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# A Study on the Interrelationships Among Trait Emotional Intelligence, Perceived Social Support, Subjective Well-being, and Job Burnout of Secondary School Physical Education Teachers

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**Abstract:** Secondary school physical education (PE) teachers face severe job burnout risks due to their unique occupational characteristics, such as open teaching environments and sports safety responsibilities, which not only impair their professional development but also affect students' physical and mental health. Trait Emotional Intelligence (TEI), Perceived Social Support (PSS), and Subjective Well-being (SWB) are key factors associated with job burnout, yet existing research on PE teachers is scarce, with obvious scholarly gaps in mechanism exploration and regional specificity. Based on the Conservation of Resources (COR) Theory and Job Demands-Resources (JD-R) Theory, this study adopted a literature review method to systematically sort out the core concepts, theoretical evolution, measurement tools, and empirical research status of TEI, PSS, SWB, and job burnout, and further analyzed their interrelationships, including direct, mediating, and moderating effects. The results revealed three core research gaps: insufficient targeting of the study population, unclear variable relationship mechanisms, and limitations in research design and methodology. It was confirmed that TEI had a direct negative predictive effect on PE teachers' job burnout, while PSS and SWB might play mediating roles, and salary level and teaching experience might act as moderators. Finally, this study proposed targeted future research directions from expanding the research context, deepening mechanism exploration, and innovating research methods, and put forward practical intervention strategies at the policy, school, and individual levels to alleviate PE teachers' job burnout, especially for those in western China. This review provides a theoretical basis for subsequent empirical research on the mental health of secondary school PE teachers.

**Keywords:** Secondary school physical education teachers; Trait emotional intelligence; Perceived social support; Subjective well-being; Job burnout; Interrelationship; Occupational stress

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## 1. Research background and review purpose

Teachers are the core implementers of basic education, and their physical and mental well-being is a prerequisite for

improving teaching quality and promoting students' holistic development. Secondary school physical education (PE) teachers face unique occupational stressors due to open teaching environments, sports safety responsibilities, and the marginalization of PE subjects, leading to a prominent risk of job burnout<sup>[1]</sup>. Job burnout among PE teachers not only reduces their teaching efficacy and professional identity but also indirectly affects students' physical literacy cultivation and mental health development through teacher-student interactions<sup>[2]</sup>.

Trait Emotional Intelligence (TEI), Perceived Social Support (PSS), and Subjective Well-being (SWB) are key factors associated with job burnout in educational research<sup>[3]</sup>. TEI, as an intrinsic emotional resource, helps individuals regulate negative emotions and cope with stress; PSS, as an external social resource, buffers the negative impact of occupational pressure; SWB, as a core subjective psychological state, reflects individuals' cognitive and affective evaluation of life and work. However, existing research has three obvious scholarly gaps: first, the research on PE teachers is scarce, with most studies focusing on general subject teachers; second, the integrated exploration of the chain mediating and moderating effects of the three variables on job burnout is insufficient; third, there is a lack of region-specific research, especially for western Chinese provinces where educational resource allocation is uneven and PE marginalization is more severe<sup>[4]</sup>.

Based on the Conservation of Resources (COR) Theory and Job Demands-Resources (JD-R) Theory, this review systematically combs the core concepts, theoretical evolution, and empirical research status of TEI, PSS, SWB, and job burnout, analyzes the interrelationships among the variables, and identifies research gaps. It aims to provide a theoretical basis for subsequent empirical research on PE teachers and offer practical implications for alleviating their job burnout.

## 2. Review framework

This review follows a logical thread of construct analysis → relationship integration → research gap identification → future directions and practical implications. First, it defines the connotations, theoretical foundations, and mainstream measurement tools of the four core constructs, clarifying their academic boundaries. Second, it synthesizes the empirical findings on the direct, mediating, and moderating relationships among the variables. Third, it summarizes the research deficiencies from three dimensions: study population, variable mechanism, and research design. Finally, it proposes targeted future research directions and practical intervention strategies combined with the professional characteristics of PE teachers and the regional characteristics of western China.

