

The Evolution of Employee Green Behavior Research: A Bibliometric Overview

Siti Norashikin Bashirun^{1*}, Zuhairah Hasan², Shereen Noranee³

^{1,2}Faculty of Business and Management, Universiti Teknologi MARA, Melaka Campus, Malaysia

³Faculty of Business and Management, Universiti Teknologi MARA, Puncak Alam Campus, Selangor, Malaysia

*Corresponding Author

DOI: <https://dx.doi.org/10.47772/IJRISS.2026.10200473>

Received: 26 February 2026; Accepted: 03 March 2026; Published: 17 March 2026

ABSTRACT

This article presents a comprehensive bibliometric analysis of the evolution of employee green behavior (EGB) from 2013 to 2023. The study aims to map the trends, patterns, and influential factors that have shaped the research landscape over the past decade. By employing bibliometric methods, the study analyses 833 publications using approaches including co-citation analysis, keyword co-occurrence analysis, and citation network analysis. The findings highlight a significant increase in literature, with focus areas on Green Human Resource Management (GHRM) and Corporate Social Responsibility (CSR). Notably, the analysis identifies significant contributions from countries such as China were notably recognized. Seven clusters were identified, emphasizing key themes including employee attitude, citizenship, green behavior, environmental leadership, pro-environmental behavior, corporate social responsibility, and climate change. The findings revealed the emergence of new research directions, the evolution of theoretical frameworks, and the growing interdisciplinary nature of this field. Finally, the article discusses implications for future research and practice, highlighting the need for continued exploration of EGB in the context of sustainable organizations and environmental management

Keywords: employee green behavior, environmental sustainability, green HRM, Scopus, VOSviewer, bibliometric analysis

INTRODUCTION

In recent years, the global community has witnessed an increasing emphasis on sustainable development and environmental conservation. The World Health Organization (WHO) has highlighted the urgent need for concerted efforts to address environmental challenges, citing that environmental risks are responsible for an estimated 13 million deaths annually, representing a significant public health concern (WHO, 2018). Furthermore, the United Nations' Sustainable Development Goals (SDGs) have underscored the importance of integrating environmental sustainability into organizational practices, aiming to ensure responsible consumption and production patterns (United Nations, 2018). To achieve these global goals, therefore, the relevant measures should be implemented to move towards eco-friendly lifestyles by putting the appropriate policies and regulatory framework in place to protect and conserve the environment (Bohlmann et al., 2018). Consequently, research into employee green behavior (EGB) has emerged as a growing field aimed at promoting environmental sustainability within organizations. Thus, understanding the research landscape is essential for advancing the field, informing policy-making, and guiding organization practices towards sustainability. Ones and Dilchert (2012) were among the earliest researchers to conduct a study on the various environmentally related behaviors that employees perform at work. Modern organizations are increasingly subjected to institutional pressures to adopt environmentally responsible practices. In this regard, Norton (2016) examined the increasing pressure on modern organizations to be more environmentally friendly due to regulatory, normative, and social factors, making significant contributions to the literature. Consequently, EGB can considerably decrease the ecological footprint of the organization and ensure an environmental responsibility culture, thus it is a crucial sustainable success strategy (Bashirun et al., 2025).

Specifically, this study aims to answer the following research questions:

1. What is the current landscape of employee green behavior research?
2. What emerging trends can be observed in employee green behavior publications?
3. Which key players - authors, institutions, and countries - are driving the advancements in employee green behavior research?
4. Which journals and publications act as the epicenters for ground breaking employee green behavior studies?
5. Which landmark papers have shaped the discourse and direction of employee green behavior research?
6. What pivotal research themes underpin the development and growth of the employee green behavior field?

The comprehensive nature of this study provides an opportunity to fully comprehend the level of research in EGB. By employing bibliometric and network analysis approaches, it creates a thorough picture of the literary landscape, important themes and clusters within this discipline. Overall, this study aims to map the interesting landscape of green behavior from the past to the current study.

