太极拳健康促进研究的知识图谱构建——一项基于 CiteSpace 的文献计量学研究

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摘要：研究目的：在“健康中国 2030”国家战略背景下，太极拳作为中华优秀传统体育文化的典型代表，蕴含的健康理念正焕发出新的价值。基于此，本研究利用 Cite Space 文献计量学软件对太极拳健康促进领域的学术文献进行分析，以直观的方式梳理太极拳健康促进领域的研究热点和发展趋势。**研究方法：**本研究以 2010-2025 年中国知网核心期刊与 Web of Science 核心合集数据库收录的相关文献为研究对象，利用 Cite Space，通过构建作者共现网络、机构合作网络和关键词共现网络，系统地进行文献计量分析。研究采用关键词聚类分析揭示学科知识结构，通过时区分布图追踪研究热点的演变路径，并结合突现词捕捉前沿动态，最终构建多维度的科学知识图谱。**研究结果：**通过检索共获得 1067 篇有效文献（知网：252 篇中文核心期刊文献；Web of Science：815 篇英文核心文献）主要研究结果如下：1.太极拳健康促进领域的研究现状分析： 1.1 发文量增长趋势。国内（CNKI）显示，2010-2016 年为缓慢增长期，年均 12-25 篇；2017-2022 年在“健康中国”政策的推动下，发文量在 14-20 篇之间大幅波动；2023 年以后，由于数据采集的滞后性，增长幅度有限；国际（WOS）显示，2010-2016 年年均增长率为 15%，2017-2022 年增长率超过 25%，预测 2023 年发文量可达 90 篇，明显高于疫情发生前的发文水平。中国学者投稿约占 WOS 文章的 50%，凸显国际参与度的提高。1.2 作者与机构合作的特点： CNKI 网络显示，作者合作密度仅为 0.0032，独立研究占主导地位，以于虞定海、吕韶钧等团队为核心，但未形成广泛合力；机构以体育院校、中医药大学为主，跨区域合作不足，体医结合实践部分薄弱；WOS 网络显示，作者合作密度（0.0066）是国内的 2 倍。Wayne、Peter M 等学者主导多中心研究，哈佛大学及其附属机构是核心，中国机构（如上海体育学院）属于高频合作，体现了全球化合作的优势。2.太极拳健康促进领域研究热点分析：2.1 关键词共现主题。CNKI 网络显示的热点主要集中在老年人（平衡、骨密度）、慢性病康复（冠心病、脑卒中）和提高生活质量方面，但对循证医学方法的应用较少。WOS 网络显示的热点主要集中在以随机对照试验 (RCT) 为核心的方法上，重点关注老年人的整体生活质量、疾病风险预防（如类风湿性关节炎）和复杂疾病（癌症、脑损伤）干预。2.2 关键词聚类演进。国内阶段特征，早期（2010-2015 年）：传统健身方法（太极拳、八段锦）和基本健康问题（睡眠质量、抑郁症）；中期（2016-2020 年）：政策驱动，扩展到大学生、慢性病管理（高血压、糖尿病）和认知健康；近期（2021-2025 年）：深化微观机制（微循环、免疫老化）和跨学科（中医和康复），出现技术驱动的主题（可视化、基因组）。国际阶段的特点： 初期（2010-2015 年）：传统干预措施（平衡、

肌肉力量）和基础康复医学： 中期（2016-2021 年）：精准管理（糖尿病、癌症相关疲劳）和心理健康（积极思考、失眠）： 近期（2022-2025 年）：神经科学（大脑激活、前额叶）与临床实践（中风指南）的整合，以技术驱动的研究（抗氧化活性、自律神经系统）为先导。3. 太极拳健康促进领域研究趋势分析：3.1 时区图演进路径。国内外均呈现出从传统干预到精准化、科技化、跨学科的演进路径，以老龄化需求和科技融合为核心驱动力。3.2 突现词动态。国内新兴方向表现为脑卒中康复、帕金森病运动疗法、大学生健康管理等；国际前沿主题表现为轻度认知障碍、慢性心力衰竭、跨文化量表验证、疼痛管理等，体现了老龄化与慢性病交叉研究的深化。**研究结论：**通过可视化分析，直观展示了太极拳健康促进研究总体脉络，研究范围从基础干预向慢性病管理、心理健康等多维健康体系。（1）研究现状：国内研究增速有限，合作网络松散；国际论文数量增加，合作深入；国内学者贡献显著，但优势不足。（2）核心热点：国内外研究都关注老年健康，但国内研究侧重于慢性病康复和中医理论，国际研究侧重于循证医学和复杂疾病干预。（3）演进趋势：精准化、科技化、跨学科是共同方向，国内研究者需要加强循证医学和科技创新，国际研究者需要深化跨文化实践转化。未来，我们要加强循证医学研究，推进多中心随机对照试验（RCT）和临床数据整合，提高成果转化效率；深化体医结合，搭建跨学科协作平台，促进中医理论、运动科学与现代医学协同创新； 加快科技赋能健康管理，开发人工智能辅助工具和开放数据平台，推动精准医疗和中医康复的智能化应用；拓展全球协作网络，积极推动体医融合发展，为后续研究方向的选择提供参考依据。

关键词：太极拳；健康促进；Cite Space；可视化；热点；趋势

Bibliometric visualization and analysis of research on health promotion involving Taijiquan— a comparison and outlook based on core Chinese and English literature