## 3. Review of theoretical and empirical research on core constructs

### 3.1. Trait emotional intelligence (TEI)

The theoretical origin of emotional intelligence can be traced to Thorndike's social intelligence theory and Gardner's multiple intelligences theory<sup>[5-6]</sup>. Mayer and Salovey divided it into the ability model and the mixed model, while Petrides proposed a dual classification of TEI and Ability Emotional Intelligence based on measurement methods<sup>[7-8]</sup>. TEI refers to individuals' stable behavioral tendencies and self-perceived abilities in emotion recognition, processing, regulation, and utilization, belonging to the personality domain and measured by self-report questionnaires<sup>[9]</sup>. It is the focus of this study for its good adaptability to large-scale teacher research.

Mainstream TEI measurement tools include the Trait Emotional Intelligence Questionnaire (TEIQue), Trait Meta-Mood Scale (TMMS), Emotional Quotient Inventory (EQ-i), and Wong-Law Emotional Intelligence Scale (WLEIS). WLEIS is the most widely used in teacher research due to its conciseness and alignment with educators' emotional demands<sup>[10]</sup>.

Empirical studies have confirmed that TEI positively predicts teachers' teaching efficacy and acts as a protective factor against job burnout<sup>[11-12]</sup>. However, research on PE teachers' TEI is deficient: it ignores the impact of unique occupational contexts such as outdoor teaching and sports safety management on TEI application; Chinese studies focus more on students' TEI cultivation than teachers' emotional competence development; and there is a lack of dimensional analysis of TEI's differential effects<sup>[13]</sup>.

### 3.2. Job burnout

Freudenberger first proposed the concept of job burnout, and Maslach et al. established the classic three-dimensional model, including emotional exhaustion (the core dimension), depersonalization, and reduced personal accomplishment [2, 14]. From the COR and JD-R perspectives, job burnout stems from the imbalance between resource loss and gain, and the mismatch between high job demands and low job resources, which is highly consistent with the occupational characteristics of PE teachers [15-16].

The Maslach Burnout Inventory (MBI) is the authoritative measurement tool, with three versions: MBI-HSS, MBI-ES (for educators), and MBI-GS. Localized revisions for Chinese teachers include the MBI-ES revised by Wu et al., which adds context-specific items and is suitable for PE teachers, and the Occupational Exhaustion Scale for Secondary School PE Teachers with an additional “knowledge exhaustion” dimension [17].

PE teachers are a high-risk group for job burnout with distinct characteristics: junior high school PE teachers have higher burnout levels due to students’ adolescent characteristics and PE’s auxiliary positioning; male PE teachers score higher on depersonalization in the Chinese context due to gendered social norms; and unique stressors such as insufficient resource allocation and sports safety liability exacerbate burnout [4]. Current research limitations include overemphasis on external stressors, lack of integrated analysis of multi-variable mechanisms, and absence of regional research on western China [1].

### 3.3. Perceived social support (PSS)

PSS refers to individuals’ subjective evaluation of the availability, adequacy, and relevance of social support resources, differing fundamentally from objective social support [18]. Its theoretical foundations include the social support theory (buffering model) and social resource theory, both of which confirm PSS’s protective effect on mental health [19]. For PE teachers, PSS mainly comes from family, colleagues, school administrators, and professional peers.

The Multidimensional Scale of Perceived Social Support (MSPSS) is the mainstream tool, with two localized Chinese versions: the three-dimensional version revised by Jiang and the two-dimensional version (family/non-family support) by Wang et al., which is more suitable for Chinese teacher research [20-21].

Empirical studies show that high PSS reduces teachers’ depression and anxiety, buffers job burnout, and its effectiveness is related to support sources and quality [3, 22]. Gender differences in PSS are insignificant in Chinese collectivist culture [23]. However, research on PE teachers’ PSS is insufficient: it neglects the uniqueness of their social support network caused by PE marginalization; it fails to explore the impact of hierarchical workplace relationships on PSS; and there is a lack of research on the interaction between PSS and intrinsic psychological resources [22].

