

GLOBAL RESEARCH TREND EVOLUTION IN OCCUPATIONAL HEALTH AND SAFETY OVER THE PAST DECADE

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Abstract. Occupational health and safety (OHS) is crucial for any organisation to create a safe work environment and protect employees' well-being. The field of OHS has evolved significantly over the past decade, with pandemic distractions, evolving labour trends and technological advancements. Thus, this study focuses on investigating the evolution and key trends in scholarly publications related to occupational health and safety. Accordingly, a Scopus-based systematic review was conducted to analyse the journal articles related to this field. As the key outputs of this research, leading countries, authors and journals were identified related to this field. Further, this research reviewed the evolution of research themes and trends over the past decade as a basis for future research. The outcomes of the analysis reveal that the number of publications related to the OHS has increased consistently. Further, the United States was identified as the leading country, while Miyamoto T. was identified as the leading author of the field. According to the Scopus database, "International Journal of Environmental Research and Public Health" was recognised as the prominent journal which has the highest number of publications. Heeding research themes and trends, analysis reveals that the current trends are moving towards an integration between novel technology, such as artificial intelligence, with occupational health and safety in recent years. This study provides a comprehensive understanding of global OHS research trends over the last decade by highlighting the evolution of themes and key contributors in this field.

Keywords. Occupational Health and Safety (OHS), Workplace Health, Workplace Safety, Trends Over Year

1. Introduction

Occupational health and safety (OHS) is increasingly recognized as crucial for organizational performance, worker well-being, and social sustainability (Cottam, 2024; Kavouras et al., 2022). It encompasses the physical, psychological, and social well-being of workers, and core values contributes to promote health across global workplaces (Guillemin & Nicholas, 2022). OHS is crucial for functions of organizations and employee well-being, particularly for workers who face unique vulnerabilities (de Cieri & Lazarova, 2020). Effective OHS implementation requires to build up a positive safety culture, encouraging knowledge transfer across organizations, and promoting learning from incidents and near-misses (Duryan et al., 2020). Even though the implementation of OHS management systems has developed over time, the challenges persist, particularly in developing countries (Johanes et al., 2022).

Although, OHS initiatives significantly reduce absenteeism and healthcare costs for companies, annually, millions of work-related fatalities and accidents still occur (Lu, 2022). The primary purpose of occupational health and safety on avoiding sickness and illness has been shifted to a holistic view of considering the positive impact of work on an individual's health (Guillemin & Nicholas, 2022). Implementation of OHS measures, such as creating safe work environments and reducing work-related accidents and diseases, can significantly impact employee productivity (Hartati et al., 2024). The interventions include workplace inspections, enforcement activities, training, campaigns, and the introduction of technical devices are effective means to improve the working environment. OHS Legislative and regulatory policies and regulations have been contributed to reduce injuries and fatalities (Andersen et al., 2019). International standards, such as ISO 45001, provide guidance for effective OH&S management (Cottam, 2024).

Occupational health and safety (OHS) has evolved significantly over the past few decades. Lindholm et al. (2024) stated that, research areas have shifted from focusing on traditional risks to addressing new and emerging risks related to changing work patterns, workforce

demographics, climate change, new materials, viruses and technological advancements. Risk assessment and management at the organizational level remain central, while individual-level research has expanded from physiological issues to mental health and quality of life (Wang et al., 2020). ISO standards for occupational health and safety (OHS) have evolved significantly in response to industry accidents and health concerns. The introduction of ISO 45001 in 2018 marked a major development, followed by guidance standards addressing psychological health, infectious diseases, and pandemic-related issues (Cottam et al., 2024). Digitalization of work has led to non-routine, complex tasks and job redesign, potentially impacting workers' well-being and inducing work-related stress (Akpa, 2018). Artificial intelligence, robotics and other digital technologies is revolutionizing OHS by offering solutions to responsive approaches to work safety and ergonomics. These improvements will reshape the workplace safety landscape, with the goal of making workers' environments safer and healthier (Koh & Tan, 2024).

According to Akpa (2018), proactive measures and sustainable control strategies are crucial for ensuring safe and healthy workplaces in the future. The COVID-19 pandemic has further highlighted the importance of OHS measures in protecting workers' health and well-being (Lu, 2022). Johanes et al. (2022) revealed that, future research will identify the challenges associated with the deployment of OSHMSs and their causal factors, establishing a foundation to enhance OSHMS acceptance in the workplace. These studies highlight the importance of continued research in OHS to address evolving workplace challenges and leverage new technologies for improved safety outcomes.