LITERATURE REVIEW

Employee green behavior

Recent research shows that firms are becoming more aware of their environmental impact and as a result implementing management techniques to manage it (Anwar et al., 2020). Environmental sustainability in organizations is not only beneficial for the environment and lead to positive outcomes for the organization itself, such as cost savings and improved public image (Cherian & Sial, 2022). Boiral et al., (2015) emphasized the need for organizations to explore and promote environmentally friendly behavior among employees. By encouraging and supporting employees to engage in environmentally friendly behaviors, organizations can contribute to the overall sustainability efforts. Similarly, a meta-analysis by Katz et al., (2022) showed that individual behavior in the workplace can significantly contribute to environmental sustainability efforts. This indicates that understanding the factors that influence environmental behavior among employees is crucial for the successful implementation of sustainability initiatives within organizations.

The concept of environmental sustainability in organizations has been a topic of interest in the fields of psychology and management for quite some time. Employee green behavior (EGB) is the pro-environmental behavior which defined as scalable actions and behavior that employees engage in or linked and contribute to environmental sustainability at work (Ones & Dilchert, 2012). For example, recycling and reusing materials, reducing energy use, joining, and encouraging colleagues in environmental activities and helping to create green processes and products. These activities, when practices an entire workforce can result in significant reductions in a company's overall environmental impact. EGB can have a significant impact on organizational sustainability. Research has shown that promoting EGB can help organizations become more environmentally sustainable by reducing pollution, protecting biodiversity, complying with governmental regulations and improving environmental performance (Zacher et al., 2023). In addition, EGB can have a positive impact on employee well-being, as it provides employees with a sense of purpose and contributes to their personal growth (Zhang et al., 2021).

As mentioned by Norton et al. (2015), it is necessary to gain a better understanding of green behavior in the workplace, specifically considering the organizational context as a contributing factor. Therefore, further research is needed to explore the factors that influence green behavior, the obstacles to its promotion, and the interventions that encourage employee engagement in such behavior (Unsworth et al., 2021). In summary, a comprehensive understanding of EGB is essential for developing effective organizational sustainability strategies."

Bibliometric Analysis

The bibliometric analysis serves as a valuable and insightful tool for analysing trends within EGB research. Bibliometric analysis is a systematic and quantitative examination of published literature in a certain field or study area. The process entails defining research objectives, selecting appropriate databases, developing search

techniques, retrieving, and filtering articles, extracting data, and performing bibliometric analyses such citation, co-citation, co-authorship, journal, and keyword analysis (Donthu et al., 2021). Bibliometric analysis is a valuable tool for revealing the evolution of articles, identifying influential authors, highly cited papers, and intellectual trends, and supporting evidence-based decision-making (Ahmi, A., & Mohamad, R. (2019). Furthermore, it is a scientific computer-assisted review methodology that can identify core research or authors and their relationships (Van Eck and Waltman, 2014). The use of bibliometric analysis has been highlighted for its importance in dealing with the increasing volume of research work and for offering valuable insights into the intellectual structure, trends, and impact of a field. Therefore, this study intends to explore the EGB research landscape, identifying rising trends, significant players, pioneering research, landmark articles, and pivotal research subjects for of EGB.

METHODOLOGY

The database supplies publication details that include access type, year, author name, subject area, document type, source title, keyword, affiliation, country, source type and language. The Scopus database is used for the extraction of distributed articles. The database covers research articles from several fields, providing a comprehensive and accurate picture of EGB literature. Scopus is an ideal choice for bibliometric analysis due to its rigorous quality controls and extensive geographical coverage (Burnham 2006). To further specify relevant scholarly works on the research domain examined, researcher restricted the search of web accessibility studies based on the title. As such the following query has been specified in the search process: (TITLE (employee AND green AND behavior)). This query yielded a total of 833 documents for us for further analysis. The data were retrieved on 15 Jan 2024. Microsoft Excel was used for the initial data cleaning and organization. The analysis was further enabled with the software VOSveiw1.6.19. It is a tool that is used to create, visualize and explore maps, based on network data.

