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Factors Impacting Teachers' Job Burnout in a Private University in Zhanjiang, China

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Abstract

Purpose: This study aims to explore the impact of factors such as teachers' background, social support, social-emotional ability, teacher-student relationships, emotional exhaustion, depersonalization, and reduced personal accomplishment on teacher burnout at a private university in Zhanjiang, China, and to evaluate potential intervention measures. **Research design, data, and methods:** A questionnaire survey method was employed, utilizing a questionnaire covering seven aspects, including teachers' backgrounds. The questionnaire, conducted using a five-point Likert scale, targeted 100 teachers from various departments and majors at a private university in Zhanjiang. The study utilized the Index of Item-Objective Congruence (IOC) to assess validity and conducted a pilot test (n=50) to determine reliability using Cronbach's Alpha. Subsequently, a cohort of 30 teachers participated in a 15-week Intervention Design Implementation (IDI). Subsequent to this, the quantitative data obtained from pre-IDI and post-IDI assessments were subjected to paired-sample t-test analysis for comparison. **Results:** The study revealed significant correlations between teachers' background, social support, social-emotional ability, teacher-student relationships, emotional exhaustion, depersonalization, reduced personal accomplishment, and teacher burnout. **Conclusion:** To address burnout, school administrators and policymakers recommend interventions such as enhancing teachers' educational backgrounds, strengthening social support networks, fostering social-emotional abilities, promoting positive teacher-student relationships, and managing factors contributing to emotional exhaustion and reduced personal accomplishment.

Keywords : Social Support, Social Emotional Ability, Teacher Burnout, Private University, Intervention Measures

JEL Classification Code: I23, J28, L2

1. Introduction

The proliferation of private universities within the Chinese education system has brought attention to the issue of teacher burnout. This study focuses on a representative private university in Zhanjiang, where the teacher population exhibits diverse backgrounds. In this context, social support, emotional abilities, teacher-student relationships, and personal accomplishments significantly influence teacher burnout. Moreover, teachers in private universities face unique work pressures and professional challenges compared to their counterparts in public universities, potentially impacting their job satisfaction and teaching

quality.

Consequently, conducting comprehensive research on the factors influencing teacher burnout at this particular university and exploring effective intervention strategies is imperative. This study aims to delve into these factors and assess the efficacy of interventions in mitigating burnout among faculty members.

Initially, researchers established a theoretical framework and formulated research hypotheses by extensively reviewing relevant literature from domestic and international sources. This entailed a detailed analysis of factors such as teacher background, social support, social-emotional abilities, teacher-student relationships, emotional exhaustion,

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depersonalization, and reduced personal accomplishment, all of which may contribute to teacher burnout.

Subsequently, researchers devised a comprehensive and structured questionnaire and administered surveys among teachers from various departments at the private university in Zhanjiang. Data collected were rigorously analyzed using the Jamovi software to verify the research hypotheses and explore correlations between variables.

The study's findings indicate that all independent variables significantly influence teacher burnout, corroborating the initial research hypotheses. Furthermore, the implementation of intervention designs yielded significant changes in all variables before and after intervention, underscoring the effectiveness of the proposed measures.

This study delves into pertinent factors contributing to teacher burnout in private universities and proposes evidence-based intervention strategies. It serves as a valuable reference for enhancing the working environment for teachers and improving teaching quality, thus holding both theoretical and practical significance for teacher management and educational quality improvement in private universities.

2. Literature Review

This literature review provides a comprehensive understanding of the factors contributing to teacher burnout, including teacher background, social support, social-emotional competence, teacher-student relationships, emotional exhaustion, depersonalization, and reduced personal accomplishment. Understanding these factors is essential for identifying effective intervention strategies to alleviate teacher burnout and improve overall well-being in educational settings. Therefore, future research should focus on exploring specific intervention methods tailored to address these factors and their impact on teacher burnout in private universities like the one in Zhanjiang, China.

