlled in this study. According to Table 2, the surface acting had a significant negative effect on mental health ($\beta$)
= -0.315, p <0.05), and deep acting had a significant positive effect on mental health (β = -0.304, p <0.05) (P <0.05), and the automatic acting has a significant positive effect on mental health (β = -0.348, p <0.05), which confirms H1, H2, and H3. Further the mediate variable (emotional exhaustion) was introduced in the three models. It shows that emotional exhaustion has a negative predictive effect on mental health. The influence coefficient was -0.318, -0.331, -0.322, which confirmed H4. Similarly, when emotional exhaustion was introduced in the 3 models, the result shows that surface acting is not correlated with mental health. Deep acting is still correlated with mental health, but the influence decreased which proves that emotional exhaustion has a complete mediate effect in the relationship between surface behavior and mental health, as well as the relationship between automatic acting and mental health, that is the effect of surface behavior and autonomy regulation on mental health actually occurs through emotional exhaustion actually. Emotional exhaustion mediates the relationship between deep acting and mental health partly.

Table 2. The Mediate Effect of Emotional Exhaustion on the Relationship between Surface Acting, Deep Acting and Mental Health.

<table>
<thead>
<tr>
<th></th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mode 11</td>
</tr>
<tr>
<td>Step1 Independent</td>
<td></td>
</tr>
<tr>
<td>variables</td>
<td></td>
</tr>
<tr>
<td>gender</td>
<td>0.304</td>
</tr>
<tr>
<td>age</td>
<td>0.421</td>
</tr>
<tr>
<td>education degree</td>
<td>0.212</td>
</tr>
<tr>
<td>Work tenure</td>
<td>0.234</td>
</tr>
<tr>
<td>Step2 Independent</td>
<td></td>
</tr>
<tr>
<td>variables</td>
<td></td>
</tr>
<tr>
<td>Surface acting</td>
<td>-0.031</td>
</tr>
<tr>
<td>Emotional exhaustion</td>
<td>-0.31</td>
</tr>
<tr>
<td>△R²</td>
<td>0.192</td>
</tr>
</tbody>
</table>

Conclusions and Recommendations

Conclusions

College Teachers Express the Proper Emotion at Work by Automatic Acting, Deep Acting and Surface Acting. The results show that college teachers would more likely using automatic acting during the emotional labor at work. The majority of the emotions expressed by college teachers in teaching are their own real emotions which is different from the employees of service industry. Two reasons can explain this kind of difference: First, as a carrier of higher education, colleges and universities play a very important role in personnel training, scientific research, social services and cultural heritage. The employees, that is the college teachers received professional education and training before they were accepted as a teacher even when they are students in school. Second, the colleges teachers will express care, concern, support and other emotion naturally, because they face the students who desire for knowledge and growing constantly with the full of vitality. And they tend to use the automatic acting strategy generally, because of constantly accumulating experiences. In addition, college teachers can take the deep acting strategy (such as regulating internal cognition, changing the emotional evaluation, evoking the caring emotion) with the professional image and ethics of a college teacher, even if they cannot express the inmost concern and warm influenced from some emotional events. When they are impacted by serious
emotional events or experienced the high degree of emotional exhaustion, college teachers can inhibit the conflicting feeling and express the emotion of professional requirement by surface acting strategy, even without feeling the emotion which is needed by the situation.

