




# Global research trends in workplace health promotion, 1983 to 2024

## A bibliometric exploration

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### Abstract

**Background:** Initiatives for workplace health promotion (WHP) has gained increasing importance in the face of changing workplace dynamics and new corporate health policies. Understanding how this field has evolved allows us to identify knowledge gaps, guide new research, and strengthen evidence-based organizational interventions. This study aimed to identify existing research gaps, predominant thematic trends, and emerging ideas related to health promotion in the workplace.

**Methods:** A descriptive bibliometric review was conducted on a retrospective database, analyzing relevant scientific literature using quantitative techniques that allow assessing the impact and influence of publications in this field. The database used was Scopus, and data extraction was performed on December 13, 2024.

**Results:** The findings reveal a steady increase in WHP research since 1983. In the field of WHP, 76 countries have participated, reflecting an extensive and diverse global collaboration network. Of these, 29 countries stand out for having produced more than 5 publications each, underscoring their significant contribution to the field. The most frequently used terms, “health promotion,” “occupational health,” and “workplace,” reflect the central focus of this area of study.

**Conclusions:** The study identifies regional gaps and highlights the need for differentiated approaches based on population and context. Furthermore, it confirms the positive impact of occupational health promotion on individuals, organizations, and societies, reinforcing its strategic value globally. Based on the trends detected, future lines of research are proposed to strengthen scientific evidence and practical action in this area.

**Abbreviations:** ILO = International Labour Organization, OSH = Occupational Safety and Health, PAHO = Pan American Health Organization, TWH = Total Worker Health, WHO = World Health Organization, WHP = Workplace Health Promotion.

**Keywords:** bibliometric analysis, health promotion, occupational health, public health, working conditions

## 1. Introduction

The dissemination of scientific production in the field of occupational safety and health (OSH) is essential, as it not only shares research findings but also guides public policy formulation and prioritizes research areas. This dissemination is crucial for generating evidence-based scientific and technical knowledge on working conditions and the health of the working population.<sup>[1,2]</sup>

A global review of trends is equally important for identifying the most current and relevant research topics in occupational health promotion, ensuring that scientific efforts align with the needs of the workplace environment.<sup>[3]</sup>

In a globalized context, workplace health promotion (WHP) is key to ensuring safe and healthy environments. Strengthening OSH not only reduces risks and accidents but also enhances productivity and worker well-being, adapting to various work situations and contributing to the sustainable development of organizations.<sup>[4]</sup>

Since 1950, the World Health Organization (WHO) and the International Labour Organization (ILO) signed the first agreement to address occupational health issues, and in 1986, the Ottawa Charter defined health promotion as a process that empowers people to take control of their health, including improving working conditions. These milestones have guided

The authors have no funding and conflicts of interest to disclose.

The authors confirm that the data supporting the findings of this study are available within the article.

This study was waived from ethical approval or institutional review, as it is a review of already published records.

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How to cite this article: Amaya M, Gómez-Salgado J, Gómez-García AR, Escobar-Segovia K. Global research trends in workplace health promotion, 1983 to 2024: A bibliometric exploration. *Medicine* 2025;104:41(e44747).

Received: 09 January 2025 / Received in final form: 05 May 2025 / Accepted: 02 September 2025

<http://dx.doi.org/10.1097/MD.0000000000044747>

the evolution of WHP, integrating public policies, disease prevention, and healthy work environments.<sup>[5]</sup>

Any definition of a healthy work environment should align with WHO's definition of health: "A state of complete physical, mental, and social well-being, and not merely the absence of disease."

Definitions of a healthy work environment have evolved significantly in recent decades. Initially focused almost exclusively on the physical work environment (in the traditional occupational health and safety model, considering physical, chemical, biological, and ergonomic risks), the definition has expanded to include health habits, psychosocial factors (work organization and workplace culture), and connections to the community, as well as everything that may have a profound effect on employee health.<sup>[6]</sup>

WHP has evolved according to national regulations. In the 1990s, Sweden and Germany led the way with approaches focused on ergonomics and risk prevention. In 2003, the European Union integrated guidelines on psychological well-being. More recently, Japan (2010) and Australia (2015) adopted strategies to balance work-life integration, reflecting a comprehensive approach to workplace health.<sup>[7,8]</sup>

In Latin America and the Caribbean, the Lima Charter (2006) highlighted the need to strengthen occupational health systems. The ILO Declaration (2013) in Brazil emphasized integrated policies and participation in occupational health, while the Action Plan (2014) from the Pan American Health Organization (PAHO) and the ILO established guidelines to improve occupational health and safety in the region, focusing on prevention and well-being.<sup>[9-11]</sup>

The implementation of WHP programs varies significantly between regions. Developed countries often have well-established frameworks and adequate resources, while developing regions face challenges such as lack of funding and inadequate infrastructure. This disparity highlights a global inequality in the development and accessibility of WHP initiatives.<sup>[12]</sup>

The lack of OSH systems has a dual impact: it affects workers' quality of life and well-being, and it reduces business competitiveness and inhibits economic growth. Weak enforcement of labor regulations exacerbates this situation, generating additional costs for businesses and society.<sup>[13]</sup>

The systematic collection and analysis of reliable data has evolved, but comparing trends and data remains a challenge. In countries with well-established data collection systems, the lack of information on nonfatal accidents and occupational diseases is common. It is essential for countries to develop effective data collection systems and improve their use for reporting and analysis.<sup>[14]</sup>

This study aims to analyze, through bibliometrics, the evolution of research on WHP between 1983 (the year selected due to the oldest article present in the selected database) and 2024. It will identify trends, emerging topics, and the predominance of preventive or educational approaches, contributing to scientific knowledge and improving practices in occupational health.