2.1 Job Burnout

Job burnout is a prevalent psychological state commonly induced by prolonged work pressure and negative work experiences in the workplace. In recent years, scholars have increasingly paid attention to studying job burnout. According to various scholars, there are different perspectives on the definition of job burnout. Freudenberger suggests that it arises from excessive demands on an individual's abilities, energy, and resources, leading to exhaustion, low mood, and a sense of failure (Hoffarth, 2016). Maslach and Leiter categorize it into three dimensions: emotional exhaustion, lack of personal accomplishment, and

depersonalization (Maslach & Leiter, 2016). Ricken views job burnout as a process associated with changes in self-efficacy under long-term working conditions (Ricken & DD, 2011). Demerouti et al. consider it a form of negative work experience characterized by emotional exhaustion, reduced self-efficacy, and depersonalization (Demerouti, 2015). Bitsadze and Japaridze see it as a state of dysfunction (Bitsadze & Japaridze, 2014). Pines views it as a response to stress, manifested by fatigue, low achievement, and pitfalls (Pines, 2006). This study defines job burnout as a comprehensive experience of negative emotions, cognition, and behaviors resulting from prolonged exposure to work-related stress and negative experiences, manifested as emotional exhaustion, lack of personal accomplishment, and depersonalization.

2.2 Teacher Background

Teacher background refers to the qualifications and background of teachers with relevant experience, educational background, professional knowledge, and skills. In China, the requirements for teacher background typically include passing teacher certification to ensure that teachers have sufficient knowledge and ability to carry out teaching work. Education scholar Linda Darling-Hammond pointed out that teacher background encompasses subject knowledge, pedagogical knowledge, educational psychology knowledge, and effective teaching methods and strategies (Darling-Hammond, 2000). Some scholars, such as Grossman (2021) categorize teacher background into subject matter knowledge, educational psychology knowledge, and pedagogical knowledge, emphasizing that teachers must possess theoretical and practical knowledge. Additionally, it categorized teacher qualities into foundational, transactional, and participatory, highlighting the importance of subject knowledge and teaching skills (Darling-Hammond & Youngs, 2002). Cohen and Berlin proposed that teachers must understand students' understanding and confusion about the subject and adjust teaching knowledge and strategies according to students' needs (Cohen & Berlin, 2020). Cochran and Zeichner argued that teachers should possess the mindset and practices of subject matter professionals and be able to fully apply subject research and knowledge to teaching (Cochran-Smith & Zeichner, 2009). In summary, this study defines teacher background as the qualifications and background of teachers with relevant experience, educational background, professional knowledge, and skills. Subsequently, this study concludes a hypothesis:

H1: Teacher background has a significant impact on teacher job burnout.

2.3 Social Support

Social support originated from social pathology and refers to various forms of help and assistance that individuals receive from their social networks to cope with stress and difficulties in life. Scholars have different perspectives on the definition of social support, including emotional, instrumental, and informational support. In the relevant literature, Tsai focused on how social support influences individuals' psychological health in the workplace (Tsai & Tsai, 2011), Uchino explored the relationship between social support and physical health (Uchino, 2004), Cutrona et al. studied the impact of social support on depression among African American women (Cutrona et al., 2005), Schwarzer & Knoll provided an overview of the functions of social support in coping with stress (Schwarzer & Knoll, 2007), Holt-Lunstad et al. emphasized the relationship between social support and the risk of death through analysis (Holt-Lunstad et al., 2010), and Thoits proposed various mechanisms between social support and physical health (Thoits, 2011). Recent research has shown that social support significantly influences individuals' psychological health and quality of life. For example, social support can alleviate stress, enhance emotional security and self-efficacy, and reduce stress responses and negative emotions (Holt-Lunstad et al., 2010; Thoits, 2011). Social support is also considered an important factor in teachers' work in education. It can promote teamwork among teachers, enhance teachers' job satisfaction, and improve job performance (Else Ouweneel et al., 2009; Patterson, 2003). In summary, this study defines social support as the support teachers receive from colleagues, family, and friends while working in private universities. Subsequently, this study concludes a hypothesis: **H2:** Social support has a significant impact on teacher job burnout.

2.4 Social Emotional Competence

Ability to perceive, understand, express, and regulate emotions and establish emotional relationships with others. While definitions of social-emotional competence vary among scholars, it is generally understood to encompass core abilities such as emotion perception, understanding, expression, and regulation, emphasizing their importance for individual psychological health, interpersonal relationships, and adaptability. For example, it defines as the ability of individuals to perceive, understand, express, and regulate emotions, further subdividing it into four sub-abilities: emotion perception, understanding, expression, and regulation (Riggs et al., 2006). Meanwhile, it is redefined it as the ability of individuals to perceive, understand, express,

and regulate emotions, as well as the interaction between emotions and cognitive functions (Mayer et al., 2008). Research on social-emotional competence covers aspects such as emotional intelligence and cognition, emotion recognition, interpersonal relationships, and decision-making, which are significant for individual self-adjustment, interpersonal relationships, and social interaction. Recent studies have shown that social-emotional competence significantly influences individual psychological health and quality of life (Brackett et al., 2005, 2011; Denham, 2006; Mayer et al., 2004).

