A Bibliometric Analysis of Research on Teacher Burnout in Higher Education: A Comparative Study of Chinese and Global Literature

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Abstract
This study offers a comparative bibliometric analysis of research on teacher burnout in higher education using data from the Web of Science and the China National Knowledge Infrastructure (CNKI) spanning January 2001 to June 2025. Drawing on standard science-mapping techniques implemented in CiteSpace, the analysis examines publication trajectories, leading institutions, and thematic structures via keyword co-occurrence, clustering, temporal evolution, and burst detection. Results show steady global growth with pronounced acceleration after 2019, and a broadly similar expansion in the Chinese literature, though with distinct thematic emphases. International scholarship clusters around stress, emotional exhaustion, job satisfaction, depression, and faculty populations, reflecting a sustained psychological and organizational orientation. By contrast, the Chinese scholarship more frequently prioritizes practical concerns such as performance, intervention strategies, occupational stress, social support, and teacher development. Temporal patterns suggest convergence in recent years on cross-cutting topics including work–life balance, psychological capital, and emotional labor. Collectively, the findings delineate both common ground and divergence in how teacher burnout in higher education is conceptualized and studied across contexts, and they highlight opportunities for cross-cultural synthesis, methodological integration, and policy-relevant inquiry.
Keywords: Teacher Burnout, Higher Education, Bibliometric Analysis, Citespace, Temporal Clustering

Introduction
The concept of burnout was first articulated by clinical psychologist Herbert J. Freudenberger to capture a state of profound physical and psychological exhaustion arising from sustained occupational pressure in high-stress service contexts such as healthcare and social work (Freudenberger, 1974). He described this condition as the extinction of motivation or incentive when prolonged commitment fails to produce expected outcomes, a framing that foregrounded the erosive effects of chronic work strain on individual functioning (Freudenberger, 1974).

Building on this foundation, Maslach and colleagues refined burnout into a three-dimensional psychological syndrome that develops under prolonged job stress: emotional exhaustion, depersonalization (or cynicism), and reduced personal accomplishment (Maslach et al., 2001). This model emphasizes increasing psychological distance from work—manifested in fatigue, indifference, inefficacy, and diminished achievement—and has become the dominant conceptual lens in subsequent scholarship (Maslach et al., 2001). Against this background, research on occupational burnout has expanded across professional sectors.

In the context of higher education, teacher burnout denotes chronic occupational fatigue and psychological disengagement arising from cumulative pressures—including physical workload, emotional labor, interpersonal strain, and self-appraisal demand. As ongoing reforms and expanding institutional expectations intensify teaching, research, and administrative workloads, manifestations of burnout have become more prevalent among university faculty, with evidence linking heavy workloads, limited institutional support, and workplace conflict to emotional exhaustion and detachment (Cadena-Povea et al., 2025; Koster & McHenry, 2023). Recent cross-sectional and review evidence further indicates that longer working hours and heightened job demands are associated with elevated emotional exhaustion and depersonalization, underscoring burnout's emergence as a common psychological and behavioral condition in academic settings (Pakdee et al., 2025; Cadena-Povea et al., 2025).

Given the escalating concern and the complex, multifaceted nature of teacher burnout, a systematic and comprehensive mapping of the existing scholarly landscape is imperative to consolidate knowledge, identify evolving trends, and guide future research efforts. Although prior literature offers general overviews of teacher burnout, bibliometric, visualization-based comparative analyses remain limited—particularly those juxtaposing higher-education research published internationally with Chinese-language scholarship. To address this gap, the present study uses CiteSpace to conduct a comparative bibliometric analysis of high-quality publications retrieved from Web of Science (WoS) and China National Knowledge Infrastructure (CNKI). By generating visual knowledge maps (e.g., keyword co-occurrence, clustering, temporal evolution, and burst detection), the study maps the field's intellectual structure and developmental trajectory, identifies major research hotspots, and traces thematic evolution in teacher burnout research within higher education, thereby providing an evidence-based foundation for future inquiry and agenda setting.

Data Sources and Methodology

This section summarizes the data sources and methodological workflow for the comparative bibliometric analysis. We constructed CNKI and WoS corpora (January 2001–June 2025) using defined search terms and inclusion criteria (CSSCI/Peking University Core for CNKI; Articles/Review Articles for WoS), followed by manual screening. Using CiteSpace, we implement a two-phase analysis—descriptive indicators (publication frequency, institutional productivity) and network techniques (keyword co-occurrence, clustering, burst detection)—to ensure transparency, reproducibility, and rigor.

Data Sources

This study draws on two major academic databases—the China National Knowledge Infrastructure (CNKI) and the Web of Science Core Collection (WoS)—to provide a

comprehensive view of domestic and international scholarship on teacher burnout in higher education. To ensure coverage and quality, the search targeted high-quality Chinese and global publications relevant to the topic. All searches were conducted in July 2025 and covered the period January 2001 to June 2025.

CNKI Literature Sample
For the Chinese corpus, CNKI was queried using the subject terms "university/college teachers" and "job burnout". To maintain academic rigor, only articles indexed in CSSCI and Peking University Core Journals were retained. After a manual screening to confirm thematic relevance and exclude unrelated items, 242 valid articles remained for analysis.

WoS Literature Sample
For the international corpus, records were retrieved from the WoS Core Collection using the topic search: TS = ((university OR college OR "higher education") AND (teacher* OR lecturer* OR professor* OR "academic staff")) AND TS = ("job burnout" OR "occupational burnout" OR "professional burnout" OR "teacher burnout" OR "emotional exhaustion" OR "job fatigue" OR "psychological fatigue"). The time span was set from January 2001 to June 2025.To ensure the robustness and academic quality of the findings, only peer-reviewed documents categorized as "Articles" or "Review Articles" were included to ensure academic rigor. Following manual screening to remove irrelevancies, 206 high-quality, thematically aligned publications formed the final dataset.

Research Methods
This study adopts a bibliometric approach utilizing CiteSpace, a visualization tool for mapping scientific knowledge domains and tracking research frontiers. The analytical procedure is structured into two distinct phases:
Phase 1: Descriptive and Quantitative Overview. This involves examining the general research landscape on teacher burnout in higher education since the beginning of the 21st century. Indicators including publication frequency, institutional productivity, and keyword co-occurrence networks are systematically analyzed to reveal the intensity and distribution of scholarly engagement with this topic.

Phase 2: Cluster and Keyword Analysis. Through co-word clustering and keyword burst detection, this phase identifies major research themes and evolving scholarly interests, offering insights into current hotspots and possible future directions. The findings aim to provide theoretical references and empirical implications for future academic inquiries in the field.