Key questions to explore include: What is the predominant focus in research on WHP: risk prevention or health education? What are the main trends and emerging topics related to the future challenges of OSH? How has academic interest in WHP evolved in response to changes in the work environment?

This study will provide a comprehensive overview of the field and facilitate the development of more effective strategies adapted to the transformations in the work environment. WHP improves employee well-being, reduces absenteeism, increases productivity, and fosters a healthier, more collaborative, and productive work environment.<sup>[15]</sup>

Workplaces have a unique potential to support public health initiatives and tackle global health issues through the implementation of various health promotion strategies.<sup>[16]</sup>

## 2. Methods

### 2.1. Study design

A bibliometric review was conducted using quantitative techniques to assess the influence and impact of scientific works, helping to discern the most significant contributions and emerging research areas. This study was waived from ethical approval or institutional review, as it is a review of already published records.

An essential part of these analyses is the use of bibliometric maps, which allow for a detailed study of the cognitive structure and its dynamics over time within a specific academic field.

For this purpose, VOSviewer software was used, a tool that enables the construction and visualization of bibliometric networks for analyzing a specific intellectual group over the course of the research, utilizing elements from scientific publications such as authors, journals, keywords, references, and other bibliographic features. This provides information on the field of study, including its origins, development, and trends.<sup>[17]</sup>

### 2.2. Identification of research questions

- What has been the evolution of scientific production in occupational health promotion globally?
- Which research areas have been most prominent among the countries where information was found?

### 2.3. Study phases

The procedure followed to conduct the bibliometric analysis was structured in 5 phases, as shown in Figure 1. Several authors have emphasized the importance of structuring bibliometric reviews in sequential phases to ensure rigor and comprehensiveness. The number and specificity of these phases can vary depending on the complexity of the topic and the objectives of the research.<sup>[18]</sup>

**2.3.1. Phase 1: search criteria in the research field.** In this phase, search criteria were established to select relevant documents. The goal was to identify studies related to WHP. Keywords were determined to cover both topics, as excluding any of them could lead to the omission of important articles.

To address health promotion, the following keywords were selected: "health promotion" and "safety promotion." To specify prevention in the workplace, the terms chosen were: "occupational safety," "at work safety," and "workplace safety." Table 1 shows the keywords supported by MeSH terms, ensuring precision and relevance in the bibliometric review.

**2.3.2. Phase 2: database and document selection.** For this study, the Scopus database was selected due to its extensive coverage and esteemed position in the academic field. It is important to note that December 13, 2024, refers to the date of the final data extraction, ensuring the temporal relevance of the analyzed information.

**2.3.3. Phase 3: search strategy.** The search equation formulated to link the dimension of health promotion in the workplace was as follows:

TITLE-ABS-KEY ("occupational safety" OR "at work safety" OR "workplace safety" AND "health promotion") AND (EXCLUDE (DOCTYPE, "le") OR EXCLUDE (DOCTYPE, "sh") OR EXCLUDE (DOCTYPE, "no"))

After the initial results, exclusion criteria were applied, as described in Figure 1, to refine the selection and ensure the inclusion of documents that explicitly represent the relationship between health promotion within the workplace.