Therefore, this study defines social-emotional competence as the ability of individuals to perceive, understand, express, and regulate emotions, as well as to establish emotional relationships with others, highlighting its importance for individual self-adjustment, interpersonal relationships, and social interaction. Subsequently, this study concludes a hypothesis:

H3: Teachers' social-emotional competence has a significant effect on teachers' job burnout.

2.5 Teacher-Student Relationship

The relationship between teachers and students is a fundamental aspect of daily teaching activities, with significant and far-reaching implications for achieving ideal teaching outcomes and promoting students' healthy growth and future development. Definitions of the teacher-student relationship vary among scholars, primarily based on school educational backgrounds and teaching interactions. Roorda et al. define it as the quality of emotional connection and the nature of interaction between teachers and students (Roorda et al., 2011), while other scholars such as Spilt, Lee, Murray, and Pianta have also proposed their definitions, covering aspects such as emotional support, shared goals, and mutual understanding (Lee et al., 2011; Murray & Malmgren, 2005; Pianta et al., 2012; Spilt et al., 2011). Research on the teacher-student relationship involves multiple dimensions, including emotional connection, interaction, and control, and its relationship with student performance, behavior, and social development.

Research findings indicate that a positive teacher-student relationship is closely associated with students' adaptive behavior, school engagement, and academic outcomes. For example, research by Hamre and Pianta found that positive teacher-student relationships are associated with better adaptability and academic outcomes. Other scholars have also conducted in-depth explorations of the relationship between teacher-student relationships and students' academic motivation, engagement, and achievement. These studies provide a theoretical and practical foundation for understanding the importance of the teacher-student

relationship and how to build positive relationships (Hamre & Pianta, 2001; Martin & Dowson, 2009; Murray & Malmgren, 2005; Wentzel, 2010). This study defines the teacher-student relationship as the emotional and interactive connection established between teachers and students during teaching interactions, which is significant for individual self-adjustment, interpersonal relationships, and social interaction. Subsequently, this study concludes a hypothesis:

H4: Teacher-student relationship has a significant impact on teacher job burnout.

2.6 Emotional Exhaustion

Emotional exhaustion is a psychological state induced by prolonged work pressure and fatigue, manifested as negative emotions, fatigue, and indifference towards work. Research indicates that emotional exhaustion is not only a result of stress but also related to the variability of individual resources for coping with stress. Choi et al. pointed out that emotional exhaustion is associated with accumulating various types of stress (Choi et al., 2014). Maier et al. suggested that emotional exhaustion is also related to the preservation of individual resources and changes in coping with stress (Maier et al., 2012). The abundance of resources in the work environment, the degree of psychological and emotional demands, and individual coping strategies are closely related to emotional exhaustion (Bakker & Demerouti, 2007; Hobfoll, 2001; Xanthopoulou et al., 2007). This study argues that emotional exhaustion not only negatively impacts individual health and work efficiency but may also affect the organization's overall operation. Therefore, establishing a healthy work environment, providing resource support, and implementing effective coping strategies are crucial for preventing and alleviating emotional exhaustion. Subsequently, this study concludes a hypothesis:

H5: Emotional exhaustion has a significant impact on teacher job burnout.

2.7 Depersonalization

Depersonalization is a psychological state characterized by a sense of unreality, where individuals feel detached from themselves, often from the external world, and exhibit detached, impersonal personalities in their thoughts and experiences (Bui et al., 2011). This attitude often manifests as negative evaluations, indifference, or hostility towards others. Various studies have explored the definition and effects of depersonalization from different perspectives. For example, Sierra and David defined depersonalization as a sustained or indifferent attitude toward everyone in the workplace (Sierra & David, 2011). Meanwhile, depersonalization has also been described as apathy towards

the work environment and jealousy towards colleagues (Bianchi et al., 2015; Medford, 2012). Literature also suggests that depersonalization may be a sensation of change in self-perception, perceptions of others, and the environment when facing traumatic events, psychological or physical illnesses, or substance use experiences (Bui et al., 2011). This study contends that depersonalization manifests as indifference, callousness, or even hostility towards others in the workplace, negatively impacting the work environment and interpersonal relationships. Subsequently, this study concludes a hypothesis:

H6: Depersonalization has a significant impact on teacher burnout.

