The Changing Trends of Psychological Safety at the Workplace: An Analysis of Thematic Trends and Future Opportunities

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Abstract

Psychological Safety, a more than 50-year-old concept enables employees to take interpersonal risks and voice their opinions without the fear of negative consequences. The research in this area has evolved over the years and today, psychological safety is recognized as the most significant distinguishing factor among the highest-performing work teams. This study aims to thematically analyze the shift in trends of psychological safety in business and management research over the years and suggest a scope for future analysis. A multistep screening procedure on the Scopus database was utilized to extract 539 articles published in the last two decades. Using the Bibliometrix R Package, this study identifies the publication trends related to psychological safety over the years and investigates the affiliating countries.

The bibliometric analysis revealed an amplified interest of research scholars in this area of study. The research conducted in this field, formerly focused on the role of psychological safety in motivating employees and its impact on job satisfaction. The focus then, shifted to leadership style as an antecedent for ensuring a psychologically safe environment. However, recent researchers are investigating how psychological safety can help organizations to effectively engage their workforce and ensure their mental well-being in such a dynamic work environment. Future researchers can explore the use of enterprise social media usage in establishing a psychologically safe work environment. Employers are advised to focus on employees' mental and psychological well-being by providing mental health support services, measuring and meeting their needs, providing technical support to adapt to new technologies, demarcating work and life boundaries, and creating an inclusive work environment. Organizations also have an opportunity today to utilize social media platforms for building interpersonal relationships and ensuring employee engagement.

Keywords: Psychological Safety, Motivation, Work Engagement, Mental Health, Leadership

Introduction

A fresh look at the construct of psychological safety is needed in a hyper-competitive and continuously evolving world where organizations require employees to voice their opinions, share new ideas, collaborate effectively, and contribute to improving organizational processes. (Edmondson, 1999; Nembhard & Edmondson, 2006). Among the many factors identified to foster employees' willingness to voice their opinions, share honest feedback, and take interpersonal risks, a cognitive state that has emerged as a key factor is Psychological Safety. (Edmondson, 1999; Kahn, 1990). Psychological Safety is defined as 'feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career' (Kahn,1990). Schein and Bennis (1965) introduced the concept of psychological safety, and several quantitative and qualitative studies have analyzed the antecedents and consequences of psychological safety. Since then,

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research suggests that inclusive leadership (Weiss et al., 2017), proactive innovative behavior (Espedido & Searle, 2020), continuous improvement (Halbesleben and Rathert, 2008), perceived organizational support (Carmeli and Zisu,2009), mentoring (Law and Chan, 2015), and interpersonal communication (Edmondson & Lei, 2014) ensure a psychologically safe environment in the workplace. The authors highlighted the importance of psychological safety and identified learning from failures (Carmeli, A.,2007), creativity (Wang Y, Liu J, Zhu Y.,2018), innovation (Leung et al., 2014), and Employee Engagement (Jurnal Pengurusan, 2019) as outcomes of psychological safety. Recent research also advocates that psychological safety enables employees to get things done, foster learning behavior, and significantly improve work experience. (Edmondson & Bransby, 2023).

Considerable research has been conducted in Psychological Safety, encompassing diverse definitions, various core concepts, measures, and factors. (Frazier et al., 2017) Nonetheless, the literature in this domain is scattered and lacks a cohesive knowledge structure, necessitating integration to enhance the synthesis of existing research and facilitate further progress. This research endeavors to condense existing studies on Psychological Safety and offer a comprehensive perspective through the application of bibliographic mapping methodologies. Bibliometric studies provide a quantitative assessment of recorded research interactions in their study (Chaudhari and Pawar, 2021). The bibliometric methodology has been widely used to provide quantitative analysis of written publications using statistical tools (Ellegaard and Wallin, 2015). It can help detect established and emergent topical areas, research clusters, and scholars (Fahimnia et al., 2015). The primary aim of this paper is to present an overview of the research conducted on Psychological Safety, addressing the following research questions delineating the scope of the study:

- 1. What have been the publication trends over the years?
- 2. Which countries have contributed the most to this area of research?
- 3. How has the trend of research topics related to psychological safety changed?
- 4. How have the themes evolved in this subject area over the decades?