Recent reviews have examined the evolution of OHS research from 1930 to 2016, highlighting risk assessment, prevention, and accident analysis as key focus areas (Sánchez et al., 2017). From 1960, there was an obvious trend of increasing number of OHS publications and it reached to the peak in 2018. Numerous studies have explored various aspects of OHS such as the technology implications, mental well-being, and emerging risks (Wang et al., 2020). Febriyani et al. (2023), conducted a bibliometric analysis of OHS literature with related to the dynamic system from 2012–2022. However, the majority of OSH studies has concentrated on micromanagement, with few systematic and detailed literature reviews and evolutionary processes based on an evolutionary perspective (Wang et al., 2020). Also, these studies reveal that there is still room for improvement in understanding the effectiveness of OHS intervention and support for concrete guidance (Vitrano & Micheli, 2024).

Considering this gap of analyzing the evolution of OHS research in recent past years and this space for more improvements, this study will aim to identify the evolution and trends of key publications in the field of occupational health and safety in past ten years. Through identifying OSH research evolution this research contributes to the global OSH discourse and basis for future research.

2. Methodology

Over the last two decades, bibliometric analysis has emerged as a widely used quantitative research methodology for identifying key publications within a particular research field (Zupic & Čater, 2015). Accordingly, a bibliometric analysis of the literature was conducted as the primary research methodology to explore global research patterns in the field of OHS. For the analysis the Scopus database was selected as the sole source for literature retrieval because it is one of the largest and most comprehensive abstract and citation databases of peer-reviewed literature. Accordingly, the systematic review of literature indexed in the Scopus database was conducted, focusing on the publications from 2015 to 2024. This ten-year time frame aligns with the common practice in systematic reviews of limiting literature searches to the past decade, which helps to ensure the inclusion of recent interventions and maintain the relevance (Phokontsi et al., 2020).

To ensure the retrieval of relevant and high-quality publications, a title-based search strategy was developed using a combination of commonly used OHS terms. The search criteria were determined, including “occupational safety”, “occupational health”, “occupational health and safety”, “occupational safety and health”, “workplace safety”, “workplace health”, “workplace safety and health” and “workplace health and safety”. The search was conducted using the search string [TITLE (“occupational safety” OR “occupational health” OR “occupational health and safety” OR “occupational safety and health” OR “workplace safety” OR “workplace health” OR “workplace safety and health” OR “workplace health and safety”)]. Further, publications were refined using the filters available on Scopus's search tool: (i) DOCUMENT TYPES=(Articles) AND (ii) SOURCE TYPE=(Journals) (iii) LANGUAGE =(English) to recognise the high-quality publications. Accordingly, 3282 journal articles were selected as the basis for bibliometric analysis.

The selected publications were analysed using several bibliometric analysis techniques: the co-occurrence of words and countries, leading countries, authors and journals and the evolution of publications over time in the field of occupational safety and health. Further, Scopus analysis tools and VOS viewer software were used for generating the graphical representations of the analysis.

3. Results

3.1. LEADING COUNTRIES PUBLISHED ON OCCUPATIONAL HEALTH AND SAFETY

A co-authorship analysis was conducted using VOS viewer, with countries as the unit of analysis and the full counting method applied. This approach allowed to examine the international collaboration patterns in occupational health and safety research. In the resulting visual map in Figure 2, larger nodes represent the countries with a higher number of co-authored publications. Considering the largest node of the visual map, United States, indicates their central role in global research collaboration. Other countries with large nodes included the United Kingdom, China, Australia, and Canada. These nodes highlight their contributions and active involvement in the OHS field.

Although, the nodes represent the countries such as South Korea, Israel, Ukraine, Slovenia are linked to the cluster, they are positioned away from the central cluster in VOS viewer visual map in Figure 1. These countries conduct less frequent OHS related studies and having a less collaboration with centrally clustered countries.

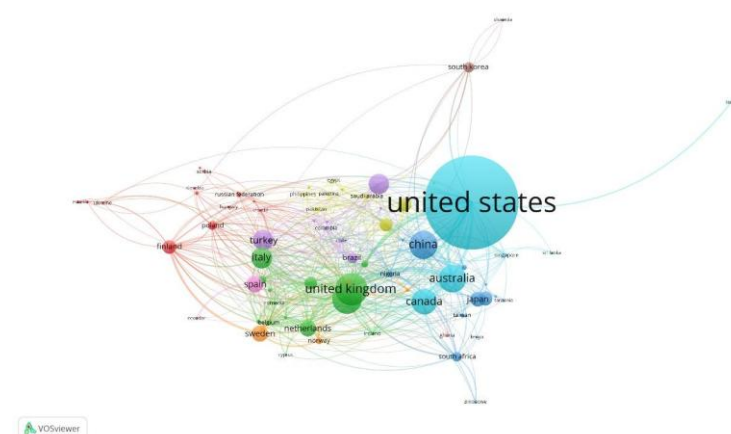


Figure 1: Leading Countries

The bar chart in Figure 2 represents a complementary country wise analysis conducted using Scopus data. In this visualization, countries are displayed along the Y-axis, while the X-axis indicates the number of published documents. This also represents the United States as the country which published the highest number of OHS related publications. Following that, United Kingdom. Germany, China, and Australia presented closely aligned publication counts, reflecting their active research involvement and growing contribution to the domain.

