

## Navigating Job Stress: Mapping the Scientific Landscape and Charting Future Research Avenues

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### Abstract

This research aims to fill the gap in job stress studies through a bibliometric analysis using metadata from Scopus and VOSviewer. The primary objective of this study is to identify key trends, significant studies, and leading authors in the job stress literature from 2014 to 2023, with a focus on English-language scholarly journal publications. By employing bibliometric methods, this study will provide a comprehensive overview of the development, central themes, and theoretical dynamics in job stress research, as well as analyse citation patterns emerging in this field. Key subjects, such as workplace dynamics, employee well-being, stress, and psychological health, as well as workplace support and performance, are among the various methodologies and theoretical frameworks employed in job stress studies that the research aims to understand better. This study will also reveal current research trends and citation patterns, providing information on the most significant studies and changes in topic focus over time. It is anticipated that the results of this study will enhance the field's overall understanding and provide more precise guidelines for future research. To manage job-related stress, improve employee well-being, and ultimately create healthier and more productive work environments in the future, these findings will inform the development of more effective strategies.

**Keywords:** Job Stress, Bibliometric, VOSviewer, Human Resource Management

### 1. Introduction

Job stress is increasing in the lives of employees, which damages their performance (Alblihed & Alzghaibi, 2022). Job stress arises because environmental demands and responses of each individual in dealing with them can be different (Cha et al., 2022). Job stress is often referred to as depression, anxiety, tension, or dislike experienced by a worker in the workplace (Salsabilla et al., 2022). This issue results from a mismatch between the employee's skills or personality and the job or work environment. Stress at work can cause physical and psychological discomfort in an individual. Both personal well-being and work productivity can be negatively impacted by job stress. However, people who experience job stress tend to have lower morale, and this occurs more frequently. Numerous employer-related variables, including a competitive work environment, technological advancements, poor pay, lack of recognition, low motivation, overwork, excessive workload, and social aspects, can contribute to occupational stress among employees.

Job stress is one of the leading reasons for physical and mental problems among healthcare staff and lower productivity in healthcare organizations (Zabin et al., 2023). Workplace stress affects a person's emotions, mental processes, and physical state when there is an imbalance between job responsibilities and personal resources (Ahmad et al., 2021; Lu et al., 2022; Sari et al., 2021; Zaitouni et al., 2024). It is excessive stress, and it comes as a result of pushing the person beyond what he was dealing with, usually because of the workload and constant stress (Abd et al., 2023).

Furthermore, digital work, which has become more prevalent since the COVID-19 pandemic, has also contributed to increased job stress, primarily due to the rapid shift to remote work and the reliance on digital tools. Key challenges include maintaining constant connectivity and the blurring of boundaries between work and personal life, leading to longer working hours and increased stress levels. Mental fatigue became a common issue as employees were required to focus for extended periods during virtual

meetings and other remote work-related tasks. This situation exacerbated mental health issues due to feelings of loneliness, stress, and a lack of social support, ultimately affecting overall well-being (Das et al., 2022; Traunmuller et al., 2024; Vinson et al., 2024).

This study aims to bridge that gap by analyzing earlier research on work-related stress. This study employs bibliometric analysis to identify key trends, notable studies, and influential authors in the field of occupational stress, thereby providing a comprehensive overview of the existing body of literature. The knowledge gathered from this analysis aims to enhance our understanding of the approaches taken, the theoretical frameworks employed, and the research on job stress.

The following queries guide this investigation: (1) How is the body of research on job stress now mapped? What are the newest and most popular study subjects related to stress in digital jobs? (3) What more research on the subject of occupational stress might be done in the future? In addition to clarifying the current status of research on job stress, providing answers to these questions will highlight areas of uncertainty and potential for further investigation. The results will be crucial for scholars, decision-makers, and professionals seeking to develop effective plans for managing work-related stress in the digital era.

## 2. Literature Review

Job stress is often conceptualized as “awareness or feeling of dysfunction as a result of perceived conditions or happenings in the work setting” (Fasbender et al., 2019). Job stress is the awareness or feeling of dysfunction arising from perceived conditions or events in the work environment. Job stress is associated with Undesirable behaviors such as decreased productivity, increased absenteeism, and the intention to quit. Additionally, chronic job stress can lead to psychological problems such as fatigue, anxiety, depression, and poor sleep quality. It involves a sense of unease or imbalance triggered by workplace dynamics that are perceived as challenging or unmanageable. Job stress is also closely associated with a range of undesirable outcomes, including reduced productivity, increased absenteeism, and heightened intentions to leave. Prolonged exposure to job stress can further escalate into psychological issues, including chronic fatigue, heightened anxiety, depressive symptoms, and disturbances in sleep patterns.

One way to conceptualize job stress is as a type of unpleasant emotional experience that occurs when there is a substantial gap between an individual's capacity to meet the expectations of their job and the job's actual obligations. A stress reaction occurs when a person's mental, physical, and emotional resources are insufficient to handle the demands and expectations of their job. In addition to increasing stress, this mismatch can have several adverse effects on a person's physical and mental health, ultimately impacting their overall well-being and productivity. Due to the body's reaction to prolonged, high levels of strain from various workplace circumstances, job stress can also manifest medically.