Publication patterns were examined to understand the historical evolution of research on Psychological Safety. This analysis considered factors such as the number of years, affiliated countries, trending topics, and thematic evolution. The goal was to assist researchers in obtaining classified insights into the existing state of Psychological Safety research.

Method

This review paper utilizes bibliometric analysis to analyze the Scopus database related to psychological safety over the last two decades. Bibliometrics has proven to be a comprehensive analytical tool applied in various contexts, ranging from conventional assessments of citation impact (Kaur et al.,2013), to the identification of problematic substances in the environment (Grandjean et al.,2011). The utilization of statistical analyses on the growing volume of available data (Bornmann et al. 2014), enables reliable mapping of scientific developments, collaboration trends, and rankings. Bibliometric analysis has gained immense popularity in business research in recent years (Donthu, Kumar, & Pattnaik, 2020). The extensive adoption of bibliometric analysis in business research can be attributed to two key factors. The first is the progress, prevalence, and accessibility to bibliometric software such as Gephi, VOS Viewer, and Leximancer, along with scientific databases such as Scopus and Web of Science. Second, the influence of bibliometric methodology across disciplines, ranging from information science to business research, plays a significant role. Moreover, using bibliometric analysis for conducting business research is not merely a fad, but it reflects its efficacy in managing significant volumes of scientific data and successfully generating impactful research outcomes. Scholars use bibliometric analysis for various reasons, such as to uncover emerging trends in article and journal performance, collaboration patterns, and research constituents, and to explore the intellectual structure of a specific domain in the extant literature (Donthu, Kumar, Pandey, & Lim, 2021; Rani & Salanke, 2023)

To conduct a Bibliometric Analysis, the researcher applies quantitative tools to the data fetched from sources such as Scopus, Web Of Science, and Dimensions. However, Scopus and Web of Science are considered the most inclusive data sources for bibliometric analyses. Scopus has proven to be a more reliable source for evaluating research results, as it provides wider and more inclusive content coverage and offers access to individual authors, institutions, and serial source profiles. Scopus, with its interrelated interface of the database, is more appropriate for practical use. Moreover, the performance indicator applied for bibliometric analysis provides better results for the Scopus data than for the Web of Science

(Pranckute,2021).

Bibliometrics, an **R** Package for Bibliometrics, and VosViewer were used to construct, visualize, and analyze the bibliometric networks. VosViewer is a computer program used for bibliometric analysis. VosViewer is widely used because of its ability to generate large bibliometric maps that can be easily interpreted. (Van Eck & Waltman, 2009)

Search String

Based on the literature review, Psychological Safety and similar constructs, such as psychological capital, psychological empowerment, trust, and work engagement, were used as the primary search string applied to the article title, abstract,

and keywords of the Scopus database on November 21, 2023. The search yielded 5,396 documents. The implementation of different inclusion and exclusion criteria limited the search results. (Table 1). This refined search filtered research papers, yielding 674 documents. These documents were further scrutinized for relevance by manually screening titles, keywords, and abstracts, resulting in a final database of 539 documents.

Table 1: Inclusion and Exclusion Criteria

Search Criteria	Result (No. of Documents)
Search String "Psychological AND Safety OR psychological AND	5,396 documents
Capital OR psychological AND empowerment OR work AND	
engagement OR trust" on the article title, abstract, and keywords of the	
Scopus database	
Limit to the Range of the documents published in Year "2003-2023"	5,264 documents
Including only "Business, Management & Accounting" as the focussed	863 documents
subject area.	
Selecting "Article" as the document type	731 documents
Language limited to English	718 documents
Including "Journal" as the source type	715 documents
Selecting only the documents that are in the "final stage" of publication	674 documents
Manually screening the documents for relevance based on "title,	539 documents
keywords, and abstract"	

Source: Author Conceptualised

Analysis and Result

In this section, we analyze important trends and patterns related to research conducted on psychological safety, inspecting the total number of publications each year, countries contributing, trending topics, and themes evolving. We also compared the thematic maps between the two decades studied in this research. The bibliographic data used in this study were sourced from the Scopus database.

Publication trends over the years

The trajectory of publications on psychological safety indicates a rising pattern (Figure 1), with only one article published in 2003 to 70 articles published in 2023 as of 1st December 1, 2023. The emergence of articles on psychological safety gained momentum starting in 2009 and there seems to be a notable surge in the prominence of psychological safety research in the years after 2017.