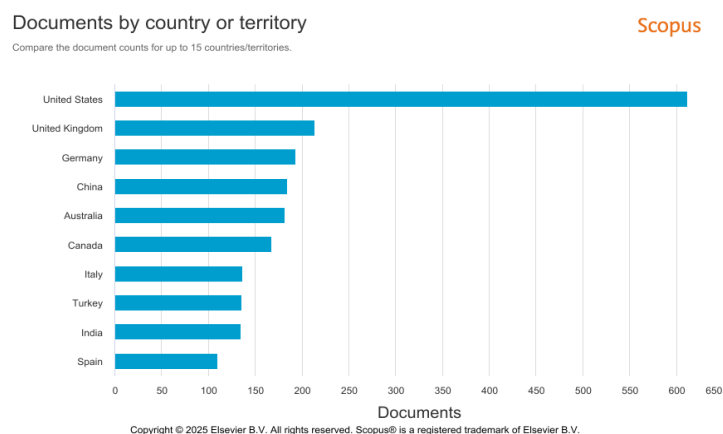


Figure 2: Documents by Countries

3.2. EVOLUTION OF THE NUMBER OF JOURNAL ARTICLES PUBLISHED ON OCCUPATIONAL HEALTH AND SAFETY

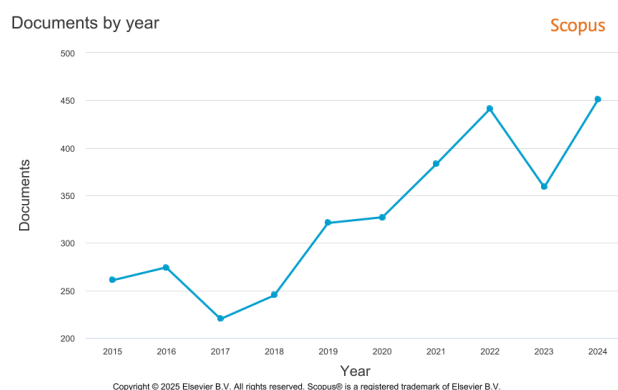


Figure 3: Documents by Years

Figure 3 illustrates the evolution of the number of publications in the field of occupational health and safety from 2015 to 2024. Upon the analysis, the total number of publications within this period is 3282 and the graph reveals an overall upward trajectory of publication fluctuations, which varied from nearly 200 to 500 publications. This indicates a steady growth of publications, reflecting a rising of research interest in OHS research domain. Based on the Scopus database, 261, 274, and 220 publications were identified in 2015, 2016, and 2017 respectively. This illustrates that the number of publications remained relatively stable, with a slight increase in 2016, followed by a decline in 2017. However, again the graph shows a consistent growth in the number of publications from 2018 onwards to 2022. Notably, the graph shows a significant surge in publications from 2020, may be attributed to the global pandemic situations which brought heightened attention to OHS field. Nevertheless, the number of publications related to the field of occupational health and safety decreased to 359 in 2023. Even though this decline was

followed by a strong rebound in 2024, it returned to the previous peak levels with 451 publications.

Overall, the graph indicates an upward trajectory in the number of publications related to the field of occupational health and safety, conveying the sustained scholarly interest in this subject area. Notably, the dramatic escalation in publications within 2020 – 2022 could correlate with the COVID-19 pandemic and its aftermath. In conclusion, this graph shows the occupational health and safety as a dynamically evolving field with the increment of scholarly publications.

3.3. LEADING AUTHORS PUBLISHED ON OCCUPATIONAL HEALTH AND SAFETY

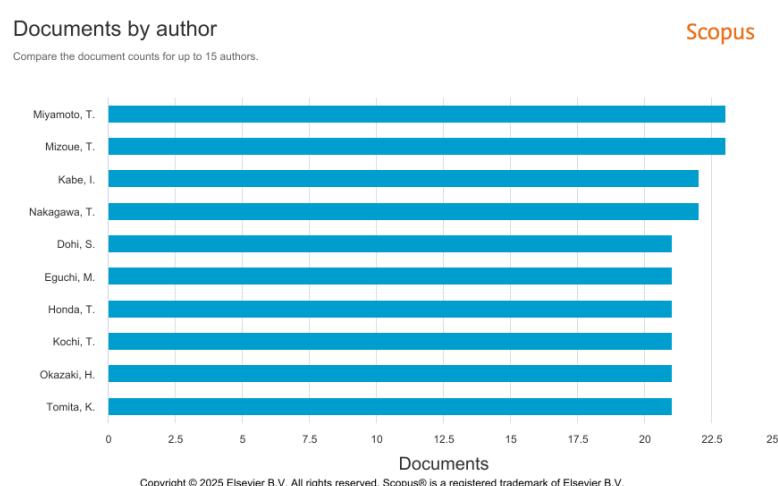


Figure 4: Documents by Authors

Based on the analysis, various researchers have contributed significantly to the field of occupational safety and health across different subject areas. Accordingly, Figure 4 highlights the most influential authors who have extensively published research in the field based on data from Scopus spanning the years 2015 to 2024.