Job stress is a negative experience characterised by negative emotions that arises from an imbalance between job demands and the response capabilities of workers. It occurs when job demands are too high to manage, leading to stress reactions. Job stress can also be defined as a physiological condition that arises when an employee is intensely affected and attacked by various factors in the workplace. When job requirements do not align with an employee's abilities, resources, or demands, harmful emotional and physical responses can occur. Social support is considered a vital resource that can help employees cope with high demands at work and reduce the impact of job stress (Giao et al., 2020; Wang et al., 2020). Additionally, job stress is a psychological reaction to the work environment that leads to threats of resource loss, net resource loss, or insufficient resource gain following significant investment of resources. This stress can cause various adverse effects, such as the desire to quit, conflicts with coworkers, health disorders, job dissatisfaction, reduced creativity, decreased professional satisfaction, poor decision-making, feelings of inadequacy and depression, burnout and fatigue from work, reduced

energy and work efficiency, and a decline in the quality of employees' work (Babapour et al., 2022; Demerouti et al., 2001; Mansour & Mohanna, 2018; Theorell, 1992).

### 3. Method

The metadata for this study was sourced from the Scopus database, chosen for its extensive and comprehensive coverage in the fields of science and technology, including a substantial body of research related to job stress in the workplace. Scopus is widely recognized for its robust capability to aggregate diverse types of scholarly information, including peer-reviewed journal articles, conference proceedings, and academic books, all of which contribute essential insights relevant to this research topic. Additionally, Scopus provides high accessibility for researchers, facilitating the exploration of the latest literature and emerging trends in job stress research. By leveraging the Scopus database, this study aims to gather an extensive and pertinent collection of information, thereby enabling a thorough mapping and bibliometric analysis of previous studies on job stress. This approach is expected to yield a comprehensive overview that will support deeper insights into the evolution, key themes, and prominent contributors in the field of job stress research. Moreover, the selection of Scopus is based on its ability to provide complete and structured metadata, according to the criteria required for bibliometric analysis in this research. In this study, a search strategy is presented and summarised as follows.

Initially, the query entered was “job stress,” resulting in 679 documents—the subsequent procedure involved limiting the documents' period, set from 2014 to 2023. Moreover, solely scholarly journal publications were considered, resulting in the exclusion of conference papers, literature reviews, chapters in edited volumes, and other types of publications. The documents were written in English. The selected tool for scientific mapping and enhancement is VOSviewer 1.6.20. The analysis method involves co-occurrences with the author's keywords as the analysis unit, utilizing complete counting, and employing the VOSviewer Thesaurus File to standardize terms during processing. In the process of using VOSviewer, data is collected by gathering relevant data from scientific databases, which includes metadata such as article titles, authors, keywords, and citations. The next step is to standardize terms, which ensures consistency in the analysis and facilitates grouping similar keywords by variations of terms. VOSviewer will then match or merge these words into a single entity. After this process, VOSviewer will build a keyword co-occurrence network. Then, VOSviewer generates a graph that shows the relationship between keywords related to the subject of interest, resulting in a network visualization that illustrates the connections between keywords or publications that frequently appear. In this visualization, which takes the form of a map, clusters of keywords are interconnected, providing an overview of their relationships.

### 4. Result and Discussion

The metadata analysis of job stress research reveals a marked increase in publication volume, peaking in 2023 (Table 1). This upward trend reflects growing scholarly interest and attention to job stress as a critical area of study, especially given its implications for mental health, productivity, and organizational outcomes. An interesting observation from the citation analysis is that 2016 recorded the highest total citations, indicating that publications from that year had a significant and lasting impact. In addition, 2022 marked the highest levels of normalized citations, a metric that indicates the broader relevance of the publications within the scientific community. Together, these data points emphasize the enduring importance and evolving relevance of job stress research over the years.

Further examination of publication metrics reveals the predominant contributors to job stress research by country, as detailed in Table 2. The United States (US), the United Kingdom (UK), and India lead in the number of publications, suggesting a concentrated research effort in these regions. Notably, the US stands out not only in terms of publication volume but also in total citations and normalized

citation impact, underscoring the influence and reach of American research contributions on a global scale. This suggests that the insights and findings from US-based studies have significantly shaped discussions and understanding in the field, reinforcing the pivotal role that US research institutions play in advancing strategies and interventions to manage job-related stress.

The data further indicate a substantial role for other countries, including the UK, India, Australia, and China, in contributing to the global knowledge base on job stress. Although the US leads in impact, the UK and India also exhibit strong research output, indicating that job stress is a widespread concern that transcends geographical boundaries. In particular, the UK has made notable contributions in both volume and citation impact, emphasizing the country's role in exploring stress factors, coping mechanisms, and organizational strategies aimed at reducing job stress. The presence of countries like Australia, China, and Canada among the top contributors reflects an increasing global focus on this topic, with diverse perspectives and cultural contexts enriching the body of knowledge.