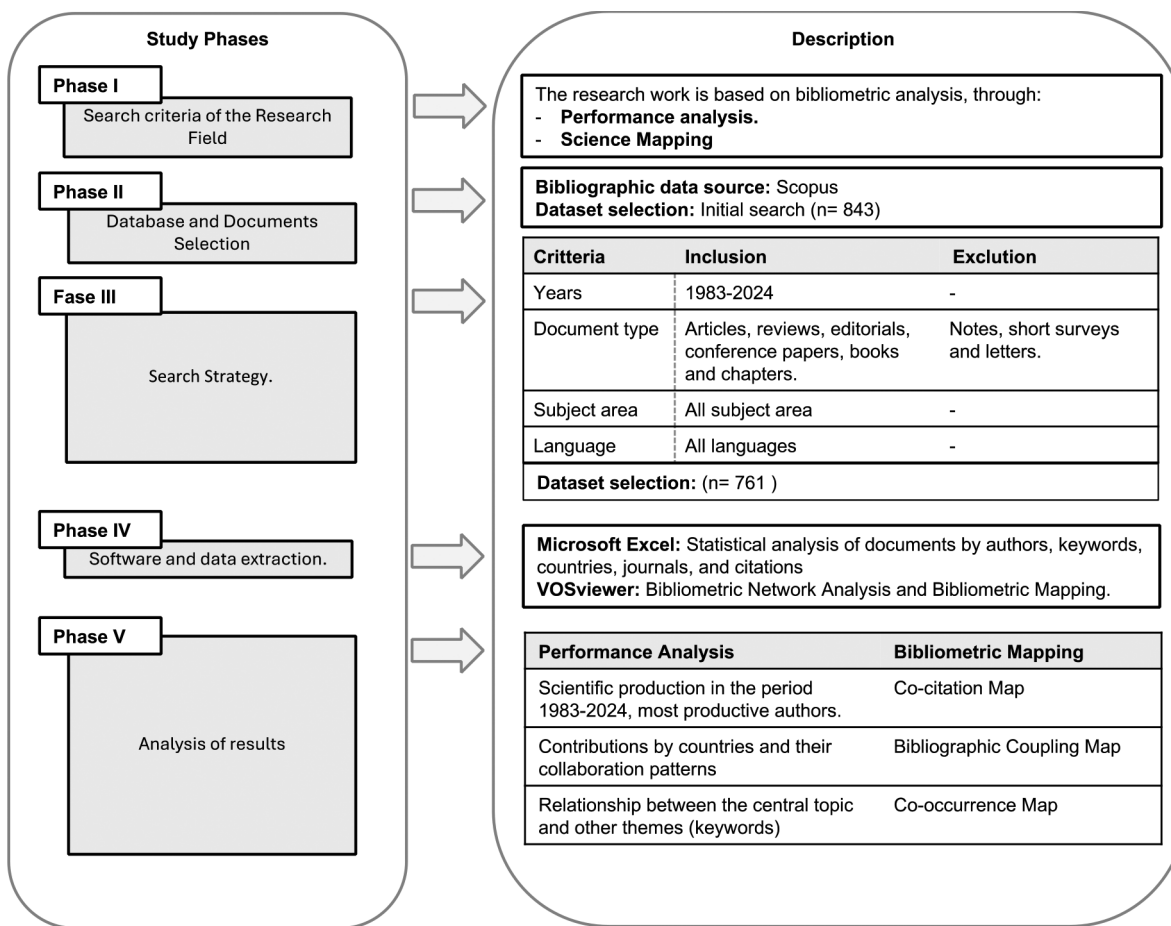


Figure 1. Flowchart of research methodology.

**Table 1**  
**Relationship between selected keywords and MeSH terms.**

Selected keyword	MeSH term
"Health promotion"	Health promotion
"Safety promotion"	Accident prevention/safety management
"Occupational safety"	Occupational safety
"At work safety"	Occupational safety/occupational health
"Workplace safety"	Workplace/ occupational safety

**2.3.4. Phase 4: software and data extraction.** For data entry and quality control, Microsoft Excel 2024, included in Microsoft Office 2024, was used. Two-way tables were created to control the quality of the information, facilitating the detection of errors in the entered data. This work was conducted by 2 authors, and in cases of uncertainty regarding a document, a third author was consulted to resolve the issue.

**2.3.5. Phase 5: analysis of results.** This exploration provides a comprehensive overview of the quantitative characteristics of studies conducted in the field of WHP. At the same time, scientific mapping offers a spatial representation of the results obtained. By utilizing tools such as VOSviewer, a freely available software developed for constructing and visualizing bibliometric networks – including co-authorship, co-citation, and keyword co-occurrence networks – it is widely used in scientometric analyses due to its intuitive interface. This tool enables the generation of maps based on citation data, making relationships and inherent patterns between documents, authors, and key

terms discernible. This, in turn, helps to identify thematic clusters, highlight research areas, recognize academic collaborations, and track the evolution of expertise within the examined field.<sup>[19]</sup>

The study included a performance analysis, evaluating scientific production (1983–2024), collaboration patterns, and key terms. Additionally, scientific mapping was performed, highlighting co-citation maps, bibliographic coupling, and co-occurrence, identifying relevant and emerging thematic areas.

Figure 1 describes the process followed for the bibliometric review, divided into 5 phases. A single researcher conducted the search independently. The Scopus database was used (n = 843 documents), and then the same researcher selected the inclusion and exclusion criteria (n = 761 documents).

### 3. Results

#### 3.1. Performance analysis

Figure 2 shows the production by years of scientific documents with an exponential trend line.

#### 3.2. Contribution by countries and their collaboration patterns

In the field of WHP, 76 countries have participated, reflecting an extensive and diversified global collaboration network. Of these, 29 countries stand out for having produced more than 5 publications each, highlighting their significant contribution to the field.

Table 2 presents the top 10 countries with the highest number of published documents. Leading the list is the

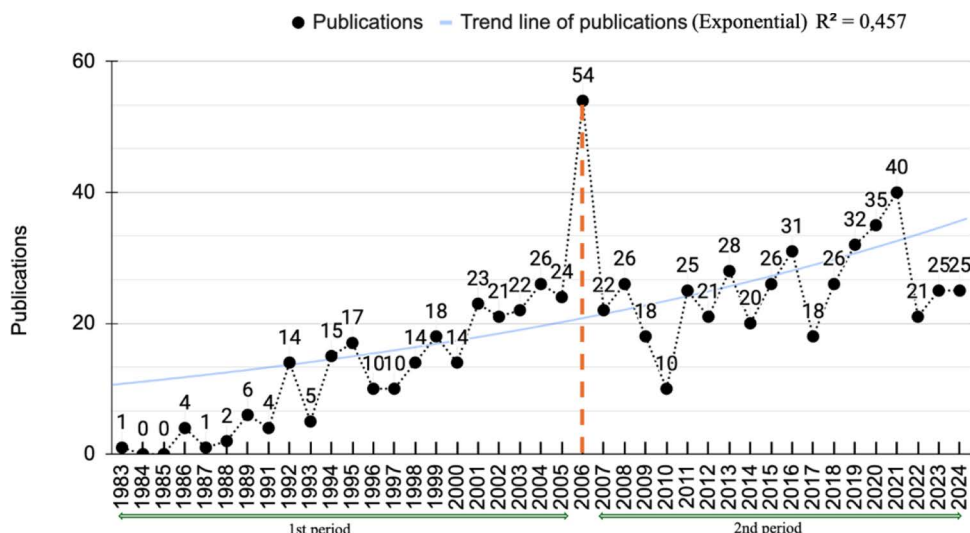


Figure 2. Annual scientific production of documents.