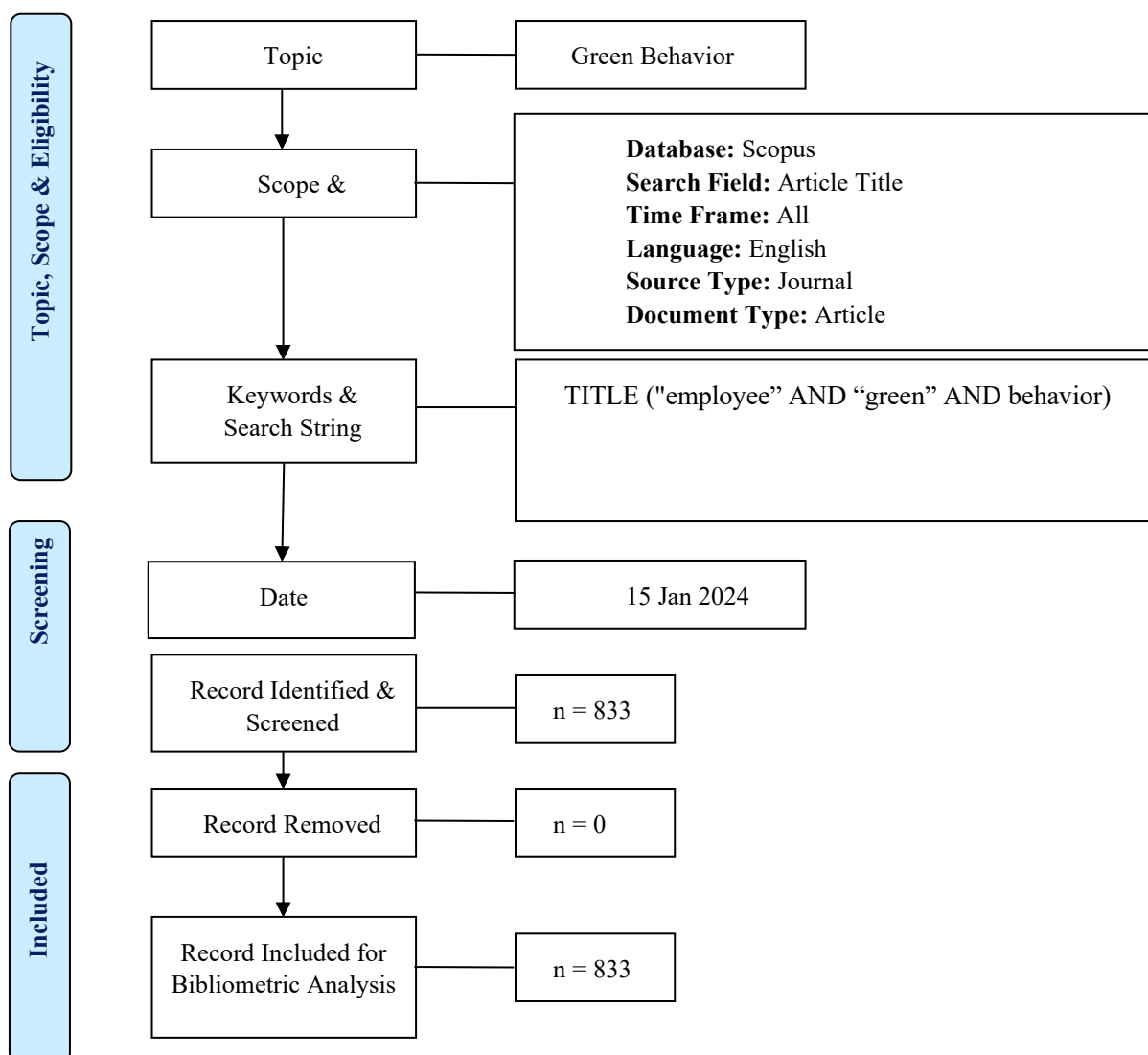


Figure 1. Flow diagram of the search strategy.

Source: Zakaria, R., Ahmi, A., Ahmad, A. H., & Othman, Z. (2020) Worldwide Melatonin Research: A Bibliometric Analysis of the Published Literature between 2015 and 2019, *Chronobiology International*.