The VOSviewer network visualization map above illustrates the relationships among various concepts in the fields of human resource management and organizational psychology (Figure 1). The term "job satisfaction" is positioned at the centre of the network, signifying its significance in related research. Other terms, such as "burnout," "stress," and "organizational commitment," are connected to "job satisfaction," illustrating how these factors interact with and influence one another in the work context.

Table 1. Publications Based on Year of Publication and Citations

Year	TP	NCP	TC	C/P	C/CP	h
2014	46	46	1915	41,63	41,63	27
2015	35	33	1921	54,89	58,21	18
2016	55	52	2070	37,64	39,81	26
2017	64	60	1768	27,63	29,47	25
2018	61	58	1717	28,15	29,60	24
2019	79	64	1145	14,49	17,89	21
2020	78	74	1071	13,73	14,47	20
2021	82	73	1045	12,74	14,32	20
2022	82	75	792	9,66	10,56	15
2023	97	68	268	2,76	3,94	8

Note: TP = number of publications; NCP = number of cited publications; TC = total citations; and h = h-index.

Source: The displayed data has been processed by the author

Table 2. The top 10 Countries contributed to the publications

No.	Countries	TP	NCP	TC	C/P	C/CP	h-index
1	United States	382	347	14900	39,01	42,94	60
2	United Kingdom	198	177	5923	29,91	33,46	42
3	India	128	92	1957	15,29	21,27	21
4	Australia	96	92	2885	30,05	31,36	32
5	China	76	76	1643	21,62	21,62	23
6	Canada	58	53	2982	51,41	56,26	25
7	Indonesia	53	35	254	4,79	7,26	8
8	Spain	47	44	1391	29,60	31,61	16
9	Italy	45	41	973	21,62	23,73	18
10	France	42	40	2487	59,21	62,18	22

Notes: TP=total number of publications; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h = h-index; and g = g-index.



Cluster 3, themed "Workplace Support and Performance," features high occurrences of "work-family conflict" (20), "job performance" (19), and "emotional labor" (15). These highlight the cluster's focus on work-family balance challenges, the importance of job performance, and the role of emotional labor. The data stresses the need for organizational support in managing work-family conflicts, optimizing performance, and addressing emotional work demands, thereby enhancing both workplace support and performance outcomes.

### *B. The Emerging and Trending Research Topics*

Overlay visualizations in VOSViewer are crucial for representing two core dimensions of scientific research: citation outcomes and the chronological distribution of new publications. These visualizations utilize specific color schemes, namely the coolwarm and viridis color gradients, to effectively distinguish these aspects. The viridis color scale, which transitions from bright yellow for recent publications to deep blue for older ones, provides an intuitive timeline that enables researchers to track the progression of scholarly focus over time easily. This color-coded approach provides a clear and informative visual guide, helping researchers understand how specific research themes or topics have evolved.

The coolwarm color scheme further enhances the analytical capability of the visualization by highlighting citation frequency, where shades of red indicate frequently cited works and shades of blue denote less-cited publications. This intuitive design facilitates the identification of highly influential studies within the broader field. By integrating these visual cues, VOSViewer enables researchers to assess not only the historical development of research topics but also the impact and relevance of individual works. Consequently, overlay visualizations serve as a powerful tool for understanding emerging research trends, recognizing shifts in scholarly interest, and pinpointing seminal works that have shaped the discourse within a given research domain.

In the context of job stress research, overlay visualizations are especially valuable, as they reveal patterns and trends that may not be immediately apparent through conventional bibliometric analyses. For example, these visualizations can illustrate the frequency with which specific keywords, such as "job satisfaction," "burnout," or "work-life balance," appear over time, offering insight into shifts in thematic emphasis within the field. As new challenges arise in workplaces worldwide—such as increased demands for remote work and heightened job insecurity due to economic fluctuations—the overlay visualizations help highlight how research priorities are adapting to these developments. By mapping these changes, researchers and practitioners alike can gain a deeper understanding of the evolving landscape of job stress studies and identify which aspects are gaining traction or losing relevance.

Moreover, the chronological visualization of citation impact and publication frequency helps researchers pinpoint specific years when significant contributions were made, as well as identify trends in high-impact research. For instance, years with high citation counts indicate periods when foundational studies or breakthrough research gained widespread attention. This information is instrumental in identifying not only the most active research periods but also potential gaps where further exploration is warranted.

Future research directions in job stress can benefit significantly from these insights. The visualizations can guide researchers toward gaps in the literature, such as underexplored topics or emerging areas of interest that require deeper investigation. Additionally, the use of overlay visualizations to monitor research trends and citation dynamics supports a more comprehensive understanding of the job stress research landscape. By examining influential studies and tracking evolving trends, researchers can better tailor future studies to address pressing issues in job stress, thereby contributing to the development of effective interventions and policies that improve workplace well-being.







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