A Comparative Visual Analysis of Global and Chinese Studies on Teacher Burnout in Higher Education
This section presents a visualization-driven comparative mapping of higher-education teacher burnout research across WoS and CNKI from January 2001 to June 2025. Using CiteSpace, we juxtapose publication trajectories and institutional contributions with the field's intellectual structure through analyses of keyword co-occurrence, clustering, temporal evolution, and burst detection.

Analysis of the Research Literature
Figure 1 illustrates the annual publication trends on teacher burnout in higher education from January 2001 to June 2025 in both Chinese and global literature.
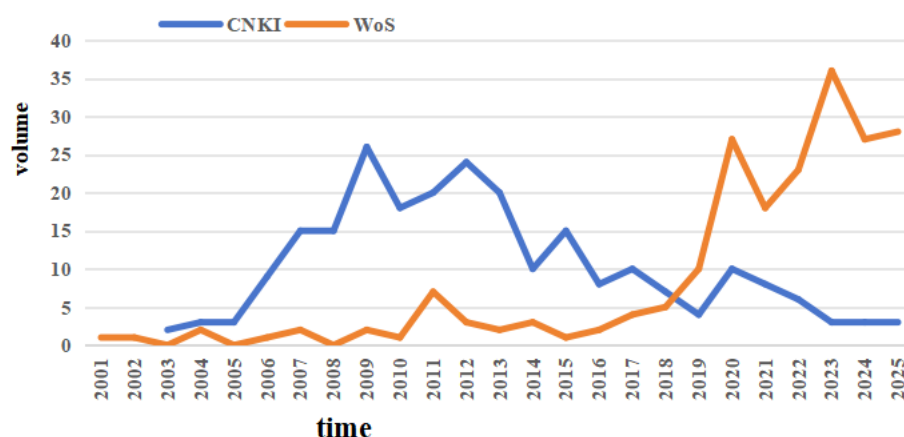

Figure 1. Annual Publication Trends on Teacher Burnout in Higher Education: A Comparative View of Chinese and Global Literature (2001–2025)

Analysis of Publication Volume in Chinese Literature (CNKI)
As illustrated in Figure 1, the volume of publications on teacher burnout in higher education within Chinese academic literature (sourced from CNKI) from 2001 to 2025 can be broadly divided into three distinct developmental stages:

Stage1.Initial Exploration Stage (2001–2006)
During this period, scholarly attention to teacher burnout in Chinese higher education was relatively limited, with annual publications consistently below 10, reflecting a nascent stage of academic engagement with the topic. Most studies were exploratory and descriptive in nature, centering on conceptual understandings of burnout and the preliminary identification of psychological and emotional symptoms among university faculty. Empirical investigations were sparse, and the absence of systematic theoretical frameworks during this stage indicates a lack of conceptual consolidation in early research efforts.

Stage 2 Gradual Growth Stage (2007–2017)
This stage marked a steady increase in scholarly output, with annual publications ranging from approximately 10 to 25. Research during this phase began incorporating standardized instruments such as the Maslach Burnout Inventory (MBI) to assess burnout levels among faculty. A broader range of influencing factors—including workload, role conflict, job satisfaction, and emotional labor—were examined. Although research topics became more diversified, the majority of studies continued to rely on cross-sectional designs, lacking both longitudinal perspectives and theoretical advancements.

Stage 3 Transitional Adjustment Stage (2018–2025)
Between 2018 and 2025, the publication volume declined markedly, with annual outputs fluctuating between 3 and 10 articles, signaling a shift from expansion to transitional adjustment. This shift is largely attributed to the implementation of national strategies such as the "Double First-Class" initiative and the "Double Reduction" policy, which have

redirected scholarly priorities toward educational quality enhancement and institutional accountability. Consequently, research on teacher burnout has entered a more selective and rationalized phase of development.

Analysis of Publication Volume in Global Literature (WoS)
As shown in Figure 1, research on teacher burnout in higher education within the global academic community, based on the Web of Science Core Collection from 2001 to 2025, exhibits a clear upward trajectory, which can be divided into three major stages:

Stage 1 Initial Stage (2001–2009)
During this stage, scholarly attention to the topic was limited, with annual publications ranging from 0 to 2 articles. Most studies were conceptual or theoretical in nature, aiming to define teacher burnout and explore its relevance in higher education settings. Systematic empirical research remained scarce, and no consistent research framework had yet been established.

Stage 2 Development and Accumulation Stage (2010–2018)
This period marked a gradual increase in scholarly output, with annual publications rising from 2 to 7 by 2018. Research began to integrate empirical methodologies, and interest expanded to include associated factors such as job stress, emotional exhaustion, and organizational climate. The use of validated instruments like the Maslach Burnout Inventory (MBI) became more common, laying the foundation for subsequent in-depth studies.

Stage 3 Rapid Growth and Maturation Stage (2019–2025)
Beginning in 2019, the field entered a period of rapid growth and relative stabilization. Annual publication counts rose sharply, reaching a peak of 36 articles in 2023 and maintaining a high level through 2025. This surge reflects a significant rise in academic interest and methodological sophistication. Research during this phase has increasingly focused on burnout prevention, institutional factors, work-life balance, and international comparative studies. Interdisciplinary approaches and global collaborations have become more prevalent, indicating the maturation and internationalization of the field.

Comparative Analysis of Publication Trends
A comparative examination of the publication trajectories in the CNKI and WoS datasets reveals distinct patterns in the evolution of scholarly attention to teacher burnout in higher education across domestic and international contexts.

In China, the research trajectory follows a three-phase progression—initial exploration, steady growth, and transitional adjustment—characterized by early conceptual discussions, subsequent empirical expansion using standardized instruments, and a recent decline likely influenced by national education reforms and shifting policy priorities. This suggests a more policy-responsive and context-sensitive research climate, wherein scholarly focus adapts to macro-level educational directives such as the "Double First-Class" and "Double Reduction" initiatives.

In contrast, the global literature demonstrates a more linear and consistent upward trend, culminating in a marked surge in publications post-2019. This rapid growth phase coincides

with the emergence of international concerns over teacher well-being, work–life balance, and institutional sustainability in higher education. The international trajectory reflects a steady accumulation of empirical research, a broadening of thematic scope, and the increasing adoption of interdisciplinary and comparative approaches.

Overall, while Chinese research exhibits a cyclic, policy-driven development trajectory with emphasis on national reforms and educator subgroups, international studies exhibit more continuous growth with increasing theoretical diversity and methodological rigor. These contrasting dynamics reflect differing academic ecosystems and policy contexts, offering complementary insights for constructing a more holistic and globally contextualized understanding of teacher burnout in higher education

Distribution of Research Institutions

The distribution of research institutions provides insights into the concentration of scholarly resources and the structure of academic influence in the field of teacher burnout in higher education. Based on CiteSpace analysis of literature indexed in the WoS and CNKI databases from 2001 to 2025, Table 1 presents the most productive institutions both in China and abroad.