2.8 Reduced Personal Accomplishment

Reduced personal accomplishment results from a fixed mindset, characterized by a pessimistic view of one's abilities and achievements, which may lead to avoidance of challenges and efforts. Dweck describes reduced personal achievement because of a "fixed mindset," where individuals perceive their abilities as fixed and immutable, resulting in helplessness in the face of failure or setbacks (Dweck, 2006). Okonkwo defines reduced personal achievement as a "failure-prone pattern," where individuals hold pessimistic and negative views of their abilities and achievements, potentially leading to avoidance of challenges and efforts (Okonkwo, 2012). Gerber et al. describe reduced personal achievement as low "academic self-efficacy," where individuals lack confidence and belief in their ability to succeed in specific tasks or domains (Gerber et al., 2013).

Recent research indicates that reduced personal accomplishment is associated with various negative impacts. Smith (2021) found that reduced personal accomplishment is correlated with decreased academic motivation and lower academic performance among adolescents. Similarly, Brown demonstrated that reduced personal accomplishment is closely related to adverse workplace conditions and occupational burnout (Brown et al., 2020). Furthermore, Dyrbye et al. highlighted a significant association between reduced personal accomplishment and emotional health issues such as depression and anxiety disorders (Dyrbye et al., 2021). Hinds, it is discovered that reduced personal accomplishment is linked to negative self-concept development and psychological health problems (Hinds et al., 2015; Mealer et al., 2012). Researchers argue that reduced personal accomplishment refers to a negative perception of one's abilities and accomplishments, which may lead to avoidance of challenges and efforts, thereby restricting personal growth and development. Subsequently, this study concludes a hypothesis:

H7: Reduced personal accomplishments has a significant impact on teacher job burnout.

3. Research Methods and Materials

3.1 Research Framework

In the current educational landscape, teacher occupational burnout has become a pressing issue, with its underlying impacts not only concerning the individual career and psychological well-being of teachers but also significantly affecting the teaching quality of schools and students' academic achievements. To comprehensively understand and elucidate various aspects of teacher occupational burnout and its influencing factors, this study drew upon three theoretical models proposed by scholars such as Sarros and Sarros (Sarros & Sarros, 1992), Tian et al. (Tian et al., 2022), and Bhanugopan and Fish (Bhanugopan & Fish, 2006). Through a comprehensive review of relevant literature, we meticulously designed a conceptual framework, as illustrated in Figure 1.

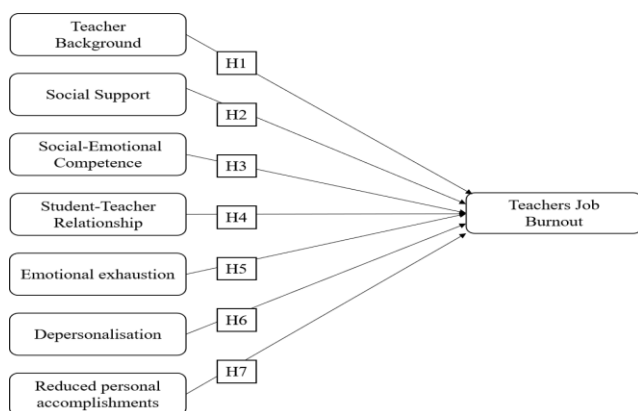


Figure 1: Conceptual Framework

H1: Teacher background has a significant impact on teacher job burnout.

H2: Social support has a significant impact on teacher job burnout.

H3: Teachers' social-emotional competence has a significant effect on teachers' job burnout.

H4: Teacher-student relationship has a significant impact on teacher job burnout.

H5: The emotional exhaustion has a significant impact on teacher job burnout.

H6: Depersonalization has a significant impact on teacher burnout.

H7: Reduced personal accomplishments has a significant impact on teacher job burnout.