**Table 2**  
Top 10 countries with the most publications.

Country	Documents	Citations
United States	293	6729
United Kingdom	72	1158
Germany	53	436
Canada	45	865
Australia	34	884
Italy	32	412
Japan	26	236
Netherlands	17	215
Finland	17	319
India	16	210

United States with 293 publications, and the highest number of citations, accumulating a total of 6729 citations for its published works. This suggests that the United States has conducted significant research in the field of WHP and has left a substantial mark on the scientific community. Other countries, including the United Kingdom, Germany, Canada, Australia, and Italy, have also made notable contributions in terms of publication quantity. These countries not only have a considerable number of publications but also receive a significant number of citations, indicating that their researchers are actively engaged in the field and are well-recognized for their contributions.

Figure 3. shows Bibliographic Coupling Analysis of countries, each node in the map represents a country that has contributed to the research. The size of each node corresponds to the number of publications from that country, illustrating its contribution to research in this domain.

The lines connecting the nodes represent collaboration ties between countries, with the thickness indicating the “strength” of the collaboration. This strength is measured by the number of jointly published works. Countries such as the United States, the United Kingdom, Germany, Canada, and Australia stand out due to their high number of connections, suggesting intensive collaborations with other nations in this research area.

Beyond the number of links, the “strength” of these ties was also evaluated, with the United States and the United Kingdom having the most powerful connection strength.

The proximity of nodes on the map can be interpreted as an indicator of the intensity of collaboration between the respective

countries. For example, the closeness between the nodes representing the United States, the United Kingdom, and Canada suggests close collaborations between these nations. The same observation applies to Japan, Thailand, and Vietnam, as well as to Italy, Turkey, and Ireland.

### 3.3. Analysis of intellectual structure

**3.3.1. Co-occurrence maps.** From the total analyzed production, 1369 keywords were obtained, of which 52 were repeated at least 5 times. Table 3 shows the most used keywords in these publications. As expected, some of the top-ranked terms include “health promotion,” “occupational health and safety,” “workplace health,” and “health promotion in the workplace.”

In Figure 4, the network is composed of 7 clusters, each represented by a specific color (in order of importance): red, green, blue, yellow, purple, turquoise, and orange.

Each cluster contains the most used concepts in the research, and the size of each concept corresponds to its frequency of appearance. Connections between concepts are represented as a network, revealing the relationships between them. Concepts that are closely related are positioned nearer to each other, while those with weaker or no connections are placed further apart. This representation provides an insightful overview of the conceptual landscape of the research.

In the red cluster the main key concepts used are WHP, health, implementation, occupational medicine, physical activity, policy, prevention, risk factors, well-being, workers, workplace, COVID-19, worksite. The interconnection between these concepts is fundamental for the development of policies that promote health promotion in the workplace with a comprehensive approach.

In the green cluster, the main key concepts used are construction industry, developing countries, health education and promotion, health promotion, occupational health services, OSH, risk assessment, risk management, workplace safety. These concepts are interconnected and refer to occupational health promotion and safety education as essential tools to improve working conditions in the construction industry, especially in developing countries.

As for the blue cluster, the main key concepts used are health protection, leadership, public health, small business, total worker health, wellness, workplace health, workplace wellness. These interconnected concepts provide a framework for developing and implementing strategies to promote