RESULTS

In this section, a comprehensive analysis on EGB will be presented to addressing the research questions. The analysis of extracted scholarly works encompasses document types and source types, annual growth, subject area, keywords analysis, country productivity, authorship, and citation analysis. By aligning the analysis with research questions, this paper aims thorough exploration of EGB research landscape providing values insight for the future researchers, academicians, and practitioners.

Current landscape – RQ1

This study analyses the distribution of publications by document type and subject area to response the first research question (RQ1) to better understand EGB research in the current landscape. Documents type is classified based on their originality, such as conference papers, articles, and book chapters. This study identified nine (9) documents types related to EGB as shown in Table 1. As indicated, most of the publications were article (83.3%), followed by conference paper (6.4%), book chapter (5.8) and review (1.9%). Conference review, book, erratum, retracted and editorial were the least commonly published document found in this study.

Table 1. Document Type

Document Type	Total Publications (TP)	Percentage (%)
Article	694	83.3%
Conference Paper	53	6.4%
Book Chapter	48	5.8%
Review	16	1.9%
Conference Review	7	0.8%
Book	6	0.7%
Erratum	4	0.5%
Retracted	4	0.5%
Editorial	1	0.1%
Total	833	100%

This study investigated papers by subject area, highlighting the transdisciplinary nature of the EGB research. As shown in Table 2, business, management, and accounting are the highest subject area (23.9%), followed by environmental sciences (16.3%) and social sciences (15.5%). Besides, other notable subject areas contributing EGB research included energy (8.6%), engineering (6.9%), economics, econometrics, and finance (6.2%), computer science (5.2%), psychology (4.6%), medicine (3.4%), decision science (1.8%) and others (7.5%). The study of EGB spans multiple subject areas due to its multifaceted nature and contributing distinct perspectives for environmental sustainability. Boiral et. al (2015) highlighted the importance of integrating insights from environmental psychology, organizational behavior, and human resource management to comprehensively address EGB. The study of EGB mainly in business, management, and accounting due to its relevance on organizational sustainability and performance.

This comprehensive analysis of document types and subject areas in the EGB field provides a robust response to the first research question (RQ1). The findings reveal a broad landscape of EGB research that is predominantly published in articles and journals, communicated mainly in English, and is fundamentally interdisciplinary, crossing business management, environmental sciences, social sciences, and numerous other areas.

Table 2. Subject Area

Document Type	Total Publications (TP)	Percentage (%)
Business, Management Accounting	421	23.9%
Environmental Sciences	284	16.1%
Social Sciences	274	15.5%
Energy	151	8.6%
Engineering	122	6.9%
Economics, Econometrics & Finance	110	6.2%
Computer Science	92	5.2%
Psychology	82	4.6%
Medicine	60	3.4%
Decision Science	32	1.8%
Others	129	7.8%

Publication trends – RQ2

In response to the second research questions, as illustrated in Figure 1, the growing trend of EGB research has seen momentous rise particularly in the highest of 259 publications in 2023. As shown in Table 3, the study considered 833 publications, receiving a total of 21974 citations over a period of 10 years. The average number of citations received per year was

2197.4 citations that advocate EGB research has significantly impacted specifically to the academic and practitioners. This could be due to the increasing global emphasis on sustainability, corporate social responsibility, and environmental consciousness at the time indicating a continued interest in this area (Faheem et al., 2023; Norashikin et al., 2022).

With regards to citation practices, the data shows highest citations in 2020 with 4155 citations. The increase in citations on the topic of "employee green behavior" in 2020 can be attributed to the COVID-19 pandemic as in Table 4. Microsoft Excel was used to screen research on green behavior and COVID-19. The pandemic caused considerable changes in work environments, resulting in a greater emphasis on remote work, sustainability, and the influence of human activities on the environment (Lai et al., 2023; Su et al., 2023; Sumayya et al., 2023). Organizations and researchers may have been particularly interested in researching how the pandemic and the transition to remote work affected employee environmental sustainability behaviors. According to a meta-analysis published in Corporate Social Responsibility and Environmental Management, the citations on the topic of "employee green behavior" increased in 2020 (Katz et al., 2022).