3.2 Research Methodology

This study adopted an action research framework divided into three stages: pre-intervention design and implementation, intervention design and implementation, and post-intervention design and implementation. Before the intervention, extensive data was collected on 100 teachers using an integrated survey method, combining questionnaire surveys and qualitative research. Subsequently, the significance of the hypotheses was verified using multiple linear regression analysis. Following this, all hypotheses underwent thorough examination through multiple linear regression analysis to ascertain their significance, with a predefined p-value threshold of < 0.05 . In the intervention design and implementation stage, 30 teachers were selected for the intervention, and the change process was observed and recorded continuously for 15 weeks. Finally, in the post-intervention design and implementation stage, the results of the intervention were evaluated again using qualitative and quantitative methods, and data were collected through questionnaire surveys, observations, and interviews to analyze and compare the outcomes of the intervention. Through this multi-stage research process, a comprehensive review of the research objectives and hypotheses was conducted, and corresponding conclusions were drawn.

3.3 Research Population, Sample Size, and Sampling Procedures

3.3.1 Research Population

The surveyed subjects are teachers from a private university in Zhanjiang. The university has a total of 860 faculty and staff, distributed across 15 different secondary colleges. For this study, three specific colleges were intentionally selected for the survey: the School of Accounting, the School of Management, and the School of Architecture and Engineering.

3.3.2 Sample size

The research sample consists of 100 teachers from the School of Accounting, the School of Management, and the School of Architecture and Engineering, which collectively represent 11.63% of the university's total population. During the initial data collection phase, 107 questionnaire responses were collected. After screening and inspection, it was confirmed that 100 of the responses were valid.

3.3.3 Sampling Procedures

Pre-survey Sampling: To ensure the purpose and effectiveness of the study, purposeful sampling was employed by the researchers, who intentionally selected

faculty members from engineering, social science, and business disciplines as survey participants. Using the Questionnaire Star application, the researchers distributed questionnaires to teachers from these three colleges and received 107 responses. During response screening, seven incomplete responses were identified. The researchers chose 100 complete and eligible responses as the study sample through careful selection.

IDI Sampling: In the Intervention Design and Implementation (IDI) phase, to ensure diversity and representativeness among participants, the researchers again employed purposeful sampling to select 30 participants from the pool of 100 eligible teachers. Selection criteria included different age groups, educational levels, and years of work experience to ensure a wide sample representation.

IDI Follow-up Interviews: In the subsequent stages of IDI, the researchers randomly selected 15 participants from the 30 teachers who had previously participated in the intervention design and implementation for interviews. These teachers' experiences and feedback will be used to evaluate the results of the IDI, providing a deeper and more comprehensive understanding of the study.

3.4 Research Instruments

3.4.1 Design of Questionnaire

The questionnaire design encompassed the development of measurement tools for factors related to teacher burnout. Firstly, by referencing relevant literature, a questionnaire covering eight aspects, including teacher background, social support, social-emotional competence, teacher-student relationships, emotional exhaustion, depersonalization, reduced personal accomplishment, and teacher burnout, was devised (as shown in Table 1). Secondly, the demographic information in the first section and the Likert scales in the second section were utilized to assess factors influencing teacher burnout. Finally, the questionnaire underwent validation using the Item-Objective Congruence (IOC) test to ensure its consistency and effectiveness.

3.4.2 Components of Questionnaire

Instrument validity analysis assesses the effectiveness of research tools, mainly including content validity analysis and construct validity analysis. Content validity analysis evaluates whether the measurement tool contains important content covering the research field, using methods such as expert review and literature review for evaluation. Construct validity analysis assesses whether the internal structure of the measurement tool meets expectations, testing whether the items in the measurement tool constitute a reasonable factor structure through statistical methods such as factor analysis.

3.4.3 IOC Results

In this study, the Item-Objective Congruence (IOC) test was used to validate the questionnaire, and five experts were invited to evaluate it, including a professor of educational psychology, higher education administrators, and experts with a Ph.D. in educational management and leadership. The results of the IOC test showed that the scores of each dimension of the questionnaire were all higher than 0.67, indicating good content validity. The experts questioned some questions in the questionnaire, but after discussion, the original questions were retained to ensure the validity and credibility of the questionnaire.

3.4.4 Pilot survey and Pilot test results

Reliability analysis is used in instrument development research to assess the consistency of measurement tools (such as questionnaires, scales, etc..) when measuring the same concept or construct. This study employed internal consistency reliability analysis with the pilot group of 30 participants, the most common method being Cronbach's Alpha coefficient. The Cronbach's Alpha coefficient is typically used for assessing the internal consistency reliability of questionnaires or scales based on Likert scales. The Alpha coefficient measures consistency among items by calculating the correlations between items. In this study, Cronbach's Alpha (CA) was used to test the internal consistency reliability of the instrument. Generally, an Alpha coefficient greater than 0.7 indicates good consistency, while greater than 0.8 indicates reliability. After reliability testing, all evaluation items were retained. The test results showed that the reliability coefficients of all evaluation items of the research instrument were above 0.6. The specific results are shown in Table 1.