Table 1

Number of Publications by Domestic and Global Institutions (2001–2025)

WoS Database		CNKI Database	
Institution（Top 10）	Number of Publications	Institution（Top 10）	Number of Publications
University of Illinois	8	Beijing Normal University	10
Beijing Normal University	5	Guangxi Medical University	7
California State University System	4	East China Normal University	6
Chinese Academy of Sciences	4	Xiamen University	6
Chinese University of Hong Kong	4	Central South University	5
Ministry of Education & Science of Ukraine	4	Hebei University of Science and Technology	5
Pingdingshan University	4	Shanghai Normal University	4
Peking University	4	Zhejiang Normal University	4
Complutense University of Madrid	3	Nanjing University of Posts and Telecommunications	4
San Diego State University	3	Northeast Normal University	3

Domestic Institutions (CNKI Database)

In the CNKI database, Beijing Normal University ranks first with 10 publications, underscoring its sustained leadership in the field of teacher burnout in higher education. It is followed by Guangxi Medical University with 7 publications, and East China Normal University and Xiamen University, each contributing 6 papers, forming the second tier. The third tier consists of Central South University, Hebei University of Science and Technology, Shanghai Normal University, Zhejiang Normal University, Nanjing University of Posts and Telecommunications, and Northeast Normal University, all of which demonstrate relatively balanced contributions and indicate broader institutional participation.

From an institutional perspective, normal universities (teacher training institutions) dominate the domestic research landscape on teacher burnout. These institutions are typically grounded in robust academic traditions in education and psychology, and have developed longstanding research traditions in areas such as teacher development, educational ecology, and occupational mental health. This academic strength has enabled them to make significant theoretical and practical contributions to the understanding and intervention of teacher burnout, particularly within localized educational contexts.

Global Institutions (WoS Database)
Internationally, the University of Illinois leads with 8 publications, indicating its central role in the global research community. Beijing Normal University, with 5 publications, also stands out as the only Chinese institution ranked highly in both WoS and CNKI datasets, demonstrating strong international academic engagement. A group of institutions, including the California State University System, Chinese Academy of Sciences, Chinese University of Hong Kong, Ministry of Education & Science of Ukraine, Pingdingshan University, and Peking University, each contributed 4 publications, forming a cluster of active contributors. Meanwhile, the Complutense University of Madrid and San Diego State University each published 3 papers, reflecting moderate research activity.

Overall, international institutions display a high degree of geographic diversity and institutional heterogeneity, spanning countries such as the United States, China, Ukraine, and Spain. The participation of comprehensive universities, research institutes, and policy-making bodies underscores the global salience and multi-perspective nature of teacher burnout as a critical issue in higher education.

Keyword Co-occurrence Analysis on Teacher Burnout in Higher Education
Keywords are concise summaries of the themes and perspectives within the literature. Analyzing these keywords can help identify the distribution of research hotspots in the field （Zhang, et al.，2023). To explore the thematic structure and focal areas in teacher burnout research within higher education, this study conducted a keyword co-occurrence analysis through the application of the CiteSpace software, drawing on literature from both Chinese and international databases. As illustrated in Figure 2, the resulting knowledge map reveals keyword networks and thematic clusters. In this network, each node (circle) represents a keyword, where the size indicates frequency of occurrence, the border thickness reflects betweenness centrality (i.e., its bridging role within the network), and the color gradient denotes the temporal emergence of the term—brighter hues signaling more recent topics.

Connections between nodes indicate co-occurrence strength; more interconnected nodes form cohesive thematic clusters. The international literature prominently features clusters around "teacher burnout," "emotional exhaustion," "depression," and "job satisfaction," with "job burnout" remaining the most central theme. This underscores the sustained scholarly attention to burnout as a core research focus in global higher education contexts.

In contrast, the Chinese literature primarily focuses on keywords such as job burnout and university teachers , with additional attention to influencing factors, social support, and occupational stress. These clusters similarly reflect a sustained and concentrated interest in the phenomenon of teacher burnout within the Chinese academic context. Notably, both the

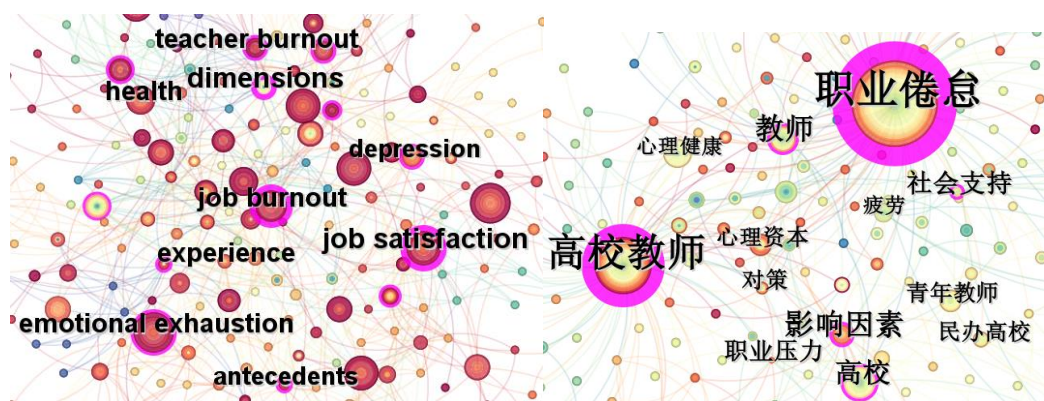Chinese and international maps highlight "job burnout" as a current and emerging research hotspot.

Figure 2. Knowledge Graph of Keywords Co-Occurrence of "Teacher Burnout in Higher Education" at Home and Abroad

To further understand the thematic priorities, the top 10 high-frequency keywords identified in the CNKI and WoS datasets were identified and summarized in Table 2. The results show that the term job burnout appeared most frequently in the CNKI database (160 times), while "stress" was the most frequent in the WoS database (54 times). The prevalence of these high-frequency keywords underscores the continued scholarly interest in the issue of teacher burnout in higher education, and reflects both the breadth and depth of inquiry in this field.