As the graph interprets, the most prolific author in this domain is Miyamoto T. and Mizoue T., who have contributed more than twenty-two (22) publications to Scopus within this period. Following closely, Kabe I., Nakagawa T., Dohi S., Eguchi M., Honda T., Koch T., Okazaki H. and Tomita K have also given a significant contribution towards the field of occupational health and safety with more than twenty (20) publications each. Accordingly, the analysis results elaborate that there is a noticeable concentration of prolific authors who worked on a wide range of subtopics in this research domain. Further, it represents the strong and sustained research focus and long-term commitment to the OHS field. Understanding the leading authors and author networks can provide valuable insights for literature reviews and future research in this field.

3.4. LEADING JOURNALS PUBLISHED ON OCCUPATIONAL HEALTH AND SAFETY

The Figure 5 shows the comparative overview of the prominent journals and their publication trends in the field of occupational safety and health from 2015 to 2024. According to the analysis, BMS Public Health, Safety Science, Journal of Occupational and Environmental Medicine, International Journal of Occupational Safety and Ergonomics, and International Journal of Environmental Research and Public Health are the leading journals in this field. 'International Journal of Environmental Research and Public Health' was the prominent journal that published the highest number of articles related to occupational health and safety. In addition to that, the

'Safety Science' journal also has a relatively high number of publications reflecting a significant contribution to the field of OHS.

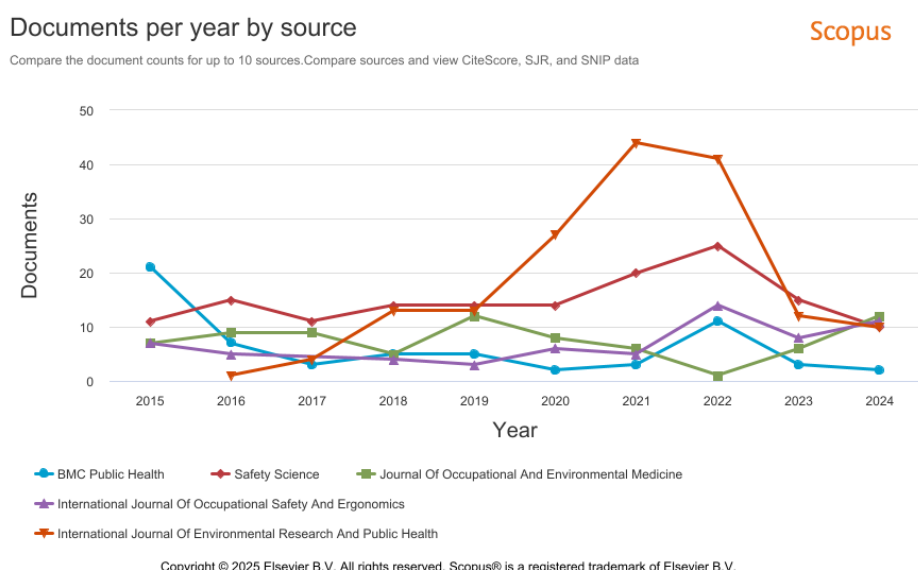


Figure 5: Documents per Year by Source

Heeding the fluctuations of publications, the number of publications has remained relatively stable across all the journals from 2015 to 2018. In the aftermath, a notable uptrend is observed from 2019 onwards, in 'International Journal of Environmental Research and Public Health', 'Safety Science', and 'International Journal of Occupational Safety and Ergonomics'. Accordingly, the 'International Journal of Environmental Research and Public Health' has reached its peak in 2021 with nearly 50 publications, while 'Safety Science', 'International Journal of Occupational Safety and Ergonomics' and 'BMS Public Health' journals have reached their peaks in 2022.

3.5. CO-OCCURRENCE ANALYSIS OF KEYWORDS IN OCCUPATIONAL HEALTH AND SAFETY PUBLICATIONS

Co-occurrence analysis of the key words was conducted using VOS viewer to examine the evolution and emerging trends within the field of occupational health and safety over the past decade. The unit of analysis was selected as the author keywords to identify the frequently co-occurring terms used by authors in OHS articles. By setting the minimum number of key word occurrence to 10, a total of 160 keywords were identified initially for the analysis. However, search strings used during the initial data retrieval process were excluded from the final analysis to ensure relevance and accuracy and final keyword count is considered as 115.