Table 1: Pilot Test Result

Variables	No. of Items	Sources	Cronbach's Alpha	Strength of Association
Teacher Background (TB)	5	Seifert and Sutton (2009)	0.932	Excellent
Social Support (SS)	5	Friedman et al. (2018)	0.841	Very good
Social-Emotional Competence (SEC)	5	Gerbeth et al. (2021)	0.861	Very good
Teacher-Student Relationship (TSR)	5	Yang (2010)	0.864	Very good
Emotional Exhaustion (EE)	5	Williamson et al. (2018)	0.917	Excellent
Depersonalization (DEP)	5	Williamson et al. (2018)	0.827	Very good

Variables	No. of Items	Sources	Cronbach's Alpha	Strength of Association
Reduced personal Accomplishments (RPA)	5	Williamson et al. (2018)	0.917	Excellent
Teacher Job Burnout (TJB)	5	Williamson et al. (2018)	0.858	Very good

4. Results and Discussion

4.1 Results

4.1.1 Demographic Profile

In this study, researchers surveyed 100 teachers from a private university in Zhanjiang, followed by selected teachers' group (n=30), as shown in Table 2.

Table 2: Demographic Profile

Entire Research Population (n=108)		Frequency	Percent
Gender	Male	37	37%
	Female	63	63%
Age	21-30	11	11%
	31-40	47	47%
	40-50	31	31%
	50+	11	11%
Teaching Years	Less 3	24	24%
	4-6	9	9%
	7-10	28	28%
	10+	39	39%
Professional Title	Not rated	15	15%
	Teaching assistant	7	7%
	Lecturer	53	53%
	Associate professor	20	20%
	professor	5	5%
Education	Bachelor's degree	16	16%
	Full-time master's degree	58	58%
	Part-time master's degree	16	16%
	Full-time research doctorate	4	4%
	In-service doctoral degree	6	6%
	Total		100
IDI Participants (n=30)		Frequency	Percent
Gender	Male	9	30%
	Female	21	70%

Entire Research Population (n=108)		Frequency	Percent
Age	21-30	6	20%
	31-40	16	53.3%
	40-50	5	16.7%
	50+	3	10%
Teaching Years	Less 3	7	23.3%
	4-6	5	16.7%
	7-10	10	33.3%
	10+	8	26.7%
Professional title	Not rated	4	13.3%
	Teaching assistant	3	10%
	Lecturer	16	53.3%
	Associate professor	5	16.7%
	professor	2	6.7%
Education attainment	Bachelor's degree	2	6.7%
	Full-time master's degree	23	76.7%
	Part-time master's degree	5	16.7%
Total		30	100%

4.1.2 Results of multiple linear regression

In the diagnostic stage, researchers conducted multiple linear regression analyses to test the impact of independent variables on teacher job burnout. The results are presented in Table 3.

Table 3: The multiple linear regression of five independent variables on teacher job burnout.

Variables	Standardized Coefficients Beta value	t-value	p-value	VIF	R ²
Teacher Background (TB)	0.279	2.20*	0.030	2.25	0.465
Social Support (SS)	0.257	2.32*	0.022	1.43	
Social-Emotional Competence (SEC)	0.924	6.20**	<0.001	1.96	
Teacher-Student Relationship (TSR)	0.546	3.80**	<0.001	1.44	
Emotional Exhaustion (EEX)	0.295	2.90*	0.005	2.00	
Depersonalization (DEP)	0.272	2.43*	0.017	1.89	
Reduced personal Accomplishments (RPA)	0.427	3.04*	0.003	2.13	

Note: p-value <0.05*, p-value <0.001**

Based on these results, researchers found that all independent variables significantly impacted the dependent variable, with p-values below 0.05. The R-square value of 0.465 indicates that these independent variables can explain 46.5% of the variance in the dependent variable. Furthermore, the standardized regression coefficients are greater than 0, indicating a positive correlation between all independent and dependent variables. All variables have VIF values below 5, suggesting the absence of multicollinearity. Among these independent variables, the standardized regression coefficients for social-emotional ability, teacher-student relationships, and reduced personal achievement are relatively high, indicating a more significant statistical impact on teacher job burnout.