Table 3. Year of Publication

Year	TP	TC
2013	17	1575
2014	15	1642
2015	16	1127
2016	31	1554
2017	26	1834

2018	35	1614
2019	57	3144
2020	92	4155
2021	107	2547
2022	178	2079
2023	259	703
Total	833	21974

Notes: TP=total number of publications; TC=total citations

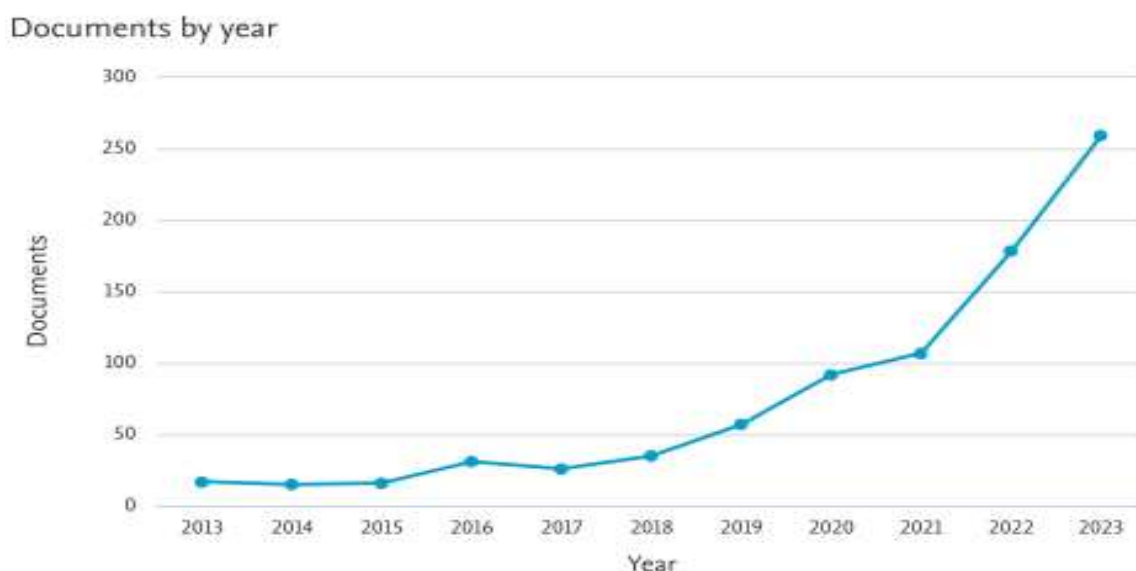


Figure 2. Total publications by year.

Table 4. Summary of research related to covid-19 and EGB

No	Title	Year
1	Heat vs. Health: Home Office under a Changing Climate	2023
2	The complexity of the tourism supply chain in the 21st century: a bibliometric analysis	2023
3	Pro-environmental MSMES performance: the role of green it adoption, green innovative behavior, and financial accounting resources	2023
4	Effects of Green Human Resource Management on Innovation Performance through Green Innovation: Evidence from Northern Cyprus on Small Island Universities	2023
5	The Behavioral Intention of Hospitals to Promote Sustainable Development of Green Healthcare from the Perspective of Organizational Stakeholders during the COVID-19 Epidemic: A Case Study of Hospitals in Taiwan	2023
6	Linking interacting/engaging environmental CSR communication strategy and employees' pro-environmental behaviors (PEBs): mediating roles of communal relationship and employee empowerment	2023
7	Towards Examining the Link Between Green HRM Practices and Employee Green in-Role Behavior: Spiritual Leadership as a Moderator	2023
8	Determinants of Russian Attitudes Toward a Green Economy During the Covid-19 Pandemic	2023

9	Connecting workplace attachment and pro-environmental behaviors in zoo and aquarium professionals	2022
10	The Role of CSR for De-Carbonization of Hospitality Sector through Employees: A Leadership Perspective	2022
11	Do Qualitative and Quantitative Job Insecurity Influence Hotel Employees' Green Work Outcomes?	2022
12	A Study of the Impact of River Improvement and Greening on Public Reassurance and the Urban Well-Being Index during the COVID-19 Pandemic	2022
13	Information disclosure, practical actions and dynamics of employees' health and safety issues in Chinese family businesses—Evidence based on Chinese a-share listed companies	2022
14	Sustainable Development Practices of Restaurants in Romania and Changes during the COVID-19 Pandemic	2022
15	A proposition relationship between green workplace environment and employee's green behavior on organizational and environmental impacts	2021
16	A socio-technical perspective on the application of green ergonomics to open-plan offices: A review of the literature and recommendations for future research	2021