The visual mapping generated through VOS viewer in Figure 6 enables to highlight the dominant research themes and their interrelationships between key topics. Co-occurrence analysis generated 09 thematic clusters in different colors. Frequently appeared keywords are close together in a cluster. The keywords with the highest occurrence are represented by larger nodes, indicating their central importance in the field. Among these, the most frequently occurring keywords included "workplace health promotion", "health promotion", "covid-19" and "risk assessment". In addition, "occupational health services", "construction", "mental health", "risk management" are other key study areas captured with high frequent in the clusters. Table 1 illustrates the keyword clustering results across nine thematic clusters highlighting diverse workplace health and safety concerns.

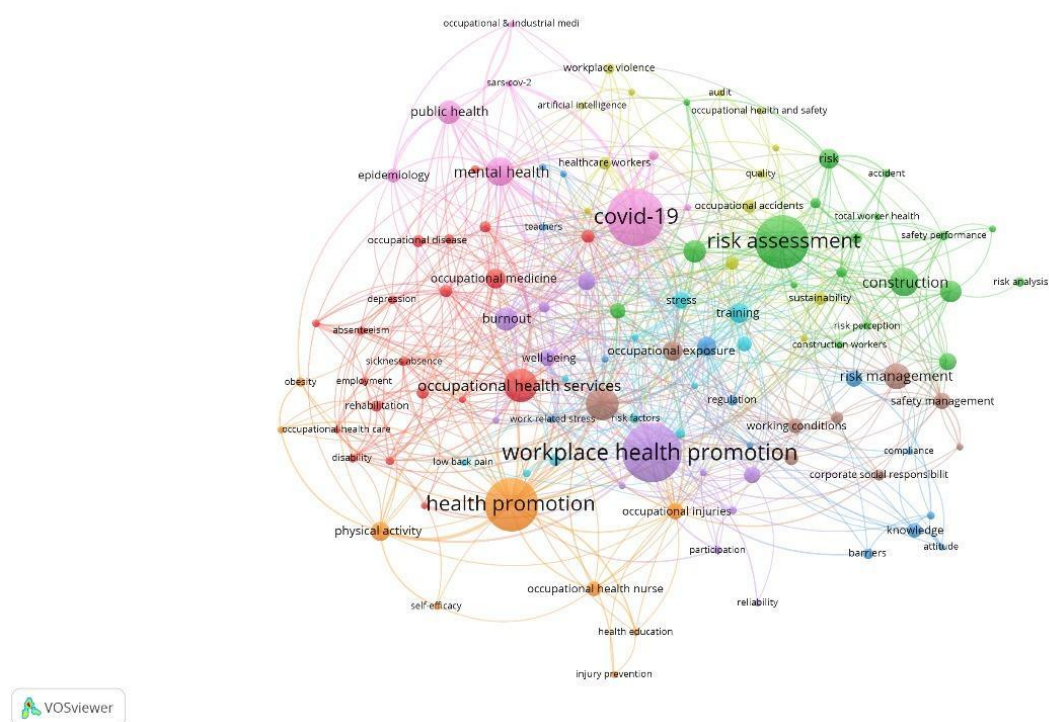


Figure 6: Keywords co-occurrence

Table 1: Clusters

Cluster1 (20Items)	Cluster 2 (19Items)	Cluster 3 (14Items)	Cluster 4 (13Items)	Cluster 5 (12Items)	Cluster 6 (11Items)	Cluster 7 (9Items)	Cluster 8 (9Items)	Cluster 9 (8Items)
Absenteeism	Accidents	Attitude	Artificial intelligence	Burnout	Climate change	Exercise	Corporate social responsibility	Covid-19
Depression	Construction	Barriers		Covid-19 pandemic	Exposure	Health education		Employee health
Disability	Construction industry	Compliance	Audit				Leading indicators	Epidemiology
Employment	Construction safety	Education	Accident	Effectiveness	Hazards	Health promotion		Mental health
Gender	Construction workers	Health care workers	Healthcare workers	Job satisfaction	Health hazards	Injury prevention	Occupational exposure	
Occupational disease	Construction workers	Healthcare	Machine learning	Occupational hazards	Injury		Occupational health nursing	Occupational & industrial medicine
Occupational health care	Ergonomics	Healthcare	Mining	Occupational hazards	Low back pain	Obesity		
	Injuries	Knowledge	Occupational accidents	Participation	Occupational health hazard	Occupational health nursing	Occupational risk	Pandemic
	Leadership	Psychosocial risks		Productivity			Prevention	Public health
	Legislation							

Occupational health service	Musculoskeletal disorder	Rational emotive occupational coaching	Occupational diseases	Reliability	Personal protective equipment	Occupational injuries	Risk management	Sars-cov-2
Occupational health services	Risk analysis	Regulation	Quality of life	Well-being	Risk factors	Physical activity	Safety management	
Presentism	Risk assessment	Safety culture	Sustainability	Work engagement	Stress	Self-efficacy	Working conditions	
Primary health care	Risk perception	Teachers	Sustainable development	Workplace health promotion	Training			
Process evaluation	Safety climate	Work stress	Workplace violence					
Rehabilitation	Safety performance	Work-related stress						
Return to work	Total worker health							
Screening	Virtual reality							
Sick leave	Exercise							
Sickness								
Absence								
Surveillance								
Work ability								

3.5.1 Cluster 1- Psychosocial Rehabilitation and Return-to-Work Support

This cluster is focused on psychosocial aspects of occupational health in relation to absenteeism, mental health, and disability. Research in this area often linked to return-to-work programs and psychosocial support in post-injury rehabilitation. There is a move towards a more holistic approach, transitioning from risk assessment to proactive management of psychosocial risks and opportunities (Di Tecco et al., 2023).