In the diagnostic stage, researchers proposed seven hypotheses (H1 to H7), and the test results from multiple linear regression analysis supported these seven hypotheses. These independent variables are mutually independent, have a linear relationship with the dependent variable, the error terms are independent, and the residuals follow a normal distribution. These analysis results proposed further hypotheses (H8 to H15) to explore the differences in various factors before and after the intervention stages.

H8: There is a significant mean difference in teacher background between the pre-and post-IDI phases.

H9: There is a significant mean difference in social support between the pre-IDI and post-IDI phases.

H10: There is a significant mean difference in social-emotional competence between pre- and post-IDI phases.

H11: There is a significant mean difference in the Teacher-Student relationship between Pre-IDI and Post-IDI phases.

H12: There is a significant mean difference in emotional exhaustion between Pre-IDI and Post-IDI phases.

H13: There is a significant mean difference in depersonalization between Pre-IDI and Post-IDI phases.

H14: There is a significant mean difference in reduced personal accomplishments between the pre-and post-IDI phases.

H15: There is a significant mean difference in teacher job burnout between the pre-and post-IDI phases.

4.2 IDI Intervention Stage

The implementation of the IDI intervention lasted for 15 weeks, aiming to reduce teacher burnout and enhance job satisfaction through quantitative and qualitative analysis of pre-existing data. The researchers provided a detailed chronological timeline of the intervention plan, as depicted in Figure 2.

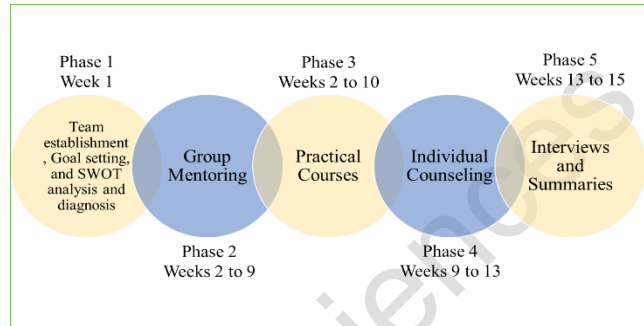


Figure 2: Implementation time and tasks as IDI

4.3 Results Comparison between Pre-IDI and Post-IDI

The researchers conducted paired-sample t-tests on all eight variables to determine whether there were differences in teacher burnout and the seven independent variables between the pre-intervention and post-intervention stages. Table 4 displays the results of the paired-sample t-test analysis for the eight variables.

Table 4: Paired-Sample T-Test Results

Variables	Mean	SD	p-value
Teacher Background (TB)			
Pre-IDI	4.88	0.260	<.001
Post-IDI	4.02	0.795	
Social Support (SS)			
Pre-IDI	4.15	0.484	<.001
Post-IDI	2.34	0.725	
Social-Emotional Competence (SEC)			
Pre-IDI	3.98	0.429	<.001
Post-IDI	2.00	0.631	
Teacher-Student Relationship (TSR)			
Pre-IDI	3.87	0.561	<.001
Post-IDI	1.83	0.530	
Emotional Exhaustion (EEX)			
Pre-IDI	4.46	0.448	<.001
Post-IDI	2.96	0.933	
Depersonalization (DEP)			
Pre-IDI	4.51	0.409	<.001
Post-IDI	3.19	0.825	
Reduced Personal Accomplishments (RPA)			
Pre-IDI	4.88	0.216	<.001
Post-IDI	3.98	0.697	
Teacher Job Burnout (TJB)			
Pre-IDI	4.08	0.516	<.001
Post-IDI	2.19	0.880	

Regarding teachers' background, the average score post-intervention was significantly higher than pre-intervention (4.88 vs 4.02, $t = 2.20$, $p < .001$). This indicates a significant improvement in teachers' backgrounds after the intervention, suggesting that teachers underwent training or improvement measures post-intervention, making their backgrounds richer and more conducive to meeting job demands. Such results support the positive impact of the intervention design on teachers' professional development and capacity enhancement.

Both social support and teachers' social-emotional competence scores also significantly increased post-intervention (SS: 4.15 vs. 2.34, $t = 2.32$, $p < .001$; SEC: 3.98 vs. 2.00, $t = 6.20$, $p < .001$). This indicates that the intervention design has significantly promoted teachers' social support and emotional competence.