Publications by authors – RQ3

To answer the third research question (RQ3), this study analyzes the most prominent authors, institutes, and countries in EGB research, including their contributions and overall impact on the subject. Table 5 shows the most prolific authors who have published over 10 articles in various conferences and publications. For example, Yusliza, M.Y. from Universiti Malaysia Terengganu (UMT), Malaysia has published 16 papers on green behavior, independent of being the first or co-author. Data also shows views of institutional contribution to the research field. The larger number of publications on EGB at Universiti Malaysia Terengganu (UMT) can be linked to its research focus, collaborations, funding, and research expertise. These factors have allowed UMT to make a significant contribution to the field of green behavior research.

Table 6 illustrates the research productivity of various countries in the field of green behavior, ranked by their total number of publications (TP) and countries. China leads the ranking in productivity, with a TP of 221. The integration of China's economy into global industrial networks has resulted in worldwide pressure on Chinese organizations to solve environmental issues (Zheng, 2021). Closely following, Pakistan presented a TP of 138 which highlights its significant contributions to the field. Contribution from other countries such as United States, Malaysia and Australia also indicate a strong contributions. Overall, the data offers a global overview of research productivity in EGB. This provides insight into where high-quality research is being done, guiding future collaborations, policy-making, and research initiatives.

Table 5. Most Productive Authors

Author's Name	Affiliation	TP
Yusliza, M.Y.	Universiti Malaysia Terengganu, Malaysia	16
Afsar, B	Hazara University, Pakistan	10
Han, H.	Sejong University, Korea	10
Karatepe, O.M.	Eastern Mediterranean University, Turkey	10
Luu, T.T	Swinburne University of Technology, Australia	10
Muhammad, Z.	Universiti Malaysia Terengganu, Malaysia	10

Table 6. Top 10 most productive countries contributing to the highest number of publications.

Country	TP
China	221
Pakistan	138
United States	91
Malaysia	86
Australia	64
India	62
United Kingdom	56
Turkey	35
Canada	31
Saudi Arabia	9

Publications by source titles – RQ4

To respond to the fourth research question (RQ4) on the central publications for ground breaking studies on EGB, Table 7 and Fig. 5 details the most active source titles of 5 documents. Sustainability Switzerland stand out significantly with the TP of 78. Rank as Q2 journal with impact factor 3.9, suggesting this is the most chosen platform by the researcher. Besides, Journal of Cleaner Production and Frontiers in Psychology also serve as essential publications with TP 38 and 33. With impact factor 11.072 and ranked as Q1, Journal of Cleaner Production specifically synonym with EGB and environmental behaviour studies. Despite of low TP which only 25 publications, Corporate Social Responsibility and Environmental Management Journal also serve as main contribution to the field. With the impact factor 10.83 and ranked as Q1, this journal was chosen due to increasing study on EGB and corporate social responsibility (CSR) as in Table 8. Additionally, the importance of EGB to an enterprise's green development goal is increasingly emphasized in many industries, and an increasing number of enterprises are implementing corporate social responsibility or corporate green measures (Mi et al., 2020).