Table 2

Top 10 High-Frequency Keywords in Teacher Burnout Research: CNKI and WoS Comparison

No.	WoS database				CNKI database			
	Freq	Centrality	Keyword	Year	Freq	Centrality	Keyword	Year
1	54	0.10	stress	2006	160	0.86	job burnout	2004
2	48	0.2	emotional exhaustion	2009	76	0.89	university teachers	2004
3	39	0.25	job burnout	2004	23	0.34	performance	2005
4	32	0.11	depression	2013	20	0.11	teacher development	2013
5	31	0.31	job satisfaction	2012	19	0.83	influencing factors	2003
6	27	0.05	university teachers	2020	15	0.24	intervention strategies	2004
7	25	0.11	performance	2006	10	0.14	occupational stress	2007
8	22	0.10	dimensions	2007	10	0.22	social support	2007
9	20	0.11	health	2001	10	0.15	psychological capital	2013
10	20	0.06	higher education	2020	9	0.09	exhaustion	2007

Keyword Co-occurrence Cluster Analysis on on Teacher Burnout in Higher Education

Keyword clustering analysis was conducted on the basis of a co-occurrence network, using the Log-Likelihood Ratio (LLR) algorithm to group semantically related high-frequency keywords into distinct clusters. This method provides a high-level abstraction of research hotspots within a specific field, enabling a macroscopic understanding of its intellectual structure and prevailing research directions. It also lays a foundation for subsequent, more granular analysis (Li et al., 2023). In this study, keyword clustering was applied to both Chinese and international literature, resulting in the generation of keyword co-occurrence cluster maps (Figures 3 and 4). Based on these visualizations, high-frequency keywords within each cluster were further extracted to produce the corresponding cluster tables (Tables 3 and 4). Two indicators—modularity (Q value) and average silhouette score (S value)—are used to assess the quality and reliability of clustering results. A Q value above 0.3 and an S value above 0.7 indicate a meaningful and robust clustering structure.

To examine the thematic structure and knowledge evolution of global research on teacher burnout in higher education, this study employed CiteSpace to generate a keyword co-occurrence cluster map based on literature from the Web of Science (2001–2025), as illustrated in Figure 3. The resulting network consisted of 314 nodes and 899 links, with a network density of 0.0183, suggesting a moderately sparse but interconnected structure. The modularity value (Q = 0.6622) indicates a well-partitioned and coherent clustering configuration (Q > 0.3), while the average silhouette score (S = 0.8754) reflects strong intra-cluster consistency (S > 0.7), confirming the interpretability of the results.

A total of nine major clusters were identified from the international dataset, including: "#0 professional burnout," "#1 teacher quality," "#2 sleep quality," "#3 antecedents," "#4 regulation failure," "#5 teacher efficacy," "#6 career adaptability," "#7 university teachers," and "#8 burnout syndrome." These clusters reveal that international scholarship on teacher burnout in higher education has primarily focused on three major dimensions: core psychological constructs (e.g., burnout, sleep quality), individual and professional factors (e.g., teacher efficacy, career adaptability), and systemic antecedents (e.g., regulatory or institutional failures). Notably, the presence of "antecedents" as a standalone cluster underscores the increasing emphasis on identifying predictive and causal mechanisms. Overall, this clustering structure reflects the field's growing theoretical sophistication and interdisciplinary integration, encompassing perspectives from educational psychology, organizational studies, and teacher development.
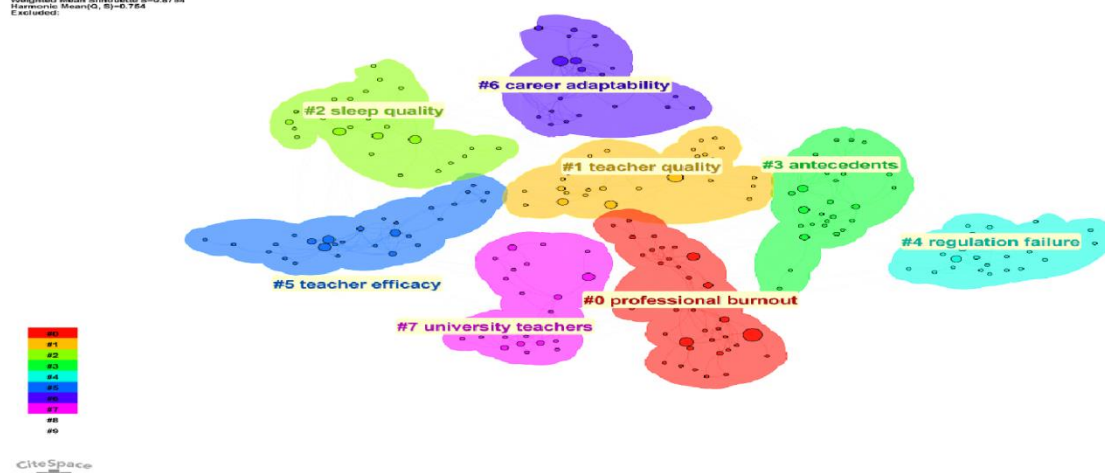
Figure 3. Keyword co-occurrence cluster map of teacher burnout in higher education (WoS database)

In contrast, Figure 4 illustrates the keyword co-occurrence cluster map derived from Chinese literature indexed in the CNKI database (2003–2025). The resulting network contains 246 nodes and 616 links, with a network density of 0.0103, indicating a relatively sparse yet thematically coherent structure. The modularity score (Q = 0.8440) and silhouette score (S = 0.9723) both exceed conventional thresholds, demonstrating that the clustering structure is well-defined, distinct, and highly reliable.