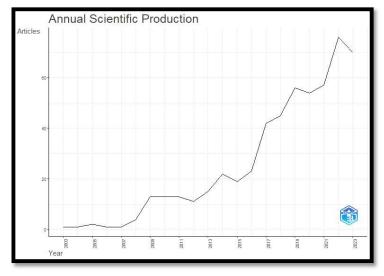


Figure 1: Publication trend over the years Source: Compiled from Biblioshiny Package by Author

Top Publishing Countries on Psychological Safety

More than 60 countries worldwide have focused on researching psychological safety. Figure 2 illustrates the top 10 countries; the USA dominates the most research published in the world, with 211 articles published between 2003 and 2023, followed by 158 articles published in China, 149 articles in India, and 126 articles in Australia. It is interesting to note that the countries that contribute the most to the world economy (USA and China) and the country with the fastest growing economy (India), expected to be the third largest economy by 2030, are the most significant countries for research

on psychological safety. India, China, and the USA are also the world's largest employers in terms of the number of personnel employed (Armstrong, 2022).

region	▼ Freq	*
USA		211
CHINA		158
INDIA		149
AUSTRALIA		126
NETHERLANDS		114
UK		93
SOUTH AFRICA		49
CANADA		48
FINLAND		44
MALAYSIA		38

Figure 2: Top Publishing Countries on Psychological Safety Source: Compiled from Biblioshiny Package by Author Investigating the Trend of Topics

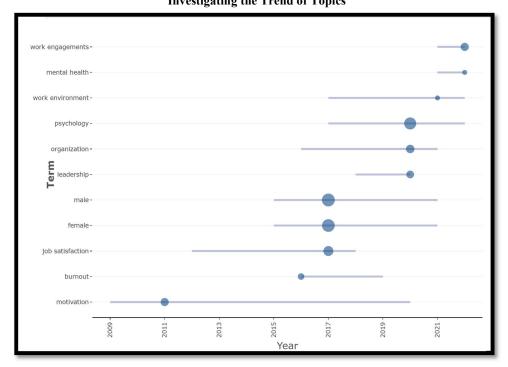


Figure 3: Topics trending over the years (2003-2023) Source: Compiled from Biblioshiny Package by Authors

The investigation of trending topics over the last two decades (Figure 3) highlighted that earlier research conducted in the area of psychological safety primarily focused on the concept of motivation. Later in 2012, the researchers began exploring the benefits and measures ensuring job satisfaction and reducing the chances of its antipode – job burnout. The research then majorly considered gender as a demographic variable impacting the perception of psychological safety and the outcomes. Researchers also acknowledged the importance of leadership style in ensuring that employees feel psychologically safe, satisfied, and motivated in their jobs. Thus, leadership was found to be a trending theme in the second decade of the 20th century. Post-pandemic, with a shift in the way we work researchers and employers are investigating the measures that can be adopted to ensure better work engagement. In addition, the rapid technological and

work model transformation is drawing the attention of stakeholders to analyze and ensure the mental well-being of employees in such a dynamic and intellectually demanding work environment.

Thematic Mapping

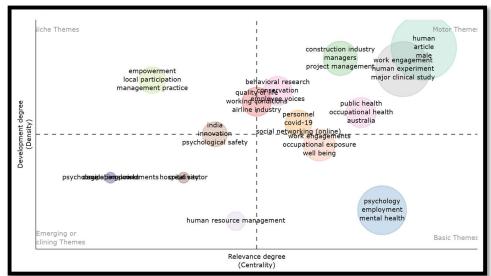


Figure 4: Thematic Map

Source: Compiled from Biblioshiny Package by Author

- The Motor theme categorized by high centrality and density reflects the elaborated themes that hold significance within the research field. The themes identified in this quadrant (Figure 4) were Job Satisfaction, Motivation, Work engagement, work environment, social support, perception, psychological capital, occupational health, covid-19, well-being, online social networking, employee voice, working conditions, and quality of life.
- The basic themes, categorized by low density and high centrality reflect the themes that hold significance within a domain but are underdeveloped, the themes highlighted in this quadrant are psychological well-being, mental health, psychology, personality, performance assessment, and social media.
- The emerging/declining themes are defined by low centrality and low density, indicating that they are underdeveloped and peripheral. The themes in this quadrant are psychological safety, innovation with a focus on India, human resource management, occupational risk, and the hospital sector.
- The niche themes, with low centrality and high density, suggest well-developed themes but of limited importance for the field: empowerment and participatory approach.

