

Analysis on Job Burnout and Professional Identity of Junior High School PE Teachers in Jinan City, Shandong Province

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Abstract This study investigates the current status of job burnout and professional identity among junior high school physical education (PE) teachers and examines the relationship between these two constructs. Using random sampling, 350 PE teachers from 10 junior high schools in Jinan City, Shandong Province, China were surveyed using the Teacher Job Burnout Scale and Teacher Professional Identity Scale. Data were analyzed using SPSS 24 software. Results showed that junior high school PE teachers exhibited low levels of job burnout and high levels of professional identity overall. Significant differences in job burnout and professional identity were found across demographic variables including gender, age, education level, academic major, teaching experience, grade level taught, and monthly income. Correlation analysis revealed a significant positive relationship between job burnout and professional identity ($r = 0.946$, $P < 0.01$). Regression analysis confirmed that job burnout significantly predicts professional identity ($Beta = 0.036$, $t = 3.837$, $P < 0.001$), explaining 78.7% of the variance. These findings suggest that enhancing professional identity may serve as an effective strategy for mitigating job burnout among PE teachers, contributing to improved teacher well-being and quality of physical education instruction.

Keywords: Junior High School PE Teachers; Job Burnout; Professional Identity

1. Introduction

1.1 Background and Problem Statement

The report of the 19th National Congress of China explicitly proposed to “accelerate the construction of a strong sports nation.” PE teachers, as a critical component of China’s physical education talent group, play a pivotal role in promoting China’s modernization as a sports power (Meng et al., 2016). However, rapid social changes and educational reforms have brought both opportunities and new challenges for teachers, contributing to increased work pressure and mental health problems (Cai, 1998). PE teachers, in particular, represent a minority of professional staff in each school, with relatively fewer opportunities for communication, making it difficult for new policies and educational ideas to be fully implemented (Geng Jiaxian, 2008). The continuous decline in students’ physical fitness has highlighted numerous problems in school physical education, with PE teacher job burnout being one of the most prominent issues. This study examines the relationship between professional identity and job burnout among junior high school PE teachers in Jinan City, Shandong Province, aiming to enrich research on the mechanism of PE teacher burnout and promote the quality of physical education teaching.

1.2 Literature Review

Job Burnout. Freudenberger (1974) first proposed job burnout as a psychological state

caused by work’s excessive demands on personal ability and energy. Maslach (2013) developed the three-dimension theory comprising emotional exhaustion, depersonalization, and reduced personal accomplishment. The Maslach Burnout Inventory (MBI) remains the most widely used measurement tool, with over 90% of burnout research employing it (Zhang Lan & Chen Xinling, 2020). Influencing factors include individual characteristics (age, gender, education), organizational characteristics, job characteristics, and personality traits (Wang Hefei, 2014). Research indicates that job burnout negatively affects physical and mental health, interpersonal relationships, work attitude, and work performance, leading to high turnover intention and poor job satisfaction (Liu, 2004; Li, 2005).

Professional Identity. Professional identity refers to an individual’s cognition, evaluation, and beliefs about their profession (Zhou, 2010). Meyer (1993) proposed a three-dimensional model comprising emotional identity, continuance identity, and normative identity. Research demonstrates that professional identity is influenced by external environmental factors (social status, school support, curriculum) and internal personal factors (self-reflection, professional values) (Wang et al., 2011; Zhou, 2015). Enhanced professional identity can improve job satisfaction, work engagement, and teaching quality (Coldron & Smith, 2010; Brickson, 2000).

Relationship Between Professional Identity and Job Burnout. Professional identity serves as a psychological resource that can compensate for employees' resource depletion at work. Research consistently demonstrates a significant negative correlation between professional identity and job burnout—higher professional identity corresponds to lower burnout levels (Lamote & Engels, 2010; Ezer, 2010). When teachers possess high professional identity, they demonstrate greater recognition of their work, sustained enthusiasm, and lower burnout (Hong, 2010; Cao, 2010; Zhao & Bi, 2016). Professional identity not only affects job burnout directly but also moderates teacher behavior and orienting effects (Shirom, 2013).

1.3 Research Objectives

- To understand the current status of job burnout among junior high school PE teachers in Shandong Province.
- To understand the current status of professional identity among junior high school PE teachers in Shandong Province.
- To analyze differences in job burnout and professional identity across demographic variables.
- To explore the correlation between job burnout and professional identity.

1.4 Research Hypotheses

- **H1:** Different background variables have significant effects on junior high school PE teacher job burnout.
- **H2:** Different background variables have significant effects on junior high school PE teacher professional identity.
- **H3:** Professional identity has a causal predictive effect on junior high school PE teacher job burnout.