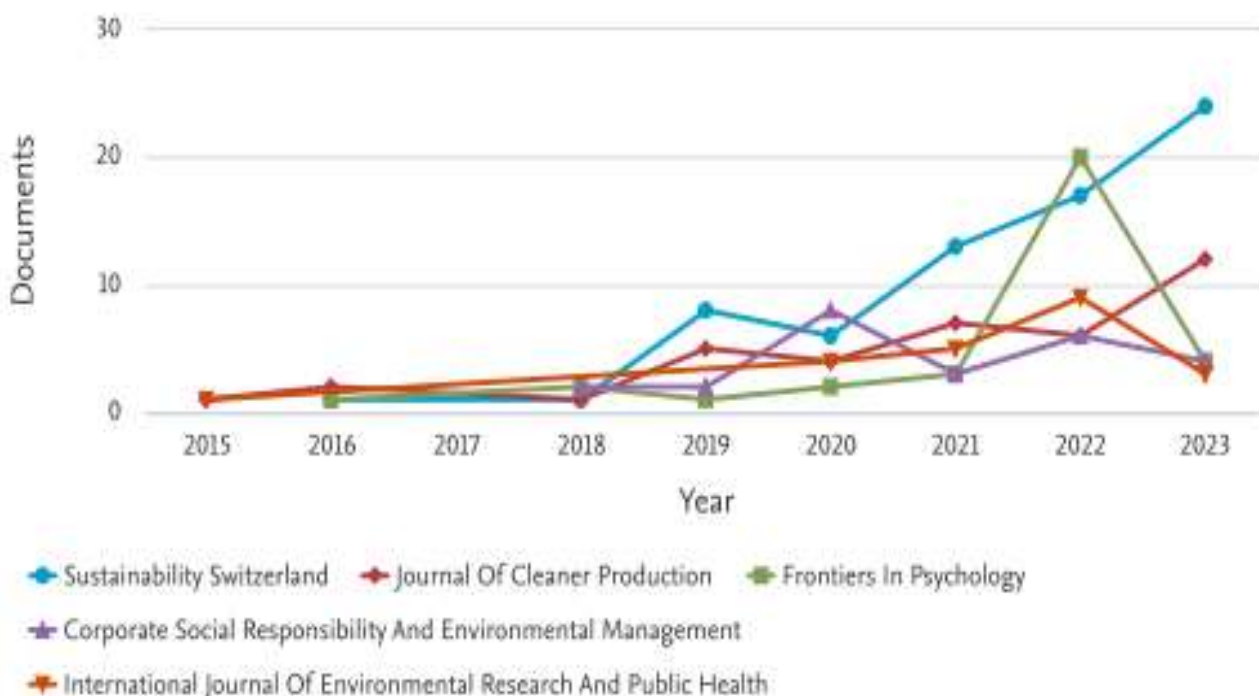


Figure 3. Total publications by year.

Table 7. Ranking of top 5 journals on EGB

Journal	Impact Factor	H Index	SJR	TP
Sustainability Switzerland	3.9	13	0.371 (Q2)	78
Journal of Cleaner Production	11.072	268	1.981 (Q1)	38
Frontiers In Psychology	3.8	157	0.891 (Q2)	33
Corporate Social Responsibility and Environmental Management	10.83	96	2.134 (Q1)	25
International Journal of Environmental Research and Public Health	4.53	167	0.828 (Q2)	22

Table 8. Summary of research on EGB and CSR

No	Title	Year
1	Bring more than green? The impact of green human resource management on hospitality employees' organizational citizenship behaviors	2023
2	Corporate social responsibility and green behavior: Towards sustainable food-business development	2023
3	Influence of green human resource management on employee green behavior: The sequential mediating effect of perceived behavioral control and attitude toward corporate environmental policy	2023
4	Linking environmentally-specific transformational leadership and employees' green advocacy: The influence of leadership integrity	2022
5	Being sustainable: The three-way interactive effects of CSR, green human resource management, and responsible leadership on employee green behavior and task performance	2021
6	Impact of CSR and environmental triggers on employee green behavior: The mediating effect of employee well-being	2020
7	The moderating effects of employee corporate social responsibility motive attributions (substantive and symbolic) between corporate social responsibility perceptions and voluntary pro-environmental behavior	2020
8	Employees' corporate social responsibility perceptions and organizational citizenship behaviors for the environment: The mediating roles of organizational identification and environmental orientation fit	2020
9	How employee's perceived corporate social responsibility affects employee's pro-environmental behaviour? The influence of organizational identification, corporate entrepreneurship, and environmental consciousness	2020
10	Corporate social responsibility and pro-environmental behavior at workplace: The role of moral reflectiveness, coworker advocacy, and environmental commitment	2020
11	Activating employee's pro-environmental behaviors: The role of CSR, organizational identification, and environmentally specific servant leadership	2018

Highly cited documents – RQ 5

In response to the fifth research question (RQ5), Table 9 discloses 10 most cited article as reported by Scopus that have significantly influenced the EGB discourse. The higher number of citations indicates that has been influential and well-received in their field. Research from Dumont et al. (2017) receiving total citations at 580. This article explores on green HRM and EGB in enhancing the role of green work climate and green values.