Further analysis was conducted to analyze the evolution of themes (Figure 5) over the decade, it was found in the earlier decade investigated (2003-2010) motivation emerged as the basic theme of research in this area. This finding coincides with the analysis of trending topics, where motivation was the most celebrated research topic in former years. Further, it is worth noting that none of the themes were mentioned under the active sphere of motor themes. Again, it is evident from the analysis of publications over the years that the number of publications has grown over the years, with close to one publication in 2003 to 12 articles published in 2010 and more than 70 articles published in 2023.

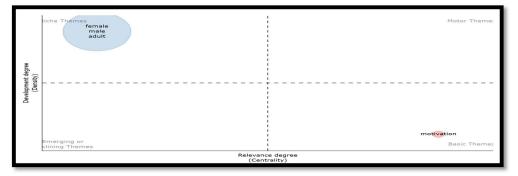


Figure 5: Thematic Map (Year 2003-2010)

Source: Compiled from Biblioshiny Package by Author

The latest decade (2010-2023) analyzed in this study reflects an overwhelming increase in the publications and themes in this research identified as the motor themes (central and developed) are work engagement, job satisfaction, leadership, burnout, organizational culture, mental health, COVID-19, psychological capital, and employee voice. (Figure 6)

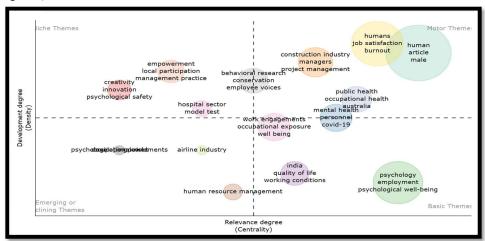


Figure 6: Thematic Map (Year 2010-2023)

Source: Compiled from Biblioshiny Package by Author

Psychological well-being, psychology, personality, quality of life, employment, working conditions, and work engagement were categorized as basic topics of this research area yet to be explored. Human Resource Management and occupational risk were highlighted as the weakest research areas (peripheral and immature). Further, creativity, innovation, empowerment, psychological safety, and employee voice were found in the niche themes, with well-developed internal links but unimportant external links.

Discussion

The descriptive analysis illuminates the prevailing trend of research on psychological safety and related topics and finds that the publication trajectory of psychological safety has grown over the years. More than 60 countries have contributed to the research in this area, with the largest employers of the world: the USA, China, and India, dominating the number of publications over the two decades studied. The analysis of trends and themes revealed the evolution of psychological safety research in the last two decades.



Figure 7: Evolution of Research in Psychological Safety (2003-2023)

Motivation

Over the years, motivation has been a trending topic in this area, as research conducted in the early years captivated the different sources of motivation, the positive impact of motivated employees, and measures that an organization should undertake to motivate employees. (Sekhar et al., 2013). Psychological safety in an organization fulfills an employee's higher-order need which boosts their intrinsic motivation. (Soumyaja & Kuriakose, 2020).

Job Satisfaction

Gradually, job satisfaction gained the researcher's attention investigating the factors that can ensure job satisfaction (Staempfli & Lamarche, 2020), exploring job satisfaction as a distinct construct, and the positive outcomes of satisfied employees (Goetz & Wald, 2022). Motivation in terms of compensation, incentives, and recognition positively impacts job satisfaction. (Jamal Ali & Anwar, 2021). Quantitative research conducted in the medical sector advocates that psychological safety ensures job satisfaction for nurses, and this relationship is mediated by trust (Mitterer & Mitterer, 2023). The relationship between psychological safety and job satisfaction has been extended ensuring that employees are effectively committed to the organization (Li et al., 2022). A construction industry-based research also highlighted job

satisfaction as a relationship between psychological safety and the employee's intent to stay with the organization (Xie et al., 2022).

Leadership

Later, researchers investigated leadership as a significant antecedent to ensure psychological safety. It was found that a leader's motivating language and employee's self-leadership contribute to the psychological safety of the workforce (Mayfield & Mayfield, 2021).