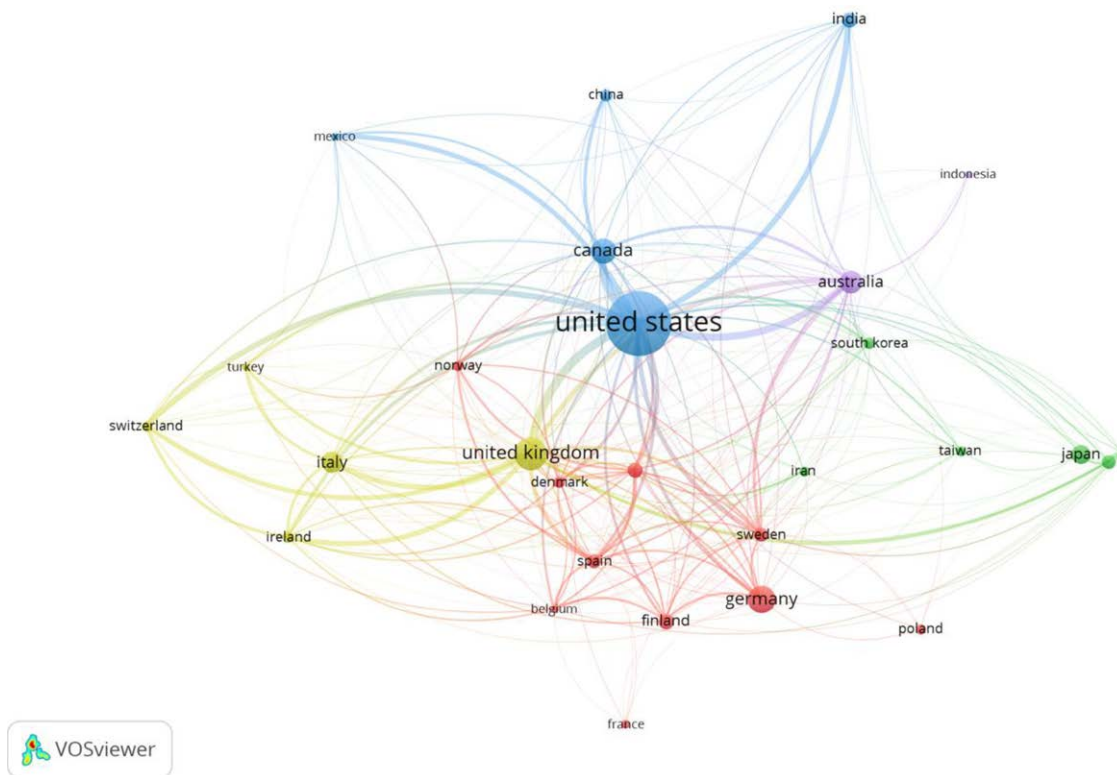


Figure 3. Bibliographic coupling network of countries.

workplace wellness in all types of organizations, including small businesses.

In the yellow cluster the main key concepts used are intervention, mental health, occupational hazards, research, safety, training, and work. These interconnected concepts contribute to the creation of training and research interventions for safety and mental health, thus addressing psychosocial risks at work.

In the purple cluster the main key concepts used are agriculture, epidemiology, health and safety, injury, safety culture, stress. The interconnection of these concepts allows the development of integrated strategies that optimize safety and health in the agricultural sector, promoting a culture of safety and using epidemiological tools.

In the turquoise cluster, the main key concepts used are ergonomics, hazards, safety climate, work organization. Together, these concepts interrelate and reinforce each other to create a comprehensive OSH system.

Finally, in the orange cluster, the main key concepts used are injury prevention, musculoskeletal disorders, occupational health, and occupational safety. These concepts are closely interconnected in the well-being of the worker, forming an integral preventive cycle.

### 3.4. Prominent authors and author co-citation

The relevance of an author in their field of study is reflected in the number of citations their work receives. A total of 12,512 citations were counted across 761 documents. Regarding the most cited authors, 126 were analyzed, selected based on the criterion of having at least 20 citations.

Table 4 summarizes these data and shows the ten most prolific authors in the area. Of this group, Sorensen G, Stoddard A.M. and Goetzel R.Z. are the most referenced authors in the field. Sorensen G. is not only the most prolific author, but his publications have a recognized quality in the scientific community. This result is confirmed in the network of co-citation of

Table 3

Keywords with the most occurrences.

Keyword	Occurrences
Health promotion	89
Occupational safety and health	65
Occupational health	61
Workplace health promotion	34
Total worker health	33
Occupational safety	27
Workplace	26
Safety	21
Prevention	19
Intervention	13

authors where he is a fundamental node (Fig. 5). Barbeau E.M. and Pronk N.P. stand out with 115 and 114 publications respectively, accumulating 109 citations individually.

These findings suggest that these authors are the most influential in this field, not only because of the volume of their publications, but also because of the impact of their research and their collaborative work with other authors,<sup>[20-23]</sup> as shown in Table 5.

Using VOSviewer software for an author co-citation analysis, key leaders in the field were identified based on their frequently cited works. Specifically, within the research topic, Sorensen G, Stoddard A.M., and Goetzel R.Z. are not only frequently cited but also mentioned alongside other authors, underscoring their substantial influence.

## 4. Discussion

The bibliometric approach is a powerful tool for the rapid and efficient review of large volumes of information in a semi-automated manner. This methodology allows for the structuring