Nine main clusters were identified in the Chinese dataset, labeled as follows: #0 professional burnout), #1 college teachers, #2 universities, #3 influencing factors, #4 teachers, #5 fatigue, #6 psychological capital, #7 performance, and #8 burnout. These clusters reflect a focus on psychological states (e.g., professional burnout, fatigue), institutional and organizational contexts (e.g., university teachers, university environments), and internal psychological resources (e.g., psychological capital). The inclusion of clusters such as "influencing factors" and "performance" suggests that domestic research increasingly considers both the antecedents and outcomes of teacher burnout, beyond its psychological manifestations.
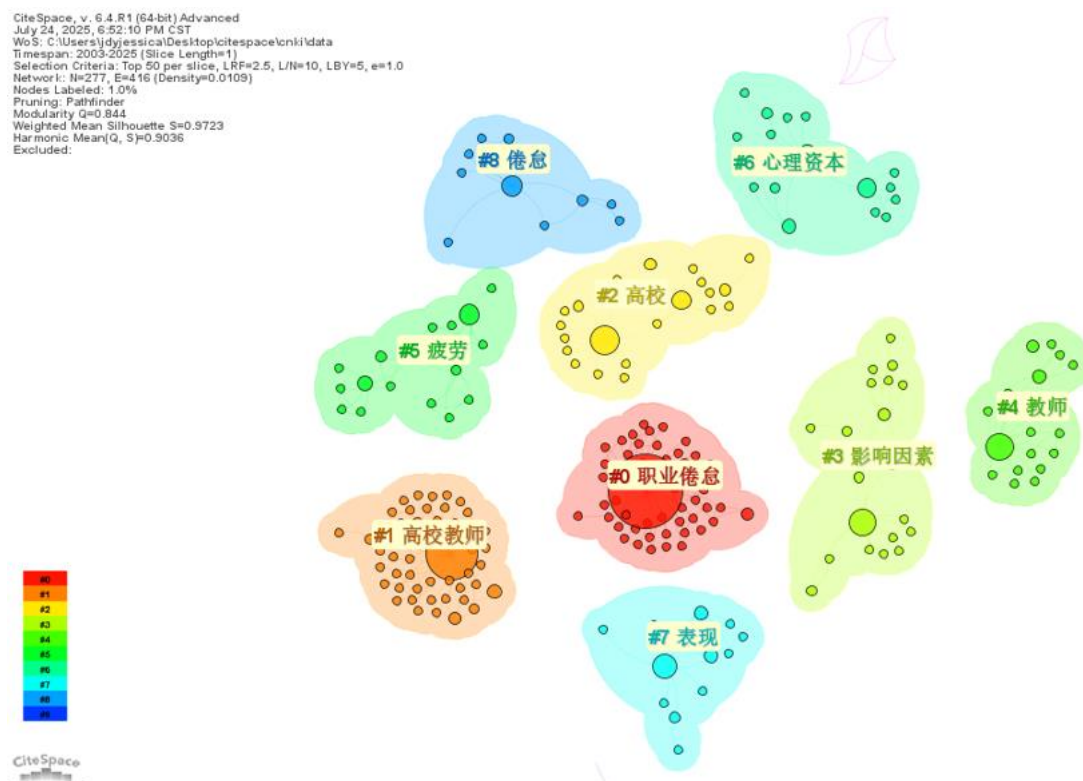
Figure 4. Keyword co-occurrence cluster map of teacher burnout in higher education (CNKI database)

Taken together, the clustering results from both datasets reveal shared concerns over teacher burnout and its antecedents, while also highlighting notable differences in focus and scope. Compared to international studies, Chinese research places more emphasis on institutional classifications, teacher typologies, and internal psychological resources within the context of higher education. These findings not only enrich the global discourse on teacher burnout but also offer valuable empirical foundations for future comparative and cross-cultural investigations.

Keyword Burst Analysis on Teacher Burnout in Higher Education
This subsection applies CiteSpace's burst-detection to identify keywords with abrupt frequency spikes, signaling emergent themes and shifts in scholarly attention. Relative to static co-occurrence and clustering, burst metrics—timing, strength, and duration—provide a temporal lens on how topics emerge and persist. CNKI results are presented first, followed by WoS and a brief cross-dataset comparison. Short, sharp bursts often reflect episodic debates or methodological inflections, whereas sustained bursts indicate consolidating research trajectories in higher-education burnout.

CNKI Keyword Burst Analysis
Keyword burst analysis refers to the detection of terms whose citation frequency has increased significantly over a specific period, serving as an effective indicator of shifting research hotspots and emerging frontiers in the field (Long & Wang,2024). Based on the CNKI dataset (2003–2025), CiteSpace was employed to identify the top 16 keywords with the strongest citation bursts, as shown in Figure 5. These citation bursts reflect changes in

academic attention and highlight the temporal dynamics of thematic evolution in the field of teacher burnout in higher education.

Among the top keywords, PE teachers, influencing factors and psychological capital exhibited the highest burst intensities, with strengths of 2.64, 2.73, and 2.2 respectively. These terms reflect a growing concern with subgroup-specific teacher burnout (e.g., physical education teachers), underlying causes (influencing factors), and internal resources for coping (psychological capital). Additionally, terms such as teacher development, performance and mental health have shown bursts in more recent years (post-2018), indicating a transition from identifying burnout symptoms to exploring its broader consequences and psychological foundations.

Temporal analysis reveals that earlier bursts (2004–2008) were concentrated on macro-level discussions such as strategies, performance and causes, which laid the conceptual groundwork for the field. In contrast, the period from 2019 onward shows an increasing emphasis on emotional and psychological dimensions, as evidenced by the burst of emotional labor, a keyword that may be associated with the affective experiences of teachers under institutional pressure.

Overall, the evolution of burst keywords in the CNKI literature reflects a clear trajectory: from general discussions on causes and reform strategies toward more nuanced, psychological, and role-specific inquiries. This shift aligns with the broader trend of integrating organizational behavior and psychological resource theory into educational research. The emphasis on terms such as "psychological capital" and "teacher development" suggests a growing domestic interest in resilience-based and development-oriented frameworks to address teacher burnout in Chinese higher education.

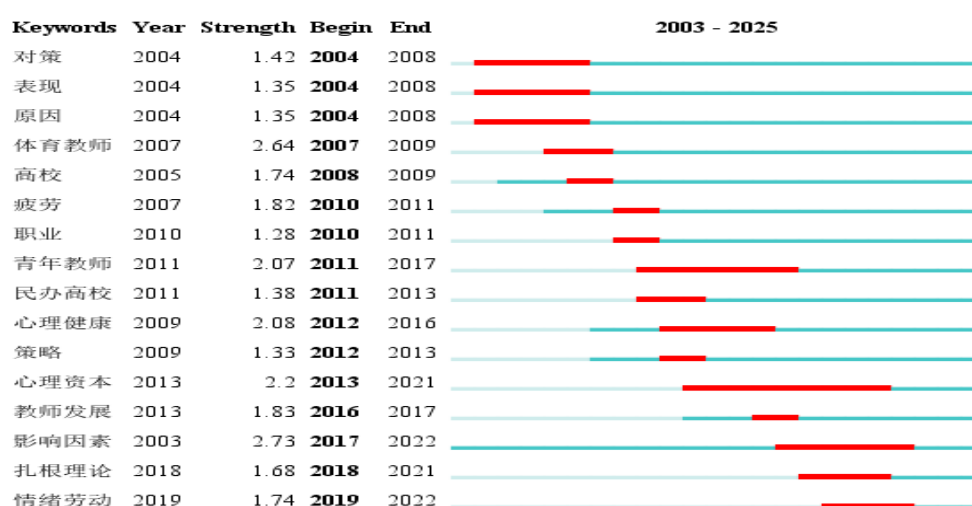**Top 16 Keywords with the Strongest Citation Bursts**