**Emotional Labor Induces Emotional Exhaustion, and Affects the Mental Health.** The results of correlation analysis and mediate analysis show that surface acting has a negative effect on mental health and the emotional exhaustion is the mediator. The more surface acting is used, the greater intensity of emotional labor induced, and the easier to cause emotional exhaustion which has a bad influence on individual mental health. These results are consistent with some researches at home and abroad [18] [19]. The suppression of negative emotions consistently would cause more pressure, depression, physical and mental fatigue. Excessive control of the mood will have a deleterious impact on mental and physical health. Gross suggests that excessive emotional depression (restraining the behavioral expression intentionally when emotional is awakened) affects physical health [20]. Cigantesco's study shows that long-term inhibition of sadness and craving is likely to cause respiratory disease, which is closely linked to cardiovascular disease and hypertension. And inhibition of emotional expression can accelerate the process of cancer progression and inhibition of intimacy intimate relationships can cause bronchial disease. College teachers assist that their work is not easier than people think. If they engage in emotional labor for a long time and suppress their true feelings, it will be easy to produce emotional exhaustion which leads to mental health problems. The strategy of deep acting is to change the cognition of college teacher effectively, and the strategy of automatic acting is to express their real emotions with control and guidance. The result of this study shows that both have positive impact on the mental health. Therefore, in the construction of higher education and management, we should pay attention to the inner situation of college teachers and appropriate to guide them to use the strategies of automatic acting and deep acting.

**Recommendations**

There is a higher require for the emotional management ability of college teachers. Because education is a kind of interpersonal activity and the object of higher education are the college students who have perfect self-consciousness. At present, the intensity of emotional labor of teachers in colleges and universities is relatively large, so it is necessary to discover and solve various factors that increase the emotional labor and emotional exhaustion of teachers in colleges and universities. In this way, they can maintain a better state to work.

**Concern the Emotional Labor of College Teachers and Pay Attention to the Selection and Cultivating of Teachers.** Teachers' professional activities are in essence emotional, so emotional is the key to the work of teachers. We must pay great attention to the emotional labor of college teachers, and to improve the emotional management of college teachers into the scope of the focus of work. Some college teachers are good at expressing emotional work through the surface acting; some are better at managing the emotions through the deep acting. Therefore, in the recruitment process of teachers, we should focus on the selection of those who have strong emotional management ability. In the meantime, we should focus on the guidance of teacher's emotional labor in the cultivating and assessment. It is necessary for school administrators to strengthen teacher's emotional management skills by various training to help them reduce their emotional workload, reduce emotional exhaustion and maintain mental health.

**Create a Favorable School Environment and Provide Organizational Support.** Although emotional exhaustion can affect mental health, a favorable social support system can reduce the emotional exhaustion of individual, so individual can maintain a good mental state. Colleges and universities should create a good organizational environment, cultivate a good school culture, pay attention to teachers’ emotion, care for the work and daily life of teachers. That way we can make up for teachers by psychological resources in the emotional labor loss, thereby reducing the possibility of staff burnout. In the meantime, it is suggested to establish a good social support system, such as mutual actions of junior and senior teachers, professional skills trainings, collective activities (such as sports), and give teachers emotional support, enrich their emotional resources.
balance the mental and emotional labor in teaching. Those can prevent and alleviate the emotional pressure of teachers effectively, and prevent depression or physical health problems caused by emotional stress.

**Improve the Emotional Cultivation of College Teachers and Enhance the Role of Identification.** As the conclusion in this study, although the surface acting of emotional labor can increase the emotional exhaustion, the deep acting can mobilize the individual's internal awareness actively. So students will feedback to teacher in a positive way, thereby enhancing teachers’ self-achievement and reducing emotional exhaustion. The strategy of automatic acting is also conducive to the mental health of teachers; therefore, the key to emotional labor of college teachers is to increase the strategies of deep acting and automatic acting. School administrators should pay more attention to the cultivation of teachers’ ethical accomplishment, and enhance the emotional quality. The promotion of emotional conservation is a stable internal factor for teachers. In terms of external factors such as "compulsive", internal factors as "initiative" have far-reaching and stable effect, so it is the most favorable weapons to reduce the emotional labor and emotional exhaustion, and maintain mental health of health weapons. In the meantime, with the increase of teaching experience, the continuous familiarity with higher education and emotional input, the increasing recognition of the role of college teachers, and the internalization of role behavior, college teachers can keep their behavior more in line with professional requirements without deliberately emotional adjustment. Therefore, in the daily work, the school should also continue to work to create a positive organizational culture, to promote the teacher role identity for higher education.

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**References**