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Abstract：Objectives：Against the backdrop of the national strategy “Healthy China 2030,” Tai Chi, as a quintessential representative of China's outstanding traditional sports culture, is seeing its health philosophy gain renewed significance. Based on this context, this study employs CiteSpace bibliometric software to analyze academic literature in the field of Tai Chi health promotion, providing a visual overview of research hotspots and development trends within this domain. **Method:** This study systematically conducts bibliometric analysis using CiteSpace by constructing author co-occurrence networks, institutional collaboration networks, and keyword co-occurrence networks. The research focuses on relevant literature indexed in the CNKI Core Journals and Web of Science Core Collection databases from 2010 to 2025. Keyword clustering analysis was employed to reveal disciplinary knowledge structures,

while time-zone distribution maps traced the evolution of research hotspots. Emerging keywords were captured to track frontier dynamics, ultimately constructing a multidimensional scientific knowledge map. **Result:** A total of 1,067 valid literature sources were retrieved (CNKI: 252 Chinese core journal articles; Web of Science: 815 English core articles). The main findings are as follows: 1. Analysis of the current state of research in the field of Tai Chi health promotion: 1.1 Publication volume growth trend. Domestic (CNKI) data indicates a slow growth phase from 2010 to 2016, averaging 12–25 papers annually. From 2017 to 2022, driven by the "Healthy China" initiative, publication volume fluctuated significantly between 14 and 20 papers. Post-2023, growth remains limited due to data collection lags. International (WOS) data reveals an average annual growth rate of 15% from 2010 to 2016, exceeding 25% from 2017 to 2022. Projections indicate 2023 publication volume could reach 90 articles, markedly surpassing pre-pandemic levels. Chinese scholars contributed approximately 50% of WOS articles, highlighting increased international engagement. 1.2 Characteristics of Author and Institutional Collaboration: CNKI network analysis indicates an author collaboration density of only 0.0032, reflecting a dominance of independent research. Key teams include those led by Yu Yuding and Lü Shaojun, though broader synergies remain underdeveloped. Institutional collaborations primarily involve sports universities and traditional Chinese medicine universities, with insufficient cross-regional cooperation and weak integration of sports and medicine practices. The WOS network reveals an author collaboration density (0.0066) twice that of domestic networks. Scholars like Wayne and Peter M lead multi-center studies, with Harvard University and its affiliates at the core. Chinese institutions (e.g., Shanghai University of Sport) engage in high-frequency collaborations, demonstrating the advantages of global cooperation. 2. Analysis of Research Hotspots in Tai Chi Health Promotion: 2.1 Keyword Co-occurrence Themes. CNKI network analysis reveals hotspots concentrated in elderly populations (balance, bone density), chronic disease rehabilitation (coronary heart disease, stroke), and quality of life enhancement, though evidence-based methodologies remain underutilized. WOS network analysis reveals hotspots centered on randomized controlled trials (RCTs), emphasizing holistic quality of life in the elderly, disease risk prevention (e.g., rheumatoid arthritis), and interventions for complex conditions (cancer, brain injury). 2.2 Keyword Cluster Evolution. Domestic Phase Characteristics: Early Stage (2010–2015): Traditional fitness methods (Tai Chi, Baduanjin) and fundamental health issues (sleep quality, depression). Mid-Stage (2016–2020): Policy-driven expansion to university students, chronic disease management (hypertension, diabetes), and cognitive health. Recent phase (2021–2025): Deepening micro-mechanisms (microcirculation, immune aging) and interdisciplinary approaches (TCM and rehabilitation), with emerging technology-driven themes (visualization, genomics). International phase characteristics: Initial phase (2010–2015): Traditional interventions (balance, muscle strength) and foundational rehabilitation medicine; Mid-stage (2016–2021): Precision management (diabetes, cancer-related fatigue) and mental health (positive thinking, insomnia): Near-term (2022–2025): Integration of neuroscience (brain activation, prefrontal cortex) with clinical practice (stroke guidelines), spearheaded by technology-driven research (antioxidant activity, autonomic nervous system). 3. Analysis of Research Trends in Tai Chi Health Promotion: 3.1 Evolutionary

Pathways in the Timeline Map. Both domestic and international research exhibit an evolutionary trajectory from traditional interventions toward precision, technology-driven, and interdisciplinary approaches, driven primarily by aging demographics and technological integration. 3.2 Emergent Term Dynamics. Emerging domestic directions include stroke rehabilitation, Parkinson's disease movement therapy, and university student health management; international frontiers focus on mild cognitive impairment, chronic heart failure, cross-cultural scale validation, and pain management, reflecting deepening research at the intersection of aging and chronic diseases. **Conclusion:** Through visual analysis, the overall trajectory of Tai Chi health promotion research is intuitively presented, with studies expanding from basic interventions to multidimensional health systems encompassing chronic disease management and mental health. (1) Research Status: Domestic studies show limited growth with loose collaborative networks; international publications increase with deeper cooperation; domestic scholars contribute significantly but lack competitive advantages. (2) Core Focus Areas: Both domestic and international research emphasize elderly health, though domestic studies prioritize chronic disease rehabilitation and traditional Chinese medicine theory, while international research focuses on evidence-based medicine and complex disease interventions. (3) Evolutionary Trends: Precision, technological advancement, and interdisciplinarity represent shared directions. Domestic researchers must strengthen evidence-based medicine and technological innovation, while international researchers need to deepen cross-cultural practice translation. Moving forward, we must: - Strengthen evidence-based medical research by advancing multicenter randomized controlled trials (RCTs) and clinical data integration to enhance translation efficiency; - Deepen the integration of physical activity and medicine by establishing interdisciplinary collaboration platforms to foster synergistic innovation among TCM theory, exercise science, and modern medicine; - Accelerate technology-enabled health management through AI-assisted tools and open data platforms to advance precision medicine and intelligent applications in TCM rehabilitation; - Expand global collaboration networks to actively promote integrated physical activity and medical development, providing reference frameworks for future research directions.

Keywords: tai chi; health promotion; Cite Space; visualization; Hotspots; Trends