Keywords	Year	Strength	Begin	End	2003 - 2025
对策	2004	1.42	2004	2008	
表现	2004	1.35	2004	2008	
原因	2004	1.35	2004	2008	
体育教师	2007	2.64	2007	2009	
高校	2005	1.74	2008	2009	
疲劳	2007	1.82	2010	2011	
职业	2010	1.28	2010	2011	
青年教师	2011	2.07	2011	2017	
民办高校	2011	1.38	2011	2013	
心理健康	2009	2.08	2012	2016	
策略	2009	1.33	2012	2013	
心理资本	2013	2.2	2013	2021	
教师发展	2013	1.83	2016	2017	
影响因素	2003	2.73	2017	2022	
扎根理论	2018	1.68	2018	2021	
情绪劳动	2019	1.74	2019	2022	

Figure 5. Top 16 Keywords with the Strongest Citation Bursts （CNKI database）

WoS Keyword Burst Analysis
This section analyzes the top 16 keywords with the strongest citation bursts in the Web of Science (WoS) dataset from 2001 to 2025, as shown in Figure 6. Citation burst analysis

captures keywords that have experienced a sharp increase in attention within a specific time frame, indicating shifts in scholarly focus and the emergence of new research frontiers.

The keyword with the highest burst strength was "inventory" (3.74), followed by "personality" (3.64), "burnout syndrome" (2.94), and "impact" (2.91), suggesting that these topics have received widespread attention from the global academic community. Notably, the burst for "inventory" spanned from 2004 to 2017—making it one of the longest sustained bursts—implying that instrument development and measurement frameworks (such as burnout inventories) have remained central to empirical investigations. Similarly, "impact" and "burnout syndrome" emerged as focal areas during 2019–2020, reflecting increasing concern with the consequences and mental health implications of burnout among educators.

The most recent bursts include keywords such as "education" (2020–2023), "engagement" (2022–2023), "higher education" (2020–2025), "gender" (2022–2025), and "turnover intention" (2023–2025), indicating a clear shift toward institutional and demographic dimensions of burnout research. The emergence of "turnover intention" as a recent burst keyword suggests that scholars have become increasingly interested in the organizational outcomes of burnout, particularly in relation to teacher retention and workplace sustainability.

In addition, keywords such as "social support", "occupational stress", and "depression" have shown prolonged bursts over multiple years, reflecting a continued interest in psychological stressors and protective factors. These topics point to a growing interdisciplinary integration between occupational health, educational psychology, and human resource management.
Overall, the burst analysis of WoS keywords highlights the evolving trajectory of global research on teacher burnout—from early emphasis on theoretical frameworks and stress-related symptoms to recent concerns with engagement, equity, and institutional outcomes. The sustained attention to psychological and organizational factors reflects an increasing demand for system-level interventions to address burnout in higher education.
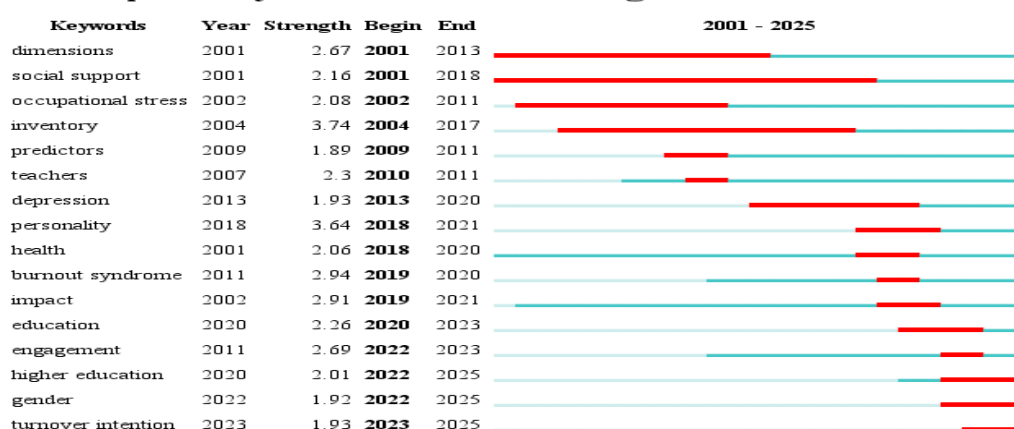

Figure 6.Top 16 Keywords with the Strongest Citation Bursts （WoS database）

Comparative Analysis of CNKI and WoS Keyword Bursts
A comparative examination of the keyword bursts in CNKI and WoS datasets reveals both convergences and divergences in research priorities and scholarly orientations related to teacher burnout in higher education across domestic and international contexts.

In terms of thematic focus, both datasets demonstrate sustained interest in psychological factors associated with burnout, such as mental health in CNKI and "depression" and "occupational stress" in WoS. These recurring terms underscore a shared global concern with the mental health consequences of burnout and its emotional toll on educators. Moreover, the emergence of keywords like "psychological capital" in CNKI and "social support" in WoS further reflects a growing emphasis on personal and social resources as buffers against burnout.

However, notable differences emerge in the structure and orientation of the bursts. The CNKI dataset is more heavily weighted toward role-specific and group-centered inquiries, with keywords such as PE teachers, teacher development and foreign language teachers suggesting an emphasis on segmented teacher populations and professional growth trajectories. In contrast, the WoS dataset emphasizes theoretical and institutional constructs, with bursts for keywords such as "inventory", "burnout syndrome", and "turnover intention", indicating a stronger concern with conceptual measurement, organizational consequences, and workforce sustainability.

Temporal patterns also differ. CNKI keyword bursts tend to span longer time frames and reflect a gradual evolution from macro-level causes (e.g., strategies and causes to micro-level psychological dimensions (e.g., emotional labor). In contrast, WoS bursts display sharper transitions, with newer terms such as "engagement", "gender", and "higher education" emerging more recently (post-2020), pointing to the influence of broader educational policy shifts and global discourses on diversity and inclusion.

Overall, while both Chinese and international scholars are converging on the psychological underpinnings of teacher burnout, the CNKI literature tends to emphasize professional roles, national education contexts, and developmental strategies, whereas the WoS literature reflects an increasingly system-oriented and interdisciplinary approach. These contrasts not only highlight contextual research priorities but also offer complementary insights for a more holistic understanding of teacher burnout in higher education across cultural and institutional boundaries.