3.5.2 Cluster 2- Occupational Risk Prevention in Industries

This cluster is focused on accidents, injuries, and construction industry risks, often tied to manual labor sectors where ergonomics and leadership play a role in preventing workplace harm. Also,

this cluster indicate more studies on legislation and safety climate which is required to prevent risks in high-hazard industries that are traditionally prone to workplace harm.

3.5.3 Cluster 3- Safety Education and Organizational Compliance

Keywords in cluster 3 represent the health care education, safety culture, in workplaces and highlight the different barriers for promoting education such as attitudes, work stress, compliance and regulations. Wang et al. (2020) also emphasised that at the organizational level risk assessment and management remain consistent research hotspots, while safety culture, mental health, and quality of life have emerged as core topics in recent years.

3.5.4. Cluster 4- Digital Transformation in Occupational Health and Safety

Technological integration in OHS, including Artificial intelligence, machine learning, and data-driven audits for hazard prediction, showing a growing interest in digital solutions. Studies in this area investigate the use of predictive tools such as machine learning and digital audits to enhance hazard identification and prevention, pointing to a shift toward proactive, tech-driven safety management.

3.5.5. Cluster 5- Covid -19 pandemic and Resilience

This cluster is centred around Covid-19 pandemic and explored burnout, job satisfaction, and work engagement, highlighting the need for psychological resilience among healthcare workers. Considering the resilience, it focuses on productivity, promoting workplace health, well-being and work engagement to meet the health crisis.

3.5.6. Cluster 6 - Environmental Hazards and Protective Strategies

This cluster explored environmental hazards, such as climate change and toxic exposure, relevant to radiology units and nuclear plant safety. These include traditional risks like asbestos and crystalline silica, as well as emerging concerns such as nano plastics and the impact (Laurent, 2024). It also emphasised the risk factors of hazards and usage of personal protective equipment in hazard prevention.

3.5.7. Cluster 7- Workplace Health Promotion and Personal Well-being

Here, the focus is on individual health behaviours and health promotion, covering topics like physical activity, stress, and self-efficacy. Exercise, physical activities, obesity prevention are linked to improved physical and mental well-being, reduced absenteeism, and enhanced job performance.

3.5.8. Cluster 8- Governance and Organizational Responsibility in OHS

This cluster highlighted organizational roles, such as corporate social responsibility, safety policies, prevention and risk management. It suggests that organizational commitment and leadership are vital for fostering sustain-able safety cultures.

3.5.9 Cluster 9- Public Health Preparedness and Occupational Medicine

This cluster addressed epidemiological trends and pandemics, especially public health preparedness and occupational medicine. Together, these clusters present a comprehensive view of how OSH research has evolved to address both traditional risks and emerging global health challenges.

3.6. TRENDS IN KEYWORDS IN OCCUPATIONAL HEALTH AND SAFETY PUBLICATIONS

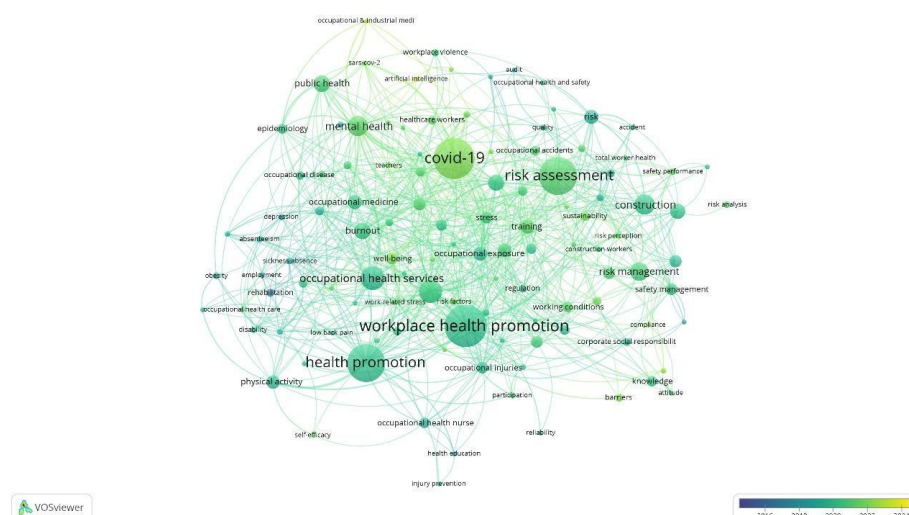


Figure 7: Trends in keywords

The Figure 7 demonstrates the key research themes and their interconnections in the field of occupational health and safety from 2015 to 2024 time period. Here, the colour gradient from blue to yellow indicates the temporal evolution of research trends throughout the time period. Further, node size represents the frequency of keyword occurrence, and the links illustrate the relationships between them.