Supportive leadership further ensures positive work outcomes such as employee voice behavior, knowledge sharing, and team learning through the mediating effect of psychological safety (Newman et al., 2017). Psychological safety also mediates the relationship between transformative leadership and job satisfaction (Moin et al., 2020).

Work Engagement

The Global Pandemic in 2020 completely transformed the workplace: changing work arrangements, incorporating more flexibility, and being more empathetic to employees and co-workers. Thus, employers today are not only looking forward to motivating or satisfying employees but also to productively engaging them at work (Newman, 2021). "Work engagement" has also been identified as one of this area's most celebrated research topics since 2020 (Figure 3). A study conducted in the Chinese manufacturing industry suggests that employees who feel psychologically safe, voice their opinions and feel more engaged in their jobs (Ge, 2020).

Mental Wellbeing

After the devastating pandemic situation, employers are concerned about the mental health of their subordinates (Segit & Segit, 2021), and researchers have also explored mental health as a trending research topic since 2021. Digital transformations and a shift to more flexible work arrangements are impacting employees' mental well-being. Australian-based research found that the rapid adaption of technology and flexibility is leading to benefits such as reduced redundant tasks, better control and autonomy, and negative implications such as blurred work-life boundaries, social isolation, and increased cognitive demands. (Johnson et al., 2020).

Deloitte's mental health survey conducted in 2022, drew employers' and researchers' attention by revealing that 80% of the Indian workforce suffers from mental health issues reporting work stress as a major cause. This alarming situation results in a loss of \$14 billion per year to Indian Employers (Chanda & Bandyopadhyay, n.d.). A business group on health survey also found that seventy percent of employers have reported a shocking increase in mental health issues among their workers since 2023 (Employers Grapple With Workforce Mental Health Needs Post-Pandemic, 2023). A research survey conducted in 2023 involving over 500 employers and 1000 employees across industries highlights psychological safety as a safety net in ensuring employees' mental well-being, satisfaction, and innovation. (Employee Well-Being and Psychological Safety Key Concerns in the Workplace, n.d.)

Social Media and Networking

The adaptation of a hybrid workplace has raised the challenge of engaging and creating a sense of belongingness among space and time-dispersed workforce. Social media platforms of companies are thus looked upon as a platform to share their thoughts and interact with colleagues. It is considered that such an initiative will enable employees to feel psychologically safe and guard their mental well-being (*Mental Health at the Workplace: Psychological Safety and Belonging*, 2024). Research suggests that enterprise social media and psychological safety further contribute to enhancing employee agility (Pitafi et al., 2019). The use of enterprise social media for both work and socializing purposes fulfills the psychological needs of the employees, improves interpersonal relations with colleagues, and enhances employee creativity (Pitafi & Xie, 2024). A study conducted to understand the role of social media at work found that its use aids in networking, developing a shared vision, and fostering trust among employees (Kasim et al., 2022). Overall, the use of social media at work has proven to engage employees at work effectively (Men et al., 2020). Although preliminary research has been conducted to analyze the impact of social media in engaging employees, its influence on the psychological safety of employees is yet to be empirically explored.

Directions for Future Research

- The second quadrant of the keyword plus thematic map suggests the themes that are significant for a research area but have not been thoroughly explored. Thus, future research should focus on understanding and improving employees' mental health and psychological well-being, and the role of social media, and networking in establishing a psychologically safe work environment.
- Future researchers can also examine the impact of personality on employee engagement and well-being.
- The basic and niche themes combine the latest trends and well-developed interdisciplinary research areas. Thus, studies conducted to investigate the impact of psychological safety on well-being, and further the impact of well-being on creativity and innovation can shape the direction for future research.

- Future researchers should consider the mental health of employees as a pivotal facet of organizational
 management and propose pragmatic measures that organizations can embrace to foster long-term psychological
 well-being and sustainable workforce engagement.
- After the pandemic, many organizations have adopted hybrid as the future of work, and future research can measure and suggest policies to engage and psychologically empower employees in hybrid workplaces.
- This review has not established a conceptual framework; consequently, future researchers have the opportunity to formulate a comprehensive framework for a more nuanced understanding of psychological safety.
- As previously stated, this investigation utilized the Scopus database, which is a highly dynamic database subject to regular updates. Future researchers can review this paper, as the findings might change over time.

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