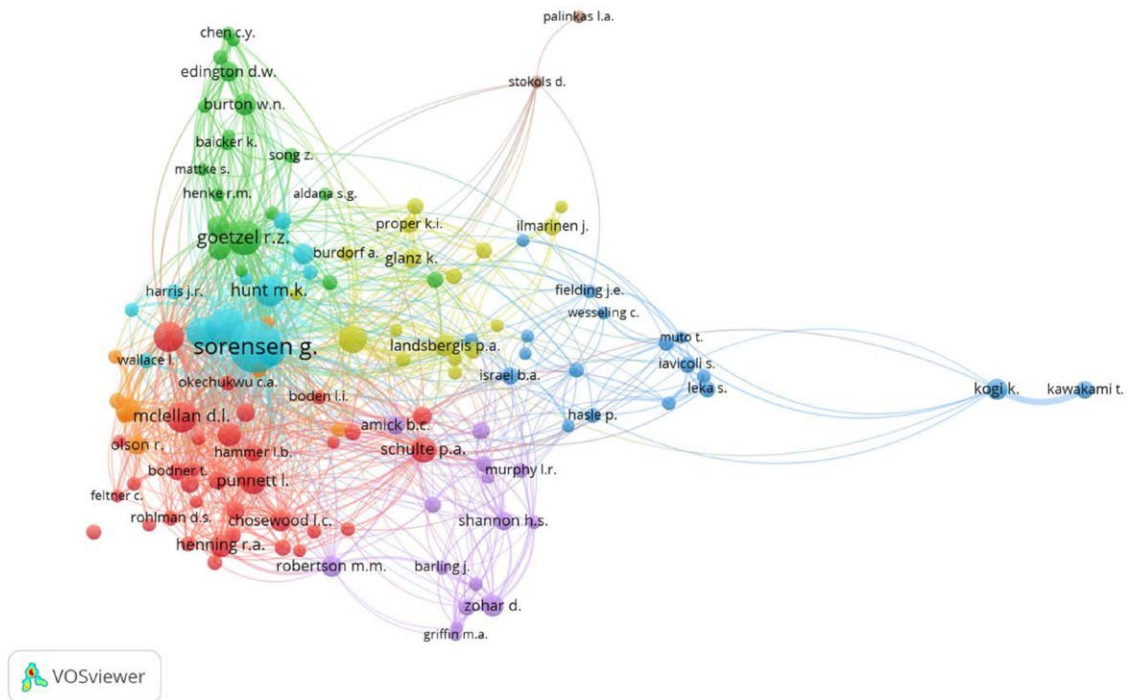


Figure 5. Author co-citation network.

Authors	Title	Source	Citation
[20]	Relative effectiveness of worker safety and health training methods	American Journal of Public Health	456
[21]	Worksite wellness programs for cardiovascular disease prevention: A policy statement from the American heart association	Circulation	215
[22]	Workplace health protection and promotion: A new pathway for a healthier-and safer-workforce	Journal of Occupational and Environmental Medicine	137
[23]	Preventing chronic disease in the workplace: A workshop report and recommendations	American Journal of Public Health	112

Entity	Event	Date	Objective
ILO, Regional Office for Asia and the Pacific	Action Plan on Occupational Safety and Health in the Asia-Pacific Region	March 2006	Develop and implement a regional action plan to improve working conditions and promote occupational safety and health
European Union (EU)	Strengthening the European Framework Directive on Occupational Safety and Health	April 2006	Introduce new measures and requirements to improve labor conditions in EU member states
ILO	Occupational Safety and Health Promotional Framework Convention (C187)	June 2006	Establish a framework for the continuous promotion of a prevention culture in occupational safety and health

ILO = International Labour Organization.

Collaborative studies between the United States and the United Kingdom total 14 collaborations. Notable research topics include:

- Construction Sector: Studies addressing health promotion at construction sites, evaluating working conditions and strategies to improve workers' well-being.<sup>[33,34]</sup>
- Industrial Sector: Research focusing on participatory organizational interventions to improve health and well-being in the foodservice industry.<sup>[35]</sup>
- Commercial Sector: Studies analyzing health protection and promotion strategies specifically designed for small businesses, identifying best practices that can be implemented in these environments.<sup>[36]</sup>
- Policy Comparisons: Studies comparing health promotion policies and practices to identify the most effective ones in occupational health promotion.<sup>[37]</sup>

Some studies provide a comprehensive view of how various interventions and policies can improve occupational health promotion and disease prevention in the workplace. Special

emphasis is placed on specific populations and environments, providing valuable recommendations for implementing effective strategies in different workplace contexts.<sup>[29,38-40]</sup>

Figure 4 shows the co-occurrence map of keywords, where the central keywords and their interrelationships can be distinguished. The term "health promotion" emerges as the most frequent, identifying it as a central theme in the reviewed literature. It is evident that health promotion stands out as a dominant area of interest in this bibliometric review. The recurrent use of the keywords "occupational health" and "occupational safety and health" suggests that the relationship between health promotion and its impact on occupational safety is a significant area of focus in literature.

Highlighted by the frequency of the term "workplace health promotion," there is a clear concern for workplace safety, emphasizing the concern about how occupational health

promotion can impact the overall health of workers, which in turn may enhance disease prevention in the workplace. “Total worker health” integrates occupational safety, health promotion, and well-being, addressing the full spectrum of worker health needs.

Regarding the specificity of the studies, the keyword “*occupational safety*” indicates an interest in specific components of health promotion and how a broader approach encompassing the physical, mental, and social health of workers could benefit both parties. Similarly, terms like “*workplace*” point to ongoing efforts to improve working conditions to prevent workplace accidents.

The keywords “*safety*” and “*prevention*” are closely related to occupational health promotion. By implementing safety and prevention measures, encouraging healthy habits among workers, training them in safety and health matters, and promoting their participation in prevention programs, companies can create a safe and healthy work environment that benefits workers, businesses, and society at large, including deliberative dialogs.<sup>[41]</sup>

This bibliometric review of occupational health promotion reflects the changing landscape of OSH and the growing emphasis on a holistic approach to worker well-being.<sup>[42]</sup> Organizations are increasingly adopting a proactive approach to OSH, implementing programs and initiatives that go beyond traditional safety measures to address broader aspects of workers’ health and well-being.<sup>[39,43,44]</sup>

## 5. Conclusions

Scientific production in occupational health promotion has evolved significantly in recent years; however, research has primarily concentrated in Europe and North America due to their substantial contributions.

Despite these advancements, there is a notable shortage of studies representing other regions, particularly Latin America. This geographic bias limits a comprehensive global understanding of occupational health promotion, suggesting that more research is needed in underrepresented regions to provide a more global perspective on the challenges and solutions.