Accordingly, the graph illustrates that several distinct research clusters and the temporal evolution of their themes. Accordingly, in the initial time phase (2015 – 2018), scholarly focus was laid on the primary occupational safety and health research areas such as “occupational injuries”, “health education”, “disability” and “physical activity. Subsequently, a noticeable shift occurred between 2019 and 2021 towards the psychological aspects of workplace health and safety. Accordingly, the analysis results reveal a significant increase in publications related to “mental health”, “well-being” and “occupational stress” in this time period. Further, these themes are slightly interconnected with various research domains including “occupational health services” and “healthcare workers”. Afterwards, “Covid-19” emerged as an extensively researched domain reflecting its global disruptive influence. Further, this is closely linked with keywords such as “risk assessment”, “healthcare workers”, “occupational exposure” and “public health”.

The graph reflects that research areas have shifted towards areas such as “risk management”, “safety performance”, “construction”, “compliance” and “sustainability” in recent past years (2022-2023). Following this, “artificial intelligence”, “telemedicine”, “corporate social responsibility” and “technological innovation” emerged as the contemporary research areas. This dynamic progression of research themes highlights the adaptability of occupational health and safety to the global needs. Further, it has evolved in response to emerging workplace challenges and societal needs, providing a roadmap for potential future areas of exploration.

4. Conclusion

This study provides a comprehensive overview of the evolution and research trends in the field of Occupational Health and Safety (OHS) over the past decade (2015–2024) through a systematic review and bibliometric analysis using Scopus data and VOSviewer. The findings highlight how OHS research has adapted to global challenges and shifting workplace priorities over the past decade. In the earlier period (2015–2018), research primarily focused on traditional OHS topics such as occupational injuries, health education, physical activity, and

disability. A notable transition occurred between 2019 and 2021, with increasing scholarly focus on mental health, well-being, and occupational stress marking a shift towards psychosocial dimensions of workplace health. The COVID-19 pandemic (2020–2022) then significantly leads to increase the attention towards risk assessment, occupational exposure, healthcare workers' safety, and public health preparedness. The author keyword co-occurrence analysis reveals that, key thematic research areas in workplace health promotion, COVID-19, risk assessment, mental health, and occupational health services. In recent years, new research themes have emerged. including digital transformation in OHS with applications of artificial intelligence, machine learning, corporate social responsibility, sustainability, and technological innovation. These trends signal a growing shift toward data-driven digitalised approaches in safety management.

In country wise contribution to the OHS researches, the United States is identified as the leading contributor, followed by the United Kingdom, China, Australia, and Canada, indicating their lead role in global OHS research. In terms of scholarly contributions, authors such as Miyamoto T. and Mizoue T. identified with over 22 publications each during the review period. The International Journal of Environmental Research and Public Health was identified as the leading journal, with its highest number of publications in 2021. Considering the trend analysis, there is a steady increase in OHS-related publications. A significant surge was observed between 2020 and 2022, likely influenced by the global impact of the COVID-19 pandemic. Although there was a slight drop in 2023, publications have increased again in 2024. This implies the continued interest and relevance in the field. This study encounters certain limitations as it solely based on Scopus-indexed publications and limited to author keywords, which may exclude relevant studies from other databases. Theoretically, this study contributes to the conceptual expansion of OHS by integrating psychosocial, technological, and environmental perspectives. Practically, it offers actionable insights for designing future OHS policies, workforce training, digital safety tools, and organizational interventions aligned with emerging risks and societal expectations. Overall, this study highlights the dynamic growth of OHS research in recent years, identifies key contributors and themes, and provides a foundation for future studies, policy development and improving workplace health and safety worldwide.