1.5 Conceptual Framework

This study examines the relationship between background variables (gender, age, education level, major, teaching experience, grade level taught, monthly income), job burnout (emotional response, views on teaching, attitudes toward students), and professional identity (value identity, emotional identity, competence identity, continuance identity, engagement identity). The framework posits that background variables influence both job burnout and professional identity, and that job burnout significantly predicts professional identity.

2. Materials and Methods

2.1 Research Design

This study employed a quantitative research design using questionnaire surveys. Four phases were conducted: (1) literature analysis to clarify concepts; (2) questionnaire development and pilot testing; (3) data collection and statistical analysis using SPSS 24; and (4) conclusion formulation and recommendation development.

2.2 Participants

Using convenient sampling, 350 PE teachers from the top 10 comprehensive-ranked junior high schools in Jinan City, Shandong Province were surveyed electronically from October 26 to November 2, 2022. Valid questionnaires exceeded 90% of the total distributed.

2.3 Instruments

The questionnaire comprised three sections: demographic information (7 items), the Teacher Job Burnout Scale (22 items across three dimensions: emotional response in high-pressure environments, views on teaching work, and attitudes toward students), and the Teacher Professional Identity Scale (19 items across five dimensions: value identity, emotional identity, competence identity, continuance identity, and engagement identity). Both scales used a 5-point Likert scoring format. The overall reliability coefficient was 0.949, exceeding 0.9, indicating excellent reliability. KMO values for both subscales exceeded 0.9, and Bartlett's Test of Sphericity was significant ($P < 0.001$), confirming good construct validity.

2.4 Data Analysis

Data were organized in Excel 2019 and analyzed using SPSS 24. Descriptive statistics, independent samples t-tests, one-way ANOVA, Pearson product-moment correlation analysis, and linear regression analysis were employed. The significance level was set at $P < 0.05$.

3. Results

3.1 Demographic Characteristics

The sample of 350 teachers demonstrated the following distribution characteristics:

Table 1. Demographic Characteristics

Demographic Variable	Category	N	Percentage
Gender	Male	168	48.1

Demographic Variable	Category	N	Percentage
Age	Female	182	51.9
	30 and below	50	14.4
	31-35 years	53	15.0
	36-50 years	143	41.3
Education	51 and above	104	29.4
	Bachelor's and below	282	80.6
	Master's and above	68	19.4
	Normal Program	284	81.3
Teaching Experience	No	66	18.8
	5 years and below	103	29.4
	6-10 years	57	16.3
	11-15 years	107	30.6
Grade Level Taught	16 years and above	83	23.8
	Seventh Grade	92	26.3
	Eighth Grade	179	51.2
	Ninth Grade	79	22.5
Monthly Income	Below 5,000 yuan	140	40.0
	5,000-10,000 yuan	153	43.8
	Above 10,000 yuan	57	16.3

3.2 Descriptive Statistics

Job Burnout. Among the three dimensions, Views on Teaching Work recorded the highest mean ($M = 38.44$, $SD = 10.76$), followed by Emotional Response ($M = 23.02$, $SD = 6.50$) and Attitudes Toward Students ($M = 23.01$, $SD = 6.55$). The overall job burnout mean was 84.47 ($SD = 23.63$).

Professional Identity. Continuance Identity recorded the highest mean ($M = 4.41$, $SD = 1.55$), followed by Competence Identity ($M = 4.32$, $SD = 1.48$), Engagement Identity ($M = 4.08$, $SD = 1.76$), and Value Identity ($M = 3.34$, $SD = 1.30$). Emotional Identity recorded the lowest mean ($M = 2.45$, $SD = 1.28$). The overall professional identity mean was 3.61 ($SD = 1.22$).

3.3 Difference Analysis

Independent samples t-tests and one-way ANOVA revealed significant differences in both job burnout and professional identity across demographic variables.

Job Burnout Differences. Significant differences were found by gender ($t = -2.585$, $P = 0.021$), with male teachers scoring lower than females. Significant differences by age were observed in Attitudes Toward Students ($F = 1.698$, $P = 0.004$) and Views on Teaching Work ($F = 0.902$, $P = 0.042$), with teachers aged 36-50 scoring highest. Education level showed significant effects across all dimensions ($P < 0.05$), with bachelor's degree holders scoring higher than master's degree holders. Normal program graduates scored significantly higher

than non-normal graduates on overall burnout ($t = 3.227$, $P = 0.003$). Teaching experience showed significant effects ($F = 4.635$, $P = 0.042$), with 11-15 years group scoring highest. Grade level ($F = 2.236$, $P = 0.032$) and monthly income ($P < 0.01$) also showed significant differences.

Professional Identity Differences.