The key research areas identified globally include:

- **Workplace training and education:** Examining how training and education impact health promotion in workplace settings.
- **Work-life balance:** Developing and evaluating interventions that promote a healthy balance between work demands and personal life.
- **Workplace culture:** Analyzing how organizational culture influences the adoption of healthy habits, particularly in relation to nutrition.
- **Healthy aging:** Promoting interventions to encourage healthy aging among workers, especially as life expectancy in the workforce increases.

Occupational health promotion involves developing strategies tailored to specific work environments, such as training, work-life balance, and organizational culture, while evaluating interventions to improve worker productivity and well-being, overcoming organizational barriers.

## Author contributions

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**Writing – review & editing:** Melody Amaya, Juan Gómez-Salgado, Antonio Ramón Gómez-García, Kenny Escobar-Segovia.

## References

- [1] Gómez García AR, Bermúdez PRS, Serpa AV, Silva-Peñaherrera MS, Purga MR. Propuesta metodológica para el establecimiento de líneas de investigación en seguridad y salud en el trabajo. *Innova Res J*. 2016;1:13–25. <https://www.redalyc.org/articulo.oa?id=737880612002>.
- [2] Gómez García AR, Ferrer-Villalobos M, Freire-Constante L, Suasnavas-Bermúdez P, Merino-Salazar P, Gómez-García A. Análisis bibliométrico de los artículos originales publicados en la revista *Ciencia & Trabajo*. *Cienc Trab*. 2017;19:81–5.
- [3] Rushton L. The global burden of occupational disease. *Curr Environm Health Reports*. 2017;4:340–8.
- [4] Guerrero Roca A. Promoción de La Salud En El Trabajo. Fundación para la Universitat Oberta de Catalunya (FUOC); 2019. Available at: [https://openaccess.uoc.edu/bitstream/10609/148559/4/Modulo4\\_PromocionDeLaSaludEnElTrabajo.pdf](https://openaccess.uoc.edu/bitstream/10609/148559/4/Modulo4_PromocionDeLaSaludEnElTrabajo.pdf)
- [5] International Labour Organization. Safety and Health at the Heart of the Future of Work: Building on 100 Years of Experience. ILO; 2019. Available at: [https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/documents/publication/wcms\\_686762.pdf](https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/documents/publication/wcms_686762.pdf)
- [6] Takala J, Hämäläinen P, Sauni R, Nygård CH, Gagliardi D, Neupane S. Global-, regional- and country-level estimates of the work-related burden of diseases and accidents in 2019. *Scand J Work Environ Health*. 2024;50:73–82.
- [7] Verra SE, Benzerga A, Jiao B, Ruggeri K. Health promotion at work: a comparison of policy and practice across Europe. *Saf Health Work*. 2019;10:21–9.
- [8] Seah BZQ, Horie S, Gan WH, Nagano C, Tan AKW, Mori K, Koh DSQ. A comparison of periodic health examinations and workplace health screening for workers in Singapore and Japan. *Ind Health*. 2024;63:93–106.
- [9] Junes FR. Occupational Safety and Health in Latin America and the Caribbean: Overview, Issues and Policy Recommendations. Inter-American Development Bank (IDB); 2002. doi: 10.18235/0008406.
- [10] International Labour Office Regional Office for Latin America and the Caribbean. 2006 Labour Overview Latin America and the Caribbean. ILO / Regional Office for Latin America and the Caribbean; 2007. Available at: [https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40americas/%40ro-lima/documents/publication/wcms\\_186250.pdf](https://www.ilo.org/sites/default/files/wcmsp5/groups/public/%40americas/%40ro-lima/documents/publication/wcms_186250.pdf)
- [11] Rebelo P, Girón LG, Buchta W, et al. Manifesto of rio de janeiro on public occupational health policies: towards strengthening, follow-up and implementation. *Revista brasileira de medicina do trabalho*. 2018;16:521–3.
- [12] Ruiz-Dominguez F, Stegeman I, Dolz-López J, Papartyte L, Fernández-Pérez D. Transfer and implementation process of a good practice in workplace health promotion. *Int J Environ Res Public Health*. 2021;18:5254.
- [13] Neves CMA. Safety and health at work as a factor of competitiveness of organizations. *Adv Saf Manag Hum Factors*. 2019;5:1–12.
- [14] Li T, Vedula SS, Hadar N, Parkin C, Lau J, Dickersin K. Innovations in data collection, management, and archiving for systematic reviews. *Ann Intern Med*. 2015;162:287–94.