Scores for teacher-student relationships, emotional exhaustion, depersonalization, and reduced personal accomplishment also significantly increased post-intervention (TSR: 3.87 vs. 1.83, $t = 3.80$, $p < .001$; EEX: 4.46 vs 2.96, $t = 2.90$, $p < .001$; DEP: 4.51 vs 3.19, $t = 2.43$, $p < .001$; RPA: 4.88 vs 3.98, $t = 3.04$, $p < .001$). This suggests that the intervention design has also positively improved teacher-student relationships, alleviated teachers' emotional exhaustion, reduced teacher depersonalization, and enhanced teachers' accomplishment.

These results further validate the effectiveness of the intervention design but also highlight the need for researchers to address further the increase in feelings of exhaustion post-intervention and how to refine intervention measures further to ensure teachers' job satisfaction and mental health.

5. Conclusions, Recommendations and Limitations

5.1 Conclusions & Discussions

This study aimed to investigate the factors influencing occupational burnout among teachers in a private college in Zhanjiang and propose effective intervention measures. By examining the correlation between variables such as teachers' background, social support, social-emotional competence, and teacher-student relationships, the following conclusions and discussions were drawn:

Firstly, teachers' background influences occupational burnout. The study found a correlation between teachers' educational background, work experience, and occupational burnout. Teachers with higher levels of education and extensive teaching experience may be better able to

withstand stress and maintain job motivation, thereby reducing the incidence of burnout.

Secondly, social support and social-emotional competence impact occupational burnout among teachers. The results showed that support from colleagues, family, and friends can alleviate teachers' occupational burnout. Additionally, teachers with better social-emotional competence are more likely to cope with work-related stress, reducing burnout caused by emotional exhaustion.

Furthermore, teacher-student relationships also influence occupational burnout among teachers. Positive teacher-student relationships can enhance teachers' job satisfaction and professional motivation, thereby reducing the occurrence of occupational burnout. In teaching practice, teachers who establish positive interactions, care, and support with students can bring about more positive teaching experiences and a sense of achievement.

These findings underscore the importance of addressing factors such as teachers' background, social support, social-emotional competence, and teacher-student relationships in mitigating occupational burnout among teachers. Effective intervention measures targeting these areas can improve teachers' job satisfaction and well-being.

5.2 Recommendations

Based on the findings above, this study proposes the following recommendations:

Firstly, educational authorities should prioritize teachers' educational background and work experience. Providing opportunities for further education and training can enhance teachers' professional competence and educational literacy, fundamentally reducing the incidence of occupational burnout.

Secondly, schools and departments should strengthen the cultivation of social support and emotional management skills among teachers. Encouraging mutual support and cooperation among teachers and offering training and resources for emotional management can help teachers better cope with work-related stress and emotional challenges.

Additionally, schools should emphasize the establishment and maintenance of teacher-student relationships. Encouraging positive interactions and supportive relationships between teachers and students and providing support and guidance can foster a positive educational atmosphere and enhance teachers' sense of personal achievement.

Lastly, the conclusions and recommendations of this study provide appropriate references and insights for educational management and individual teachers. These recommendations will likely contribute to reducing the problem of occupational burnout among teachers and

improving the quality and effectiveness of education and teaching.

5.3 Limitations for Future Research

The limitations of future research mainly lie in the following aspects:

1. **Sample and Environmental Constraints:** This study only surveyed teachers from private colleges, which may need to reflect the situation of teachers in other types of schools fully. Future research can expand the sample range to include teachers from different types of schools and consider the influence of different regions, cultures, and educational systems on teacher burnout.

2. **Data Collection Methods:** This study employed a cross-sectional research design, but future research can consider using longitudinal designs to track the occupational burnout status of the same group of teachers, providing a more comprehensive understanding of its dynamic changes and related factors.

3. **Diversity of Research Methods:** This study mainly used quantitative analysis methods. In the future, researchers can combine qualitative research methods, such as in-depth interviews or focus group discussions, to better understand the causes and influencing factors of teacher burnout.

4. **Evaluation of Intervention Effects:** This study proposed some intervention measures, but future research can further evaluate the actual effects of these interventions and compare the effectiveness of different intervention measures to guide intervention practices in practical work.

In summary, future research needs to consider the diversity of samples and environments, adopt various research methods, and conduct a more in-depth evaluation of intervention effects to further advance research and practice on the issue of teacher burnout.

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