Temporal Cluster Analysis of Research on Teacher Burnout
To elucidate the temporal evolution of research themes on teacher burnout in higher education, this study utilized a time-sliced clustering approach in CiteSpace. By chronologically organizing keywords within each cluster, a visual timeline was constructed based on both international (WoS) and domestic (CNKI) literature (see Figure 7 and Figure 8). This longitudinal mapping provides a dynamic perspective on the field's shifting research foci, allowing for a clearer understanding of thematic trajectories, scholarly emphases, and comparative developments across global and Chinese contexts.
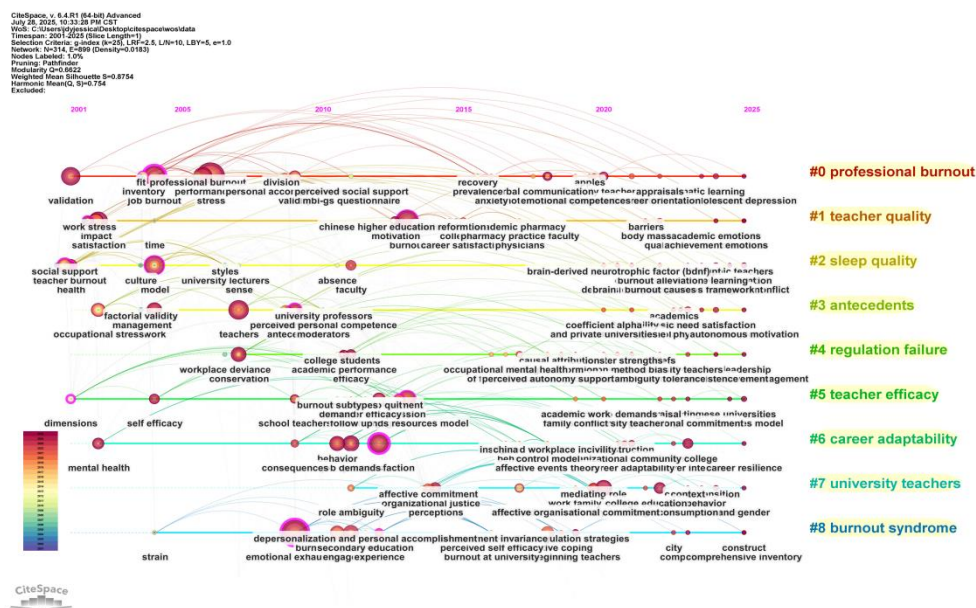
Figure 7. Timeline view of keyword clusters on teacher burnout in higher education (WoS, 2001–2025)
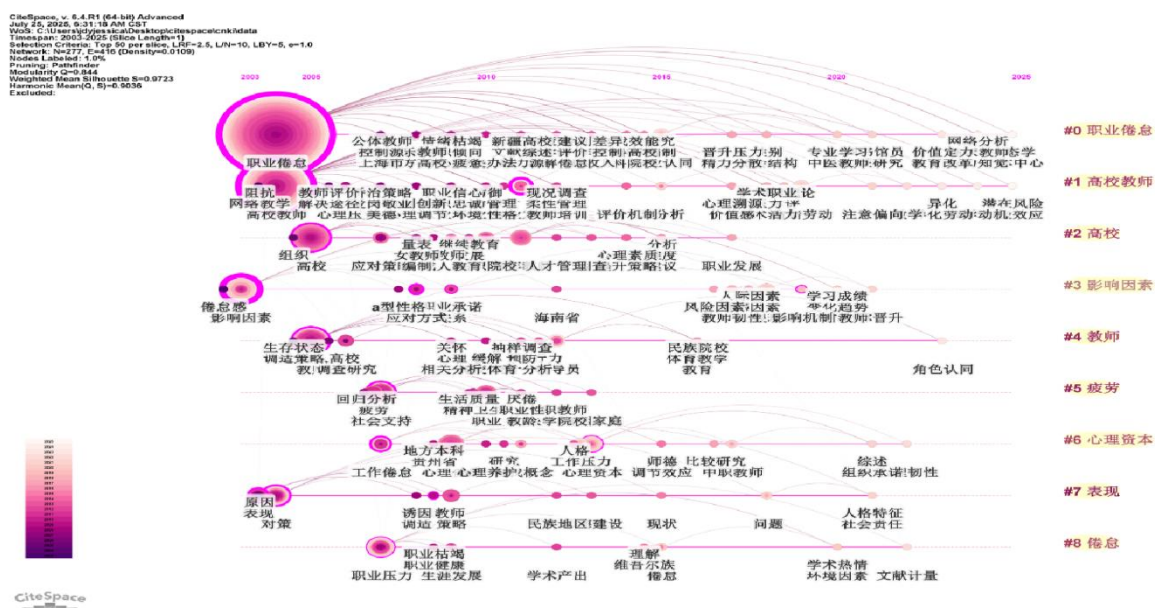

Figure 8. Timeline view of keyword clusters on teacher burnout in higher education (CNKI, 2003–2025)

Initial Stage (2001–2008): Conceptual Emergence and Stress-Related Constructs

In the formative years, both international and domestic literature emphasized conceptualizing the nature of burnout and its psychological underpinnings. The WoS dataset featured terms such as *burnout*, *occupational stress*, *work stress*, and *health*, reflecting early scholarly concerns with emotional exhaustion and mental health risks in the academic profession. Similarly, CNKI clusters highlighted foundational themes through keywords like "professional burnout, causes and strategies, indicating an initial focus on etiology and policy-level interventions in China's educational sector.

Developmental Stage (2009–2014): Role-Specific Exploration and Job Characteristics
From 2009 to 2014, research began to diversify, incorporating workplace psychology frameworks such as the Job Demands–Resources (JD-R) model. In the WoS timeline, prominent keywords included *job burnout*, *job demands*, *emotional exhaustion*, and *job satisfaction*, signifying an increased focus on the organizational and individual predictors of burnout. The CNKI clusters reflected a parallel interest in role-specific challenges, evident in the emergence of terms such as university teachers, counselors and higher education, suggesting nuanced occupational subgroup analysis within the Chinese academic landscape.

Maturity Stage (2015–2019): Institutional Contexts and Measurement Paradigms
During this stage, global research increasingly engaged with methodological rigor and institutional implications. Keywords like *recovery*, *perceived autonomy*, *self-efficacy*, and *turnover intention* in WoS literature demonstrated a shift toward empirical validation and predictive modeling. Notably, the clusters also included career satisfaction, achievement emotions, and motivation, reflecting a more nuanced exploration of affective and motivational dimensions associated with burnout in academic settings. On the Chinese side, CNKI keywords such as private universities, psychological capital and teacher development marked a transition toward exploring structural disparities and individual resources within diverse institutional settings.