Significant gender differences were found in Emotional Identity ($t = 2.075$, $P = 0.012$), Competence Identity ($t = 2.575$, $P = 0.047$), Continuance Identity ($t = 1.907$, $P = 0.026$), and overall Professional Identity ($t = 1.994$, $P = 0.029$), with male teachers scoring lower than females. Age showed significant effects across all dimensions ($P < 0.05$), with teachers aged 51 and above scoring highest. Education level, academic major, teaching experience, grade level, and monthly income all demonstrated significant differences across multiple dimensions ($P < 0.05$).

Table 2 Independent samples t-tests and one-way ANOVA

Dimension	Emotional Exhaustion	Depersonalization	Reduced Personal Accomplishment	Job Burnout
Value Identity	0.784	0.539**	0.898**	0.672**
Emotional Identity	0.883**	0.376*	0.910**	0.907**
Competence Identity	0.747	0.463*	0.929**	0.89**
Continuance Identity	0.678	0.442**	0.924**	0.900
Engagement Identity	0.829**	0.765**	0.967***	0.899**
Professional Identity	0.739**	0.894**	0.934***	0.946**

3.4 Correlation Analysis

Pearson correlation analysis revealed significant positive correlations between job burnout and professional identity ($r = 0.946$, $P < 0.01$). Among dimension-level correlations, engagement identity and attitudes toward students showed the strongest correlation ($r = 0.967$, $P < 0.01$), followed by professional identity and reduced personal accomplishment ($r = 0.934$, $P < 0.01$).

Table 2. Correlation analysis of the dimensions

Note: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

3.5 Regression Analysis

Linear regression analysis with professional identity as the dependent variable and job burnout as the independent variable yielded R -squared = 0.787 and adjusted R -squared = 0.764 ($F = 162.799$, $P < 0.001$), indicating that job burnout

explains 78.7% of the variance in professional identity.

Table 3. Linear Regression Analysis

R	R-Square	Adjusted R-Square	Std. Error	F
0.879	0.787	0.764	0.461	162.799***

The regression coefficient for job burnout was $B = -0.526$ ($Beta = 0.036$, $t = 3.837$, $P < 0.001$), indicating that for every one-unit increase in job burnout, professional identity decreases by 0.526 units.

Table 4 Regression Coefficient

Model	B	Std. Error	Beta	t	Sig.
(Constant)	74.8	6.022		12.426	0.000
Job Burnout	-0.52	0.069	0.036	3.837	0.000

4. Discussion

This study examined job burnout and professional identity among 350 junior high school PE teachers in Jinan City, Shandong Province. Results indicate that these teachers exhibit low overall job burnout and high professional identity, consistent with previous research on Chinese PE teachers (Zhou, 2015; Wang, 2016).

Gender emerged as a significant factor, with female teachers reporting higher job burnout and lower professional identity than males. This aligns with findings by Li Mingjun (2013) and can be attributed to the combined pressures of career demands, family responsibilities, and childbearing that disproportionately affect women. Teachers aged 36-50 demonstrated the highest burnout scores, likely reflecting mid-career advancement pressures and peak workload periods. Education level significantly affected both constructs, with bachelor's degree holders reporting higher burnout than master's degree holders—a finding consistent with Li, Feng, and Yuan (2015).

This may relate to higher-educated teachers possessing better stress management skills and career alternatives. Normal program graduates showed higher professional identity, supporting Wang's (2016) conclusions regarding the importance of teacher training curriculum. Low-income teachers (below 5,000 yuan) exhibited the highest burnout and lowest professional identity, confirming income as a critical motivational factor.

The strong positive correlation between job burnout and professional identity ($r = 0.946$)

and the significant predictive effect ($B = -0.526$, $P < 0.001$) confirm that professional identity serves as a psychological resource that mitigates burnout. This finding is consistent with Lamote and Engels (2010), Ezer (2010), and Cao (2010), who demonstrated that higher professional identity corresponds to lower burnout. The 78.7% explained variance indicates that job burnout is a primary determinant of professional identity among PE teachers. Enhancing professional identity through improved working conditions, social support, and career development opportunities may effectively reduce burnout levels.

5. Conclusions

1. Junior high school PE teachers in Jinan City exhibit low levels of job burnout ($M = 84.47$) and high levels of professional identity ($M = 3.61$).
2. Significant differences exist in both job burnout and professional identity across all demographic variables examined.
3. Job burnout and professional identity are strongly positively correlated ($r = 0.946$, $P < 0.01$).
4. Job burnout significantly and negatively predicts professional identity ($B = -0.526$, $P < 0.001$), explaining 78.7% of the variance.
5. All three research hypotheses are supported or partially supported by the data.

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Authors' Biography



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