- [15] Goetzel RZ, Ozminkowski RJ. The health and cost benefits of work site health-promotion programs. *Annu Rev Public Health*. 2008;29:303–23. doi: 10.1146/annurev.publhealth.29.020907.090930.
- [16] Andersen LL. Health promotion and chronic disease prevention at the workplace. *Annu Rev Public Heal*. 2024;45:337–57.
- [17] van Eck NJ, Waltman L. Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*. 2010;84:523–38.
- [18] Passas I. Bibliometric analysis: the main steps. *Encyclopedia*. 2024;4:1014–25.
- [19] McAllister JT, Lennertz L, Mojica ZA. Mapping a discipline: a guide to using VOSviewer for bibliometric and visual analysis. *Sci Technol Libr*. 2022;41:319–48.
- [20] Burke MJ, Sarpy SA, Smith-Crowe K, Chan-Serafin S, Salvador RO, Islam G. Relative effectiveness of worker safety and health training methods. *Am J Public Health*. 2006;96:315–24.
- [21] Carnethon M, Whitsel LP, Franklin BA, et al; American Heart Association Advocacy Coordinating Committee. Worksite wellness programs for cardiovascular disease prevention: a policy statement from the American Heart Association. *Circulation*. 2009;120:1725–41.
- [22] Hymel PA, Loepke RR, Baase CM, et al. Workplace health protection and promotion: a new pathway for a healthier-and safer-workforce. *J Occup Environ Med*. 2011;53:695–702.
- [23] Sorensen G, Landsbergis P, Hammer L, et al; and the Workshop Working Group on Worksite Chronic Disease Prevention. Preventing chronic disease in the workplace: a workshop report and recommendations. *Am J Public Health*. 2011;101(SUPPL. 1):S196–207.
- [24] Paz-Barzola D, Escobar-Segovia K. Oil Pollution and Public Health:aBibliometric Review of Trends, Key Contributions, and Future Perspectives. *Environ Qual Manag*. 2025;34:1–12.
- [25] Weinstein M. Lifestyle, Stress and Work: Strategies for Health Promotion. In: *Health Promotion in the Working World*. Springer; 1989. [https://doi.org/10.1007/978-3-642-74283-5\\_4](https://doi.org/10.1007/978-3-642-74283-5_4)
- [26] Yang XC, Zhang XY, Liu YH, et al. Association between workplace health promotion service utilisation and depressive symptoms among workers: a nationwide survey. *Public Health*. 2024;231:64–70.
- [27] Feltner C, Peterson K, Weber RP, et al. The effectiveness of total worker health interventions: a systematic review for a national institutes of health pathways to prevention workshop. *Ann Intern Med*. 2016;165:262–9.
- [28] Leso V, Carugno M, Carrer P, et al. The Total Worker Health® (TWH) approach: a systematic review of its application in different occupational settings. *BMC Public Health*. 2024;24:2037.
- [29] Macario E, Hannon SW, Baker R, Branche CM, Trahan C. Preventing falls in residential construction: effectiveness of engaging partners for a national social marketing campaign. *Am J Ind Med*. 2015;58:809–23.
- [30] Zhou Z, Goh YM, Li Q. Overview and analysis of safety management studies in the construction industry. *Saf Sci*. 2015;72:337–350.
- [31] Schill AL, Chosewood LC. The NIOSH total worker health™ program: An overview. *J Occup Environ Med*. 2013;55(12 SUPPL):S8–11.
- [32] Punnett L, Cherniack M, Henning R, Morse T, Faghri P; The CPH-NEW Research Team. A Conceptual Framework for Integrating Workplace Health Promotion and Occupational Ergonomics Programs. *Public Health Rep*. 2009;124:16–25. <http://www.cdc>
- [33] Campbell MA, Gunning JG. Strategies to improve mental health and well-being within the UK construction industry. *Manag Procurement Law*. 2020;173:64–74.
- [34] Hanna ES, Markham S. Constructing better health and wellbeing? Understanding structural constraints on promoting health and wellbeing in the UK construction industry. *Int J Work Heal Manag*. 2019;12:146–159.
- [35] Vecchio-Sadus AM, Griffiths S. Marketing strategies for enhancing safety culture. *Saf Sci*. 2004;42:601–19.
- [36] Pronk NP, McLellan DL, Dennerlein JT, et al. Building capacity for integrated occupational safety, health, and well-being initiatives using guidelines for total worker Health1 approaches. *J Occup Environ Med*. 2021;63:411–21.
- [37] Beck D, Schnabel PE. Verbreitung und Inanspruchnahme von Maßnahmen zur Gesundheitsförderung in Betrieben in Deutschland. *Gesundheitswesen*. 2010;72:222–7.
- [38] Vitrano G, Micheli GJL. Effectiveness of Occupational Safety and Health interventions: a long way to go. *Front Public Health*. 2024;12:1292692.
- [39] Sousa Basto P, Ferreira P. Mobile applications, physical activity, and health promotion. *BMC Health Serv Res*. 2025;25:1–11.
- [40] Ghahramani A, Prokofieva M, Pangratius de Courten M. Health promotion campaigns using social media: association rules mining and co-occurrence network analysis of Twitter hashtags. *BMC Public Health*. 2025;25:1–17.
- [41] Godhwani K, Saka AK, Ramasamy V, et al. Deliberative dialogue for co-design, co-implementation and co-evaluation of health-promoting interventions: a scoping review protocol. *Res Involv Engagem*. 2025;11:24.
- [42] Ozurmaz S, Mandiracioglu A. Healthy lifestyle behavior of employees in small and medium-sized enterprises in Aydin, Turkey. *Pakistan J Med Sci*. 2017;33:404–10.
- [43] Micheli GJL, Cagno E. Dealing with SMEs as a whole in OHS issues: Warnings from empirical evidence. *Saf Sci*. 2010;48:729–33.
- [44] Coffey M, Dugdill L. Policies alone are not enough: Workplace health development in the public, private and voluntary sectors. *Critical Public Health*. 2006;16:233–43.