Contemporary Stage (2020–2025): Emotional Complexity, Professional Identity, and Systemic Inclusion
Recent studies reflect the field's response to systemic and psychosocial challenges, particularly in the wake of the COVID-19 pandemic. In the WoS timeline (Figure 7), newer clusters such as *professional burnout*, *teacher quality*, *regulation failure*, and *career adaptability* suggest a shift toward themes of emotional resilience, governance-related stressors, and professional identity reconstruction. Keywords like *university teachers*, *role ambiguity*, and *workplace incivility* highlight the complexity of academic labor under modern pressures. Meanwhile, CNKI data (Figure 8) emphasized terms like mental health, emotional labor, influencing factors and university faculty, indicating heightened sensitivity to emotional demands and individualized stress mechanisms within Chinese institutions. Notably, the emergence of psychosocial challenges and coping strategies underlines the growing attention to protective psychological resources and resilience-building interventions.

Discussion
This section synthesizes bibliometric and temporal evidence to contextualize teacher burnout research in higher education. The analysis covers publication growth and collaboration geographies, thematic hotspots and clustering patterns across global and Chinese corpora, and temporal shifts—especially post-2020—toward engagement, gender, turnover intention, and organizational climate. Taken together, these patterns indicate a move from stress-centric constructs to resource- and outcome-oriented inquiry, with implications for comparative research, institutional policy, and practice.

General Trends in Research on Teacher Burnout
The bibliometric findings suggest a rising trajectory of scholarly output on teacher burnout in higher education over the past two decades, both in China and globally. This reflects growing academic and policy interest in educator mental health, occupational sustainability, and

institutional reform. Internationally, research has been marked by intensified collaboration among prominent institutions in the United States, Canada, and Western Europe, notably the University of Illinois and Utrecht University, which have emerged as research hubs (Hakanen et al., 2006). Conversely, Chinese scholarship is led by institutions such as Beijing Normal University and East China Normal University, although collaboration remains fragmented, often limited to intra-institutional or regional networks. This disparity points to a need for enhanced research cooperation within China and with global partners, especially in comparative and interdisciplinary studies.

Thematic Hotspots and Clustering Patterns
Keyword cluster analysis reveals overlapping yet distinct thematic concentrations across the two corpora. Internationally, dominant topics coalesce around burnout syndrome, occupational stress, work engagement, and turnover intention, reflecting a systemic and psychological orientation; recent evidence further links burnout to intention to leave among university faculty (Zhang, Li, & Gamble, 2022) and documents pandemic-era shifts that foreground gender and higher-education contexts (Ozamiz-Etxebarria et al., 2023). By contrast, the CNKI corpus is more population- and context-specific—consistent with our CNKI clusters highlighting groups such as PE teachers, foreign-language teachers, and private-university faculty—and recent China-based syntheses and studies on EFL university instructors and resource-focused pathways (e.g., psychological capital, mindfulness) corroborate this emphasis (Yu, 2023; Liu et al., 2024; Li, 2025).

Temporal Trends in Research Focus
Temporal cluster analysis reveals divergent developmental trajectories in teacher burnout research. Globally, the literature progressed from foundational stress-related constructs to more complex themes such as institutional climate, professional identity, and demographic disparities. Recent years, particularly post-2020, have witnessed the emergence of keywords like *"engagement," "turnover intention," "gender," "role ambiguity,"* and *"workplace incivility"* — underscoring the field's increasing attention to emotional resilience and organizational justice in higher education. Notably, empirical studies—such as Zhang, Li, and Gamble (2022)—highlight that burnout significantly predicts turnover intention among faculty, with job satisfaction partially mediating this relationship, reaffirming the relevance of these thematic shifts.

In contrast, Chinese scholarship has shown a gradual but focused shift from macro-level discussions of burnout causes and policy interventions to micro-level investigations, including *"emotional labor," "psychological capital,"* and *"teacher development."* The consistent presence of terms like *"mental health"* and *"coping strategies"* suggests a growing emphasis on individualized stress responses and resource-based approaches to faculty well-being.
This analysis not only highlights the thematic complexity and the dynamic evolution of teacher burnout research across diverse contexts, but also emphasizes the imperative of incorporating cross-cultural perspectives in future investigations.

Conclusion
This comparative bibliometric study clarifies both the shared ground and the distinctive emphases in higher-education teacher-burnout research across CNKI and WoS (January 2001–June 2025). Across both corpora, psychological well-being and exhaustion constitute a

common thematic core, yet the two bodies of literature diverge in scope and problem framing: Chinese studies more often disaggregate by teacher subgroups, institutional heterogeneity, and policy implementation contexts, whereas global scholarship tends to adopt system-level, interdisciplinary perspectives that foreground organizational climate, identity, and sociodemographic determinants. The temporal patterns and burst analyses in our maps further indicate a post-2019 acceleration and a post-pandemic broadening of concerns—e.g., emotional labor, workplace incivility, and turnover intention—consistent with multi-country evidence on heightened psychosocial risk in higher-education workforces (Rahman et al., 2024; Ozamiz-Etxebarria et al., 2023).

Methodologically, the study contributes an integrated, visualization-driven account of publication trajectories, institutional landscapes, and the intellectual structure of the field, extending prior teacher-burnout bibliometrics to a cross-system comparison (Gómez-Domínguez et al., 2022). The co-occurrence clusters and timelines in our results converge on a set of robust determinants—workload, role conflict, and (lack of) institutional support—while also highlighting protective resources such as collegiality and participative leadership; these patterns align with recent systematic syntheses focused specifically on university faculty (Cadena-Povea et al., 2025).

Looking ahead, two priorities emerge. First, conceptually anchored cross-cultural designs should be advanced by explicitly modelling job demands, job and personal resources, and institutional supports within contemporary extensions of the Job Demands–Resources (JD-R) framework in higher education; such an approach can improve comparability and causal inference across settings (Ueno et al., 2025). Second, evidence-informed interventions warrant greater integration with bibliometric trend-spotting: recent meta-analytic work suggests that multicomponent and context-sensitive interventions (e.g., social-support enhancement, REBT/CBT-based programs, workload and climate reforms) can meaningfully improve faculty mental-health outcomes, though heterogeneity remains (Halat et al., 2024; Cao et al., 2025). Strengthening international collaboration around shared constructs and reporting standards will help translate these insights into culturally responsive, scalable strategies to mitigate burnout.

This study thereby makes several key contributions to the social science literature on educator well-being. First, it presents the first comprehensive bibliometric comparison of teacher burnout research between Chinese and international scholarship, revealing distinct and convergent intellectual structures. Second, by employing temporal and burst analysis, it uncovers the evolutionary pathways and emerging frontiers of the field within each context, offering a dynamic rather than static view. Finally, the findings provide an evidence-based foundation for fostering cross-cultural dialogue, designing targeted interventions, and setting future research agendas that are sensitive to both global trends and local specificities.

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