5. References

- Akpa, P. N. (2018). PW 0348 Innovative solutions on the effects of emerging risks related to occupational safety and health arising from digitalization of work. *Injury Prevention*, 24, A208–A209. <https://api.semanticscholar.org/CorpusID:81385146>
- Andersen, J. H., Malmros, P., Ebbenhøj, N. E., Flachs, E. M., Bengtson, E., & Bonde, J. P. (2019). Systematic literature review on the effects of occupational safety and health (OSH) interventions at the workplace. In *Scandinavian Journal of Work, Environment and Health* (Vol. 45, Issue 2, pp. 103–113). Nordic Association of Occupational Safety and Health. <https://doi.org/10.5271/sjweh.3775>
- Cottam, M. (2024). SS09-01 Building global consensus for occupational health and safety (OH&S) management through ISO standardization - Part 1. *Occupational Medicine*, 74. <https://doi.org/10.1093/occmed/kqae023.0092>
- Cottam, M., Humphreys, L., & Swingewood, S. (2024). SPL28 The Contribution of ISO standards to the effective management of Occupational Health and Safety, and how you can contribute to their development. *Occupational Medicine*, 74. <https://doi.org/10.1093/occmed/kqae023.0039>
- de Cieri, H., & Lazarova, M. B. (2020). “Your health and safety is of utmost importance to us”: A review of research on the occupational health and safety of international employees. *Human Resource Management Review*, 100790. <https://api.semanticscholar.org/CorpusID:226342404>
- Di Tecco, C., Persechino, B., & Iavicoli, S. (2023). Psychosocial Risks in the Changing World of Work: Moving from the Risk Assessment Culture to the Management of Opportunities. *La Medicina Del Lavoro*, 114(2), e2023013. <https://doi.org/10.23749/mdl.v114i2.14362>
- Duryan, M., Smyth, H., Roberts, A., Rowlinson, S., & Sherratt, F. (2020). Knowledge Transfer for Occupational Health and Safety: Cultivating Health and Safety Learning Culture in Construction Firms.

- Febiyani, A., Suhardi, B., Laksono, P., & Prastawa, H. (2023). Bibliometric Analysis of Occupational Health and Safety in Relation to Dynamic System. <https://doi.org/10.3233/ATDE230078>
- Guillemin, M., & Nicholas, R. (2022). Core Values at Work — Essential Elements of a Healthy Workplace. *International Journal of Environmental Research and Public Health (IJERPH)*, 19, 12505. <https://doi.org/10.3390/ijerph191912505>
- Hartati, S., Nurdin, I., & Galeria, B. (2024). Implementation of occupational safety and health (OSH) in preventing employee work accidents at the regional disaster management agency (BPDP) Purworejo regency. *CosmoGov*. <https://api.semanticscholar.org/CorpusID:271346306>
- Johanes, M., Mark, M., & Steven, J. (2022). A global review of implementation of occupational safety and health management systems for the period 1970–2020. *International Journal of Occupational Safety and Ergonomics*, 29, 821–836. <https://api.semanticscholar.org/CorpusID:249094933>
- Kavouras, S., Vardopoulos, I., Mitoula, R., Zorpas, A. A., & Kaldis, P. (2022). Occupational Health and Safety Scope Significance in Achieving Sustainability. *Sustainability*, 14(4). <https://doi.org/10.3390/su14042424>
- Koh, D., & Tan, A. (2024). Applications and Impact of Industry 4.0: Technological Innovations in Occupational Safety and Health. *Safety and Health at Work*, 15(4), 379–381. <https://doi.org/https://doi.org/10.1016/j.shaw.2024.09.001>
- Laurent, L. (2024). SPL25 RESEARCH AND OCCUPATIONAL HEALTH ACTIVITIES WITHIN THE PEROSH NETWORK. *Occupational Medicine*, 74(Supplement_1), 0–0. <https://doi.org/10.1093/occmed/kqae023.0036>
- Lindholm, M., Reiman, A., & Tappura, S. (2024). The evolution of new and emerging occupational health and safety risks: A qualitative review. *Work (Reading, Mass.)*, 79, 503–521. <https://api.semanticscholar.org/CorpusID:269564783>
- Lu, J. (2022). Occupational Safety and Health amid the Global Pandemic. *Acta Medica Philippina*, 56(1). <https://doi.org/https://doi.org/10.47895/amp.v56i1.5023>
- Phokontsi, L., Mweetwa, L. L., Mweetwa, L., Tlhoiwe, T., Muya, C. K., Mudawarima, T., Silumesii, L., Chisenge, S., & Phillips, J. (2020). A Systematic Review of the Role of Physiotherapy Interventions in Palliative Care. <https://doi.org/10.20944/preprints202004.0519.v1>
- Sánchez, F. A. S., Peláez, G. I. C., & Alís, J. C. (2017). Occupational safety and health in construction: a review of applications and trends. *Industrial Health*, 55, 210–218. <https://api.semanticscholar.org/CorpusID:203799266>
- Vitrano, G., & Micheli, G. J. L. (2024). Effectiveness of Occupational Safety and Health interventions: a long way to go. In *Frontiers in Public Health* (Vol. 12). Frontiers Media SA. <https://doi.org/10.3389/fpubh.2024.1292692>
- Wang, Y., Chen, H., Liu, B., Yang, M., & Long, Q. (2020). A systematic review on the research progress and evolving trends of occupational health and safety management: A bibliometric analysis of mapping knowledge domains. *Frontiers in Public Health*, 8. <https://doi.org/10.3389/fpubh.2020.00081>
- Zupic, I., & Čater, T. (2015). Bibliometric Methods in Management and Organization. *Organizational Research Methods*, 18(3), 429–472. <https://doi.org/10.1177/1094428114562629>