### 3.4. Subjective Well-being (SWB)

Diener defined SWB as individuals’ subjective evaluation of life quality, with three core characteristics (subjectivity, stability, globality) and three dimensions (positive affect, negative affect, life satisfaction) [24]. Relevant theories include goal theory, activity theory, and social comparison theory, and SWB is regarded as a positive psychological resource that alleviates occupational resource depletion [25].

SWB measurement tools are divided into global scales (e.g., General Well-Being Schedule, Oxford Happiness Inventory) and dimension-specific scales (e.g., Satisfaction with Life Scale [SWLS], Positive and Negative Affect Schedule [PANAS]). The combination of SWLS and PANAS is the most commonly used in teacher research for its precise measurement of cognitive and affective components [26].

Teachers’ SWB is generally at a moderate level, affected by individual (age, TEI) and contextual (income, resource allocation) factors [26-27]. Rural teachers have lower SWB due to scarce resources. For PE teachers, existing research fails to explore the impact of unique professional characteristics (e.g., professional accomplishment from students’ fitness improvement) on SWB, lacks regional research on western China, and has not verified the mediating role of SWB between TEI and job burnout [28].

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## 4. Research status on the relationships among core variables

### 4.1. Direct relationship: TEI and job burnout

Numerous studies confirm a significant negative correlation between TEI and teachers' job burnout<sup>[29-30]</sup>. High TEI alleviates burnout through three pathways: emotion regulation (reducing emotional exhaustion), stress coping (adopting problem-focused strategies), and professional identity (enhancing accomplishment). Limited research on PE teachers also shows that TEI negatively predicts their job burnout by helping them cope with outdoor teaching uncertainties and sports safety pressure<sup>[31]</sup>.

However, this research has shortcomings: it lacks targeted analysis combining PE teachers' professional characteristics and western China's regional context; cross-sectional designs make it impossible to determine the causal direction between TEI and job burnout; and there is a lack of dimensional analysis of TEI's differential predictive effects on burnout dimensions.

### 4.2. Mediating mechanisms: PSS and SWB

PSS plays a significant mediating role between TEI and teachers' job burnout<sup>[3]</sup>. High TEI improves individuals' interpersonal and empathy abilities, helping them build social support networks and perceive more support, which in turn buffers occupational stress and alleviates burnout—following the “intrinsic resource → external resource → mental health” logic. This mechanism has not been verified for PE teachers, and existing research ignores the impact of PE marginalization on PSS levels and regional differences in western China.

SWB also mediates the relationship between TEI and teachers' job burnout<sup>[32]</sup>. High TEI enhances positive affect, reduces negative affect, and improves SWB; as a positive psychological resource, SWB strengthens psychological resilience and alleviates resource depletion caused by occupational stress. For PE teachers, this mediating mechanism remains unvalidated, and there is a lack of integrated research on the synergistic effect of PSS and SWB.

The chain mediation model of TEI→PSS→SWB→job burnout is a research hotspot based on COR and JD-R theories<sup>[16]</sup>. It reveals the multi-step transmission mechanism of TEI's impact on burnout by integrating intrinsic, external, and positive psychological resources. However, this model is still in the theoretical construction stage, with no empirical validation for PE teachers, and it ignores the impact of PE marginalization and western China's regional characteristics on the chain mediation effect.

### 4.3. Moderating effects: Salary level and teaching experience

Salary level, as a symbol of material compensation and professional recognition, moderates the relationship between TEI and teachers' job burnout<sup>[3]</sup>. High salary strengthens TEI's protective effect by alleviating effort-reward imbalance, while low salary weakens it. Existing research only focuses on the moderation of the direct relationship, ignoring the impact on mediating pathways and western China's low salary characteristics for PE teachers, and fails to consider relative salary levels.

Teaching experience is another important moderator<sup>[33]</sup>. High TEI has a more significant buffering effect on emotional exhaustion for early-career teachers with high adaptation stress, while it alleviates depersonalization for senior teachers with career stagnation<sup>[34-35]</sup>. For PE teachers, this moderating effect is unvalidated; research also ignores the moderation on mediating pathways and lacks refined analysis of different career stages.

## 5. Research gaps

Systematic analysis of existing research reveals three core scholarly gaps in the field of PE teachers' TEI, PSS, SWB, and job burnout:

Insufficient specificity of the study population: Research confuses PE teachers with general subject teachers, ignoring their unique occupational characteristics; there is a lack of region-specific research on western China; and sub-group

analysis by teaching experience, school type, and teaching stage is absent.

Unclear variable relationship mechanisms: The chain mediation model of TEI→PSS→SWB→job burnout has not been empirically validated for PE teachers; integrated research on the joint moderation of salary level and teaching experience is insufficient; external environmental variables (e.g., sports facilities, parental attention to PE) are not fully incorporated; and dimensional differential analysis of variables is lacking.

Limitations in research design and methodology: Cross-sectional designs dominate, making causal inference impossible; quantitative research is overemphasized, with insufficient mixed-methods research; measurement relies excessively on self-report scales, lacking objective tools; and small sample sizes and convenience sampling reduce the generalizability of conclusions.

## 6. Conclusions and future research directions

### 6.1. Conclusions

This review systematically combs the research on TEI, PSS, SWB, and job burnout of secondary school PE teachers based on COR and JD-R theories. The results show that the theoretical frameworks and measurement tools of the four core constructs are relatively mature: TEI (intrinsic emotional resource), PSS (external social resource), and SWB (positive psychological resource) are all significantly associated with job burnout. Empirical research confirms that TEI has a direct negative predictive effect on PE teachers' job burnout, PSS, and SWB may play mediating roles, and salary level and teaching experience may be moderators. However, current research has prominent gaps: the study population lacks targeting, variable relationship mechanisms are unclear, and research design and methodology have obvious limitations. Integrated research on PE teachers, especially those in western China, is extremely scarce, requiring urgent targeted empirical studies.

### 6.2. Future research directions

Expand research population and context: Conduct region-specific research on PE teachers in western China; carry out sub-group analysis by teaching experience, school type, and teaching stage; and incorporate occupational characteristic variables (e.g., outdoor teaching frequency, PE recognition) into research models to improve adaptability.

Deepen variable relationship mechanism research: Empirically validate the chain mediation model for western China's PE teachers; construct an integrated moderated mediation model with salary level and teaching experience as dual moderators; conduct dimensional differential analysis of variables; and supplement external environmental variables to enhance model explanatory power.

Innovate research design and methods: Adopt 1–3 year longitudinal designs to clarify causal relationships; use mixed-methods research combining questionnaires with semi-structured interviews and classroom observations; supplement self-report scales with objective measurement tools (e.g., heart rate variability, teaching log analysis); and use stratified random sampling to expand sample size and improve representativeness.

### 6.3. Practical implications

Based on research findings and gaps, targeted interventions are proposed at three levels to alleviate PE teachers' job burnout, with particular applicability to western China:

Policy level: Optimize PE teachers' compensation and evaluation systems, increase salary and professional recognition in western China; integrate TEI training into pre-service and in-service education; increase investment in sports resources to improve teaching facilities; and elevate PE's status in basic education to reduce marginalization.

School level: Build a "family-colleague-school" social support network and establish peer support mechanisms for PE teachers; optimize teaching task allocation to avoid excessive workload; foster a positive campus sports culture to enhance teachers' professional accomplishment; and set up mental health counseling services for PE teachers.

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Individual level: PE teachers should proactively improve TEI through emotion regulation training; build social support networks by communicating with colleagues and maintaining family relationships; enhance SWB by identifying positive teaching experiences and maintaining a healthy lifestyle; and adopt problem-focused coping strategies to improve stress management efficacy.

## Disclosure statement

The authors declare no conflict of interest.

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