This research was the first to propose measurements for green HRM and then drew on the behavioral HRM and psychological climate literature. Furthermore, Robertson and Barling's (2013) research serves as a primary reference for scholars in conducting studies on EGB that related to the role of the leader. In summary, majority of the highly cited articles are related to green HRM (GHRM). The joint role of GHRM practice has been found to enhance employees' green mindfulness and stimulate their green behaviors (Sabokro et al., 2021). The increasing trend in studying EGB in the context of GHRM management reflects a broader recognition of the importance of integrating environmental sustainability into HRM practices and leadership strategies to promote green behavior and organizational sustainability.

Table 9. Top 10 highly cited articles

Authors	Title	Year	Total Cites
Dumont J.; Shen J.; Deng X.	Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values	2017	580
Robertson J.L.; Barling J.	Greening organizations through leaders' influence on employees' pro-environmental behaviors	2013	555
Paillé P.; Chen Y.; Boiral O.; Jin J.	The Impact of Human Resource Management on Environmental Performance: An Employee-Level Study	2014	516
Kim Y.J.; Kim W.G.; Choi H.-M.; Phetvaroon K.	The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance	2019	500
Norton T.A.; Parker S.L.; Zacher H.; Ashkanasy N.M.	Employee Green Behavior: A Theoretical Framework, Multilevel Review, and Future Research Agenda	2015	416
Bissing-Olson M.J.; Iyer A.; Fielding K.S.; Zacher H.	Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude	2013	380
Saeed B.B.; Afsar B.; Hafeez S.; Khan I.; Tahir M.; Afridi M.A.	Promoting employee's pro-environmental behavior through green human resource management practices	2019	375
Kim A.; Kim Y.; Han K.; Jackson S.E.; Ployhart R.E.	Multilevel Influences on Voluntary Workplace Green Behavior: Individual Differences, Leader Behavior, and Coworker Advocacy	2017	341
Pham N.T.; Tučková Z.; Chiappetta Jabbour C.J.	Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study	2019	340
Blok V.; Wesselink R.; Studynka O.; Kemp R.	Encouraging sustainability in the workplace: A survey on the pro-environmental behaviour of university employees	2015	305

Co-occurrence analysis – RQ 6

The final research question (RQ6) is to identify the core research themes in EGB that mapping their interrelationships and examining how they have evolved over time to shape the field's development. Fig. 3 shows the co-occurrence network that represents the relationships between different concepts in EGB research. The nodes in the network represent the concepts, and the edges represent the co-occurrences of the concepts in the same context. Co-occurrence analysis was performed using VosViewer to determine how many times the authors' keywords appeared together. Co-occurrence analysis allows researcher to explore current study fields (Khan et al., 2022) and identify gaps for future research contributions.

In Figure 3, out of 833 articles on 'EGB', published during 2013-2023, of the 3457 'all keywords', 282 meet the

threshold keeping 5 as the minimum number of occurrences. The text-mining routine creates a map using VOSviewer, where the distance between different terms is interpreted as an indication of the connection among the various keywords (Laudano et al., 2018). A node's closeness value reflects its relative proximity to other nodes in the network. A higher proximity number indicates a node's centrality inside the network. As shown in Fig 3, sustainability, green HRM, workplace and environmental protection have the greatest closeness ratings, indicating their relevance in the network. This also serve a crucial function in connecting various concepts within the fields of EGB research. Furthermore, in this study, the network was divided into seven (7) clusters. The major author keywords are presented in Table 10. EGB encompasses a wide range of behaviors and is influenced by various factors, leading to the simultaneous consideration of multiple keywords. This can be explained by the multidimensional nature of this research area and show significant contribution in the EGB study (Francoeur et al., 2019; Zacher et al., 2023).

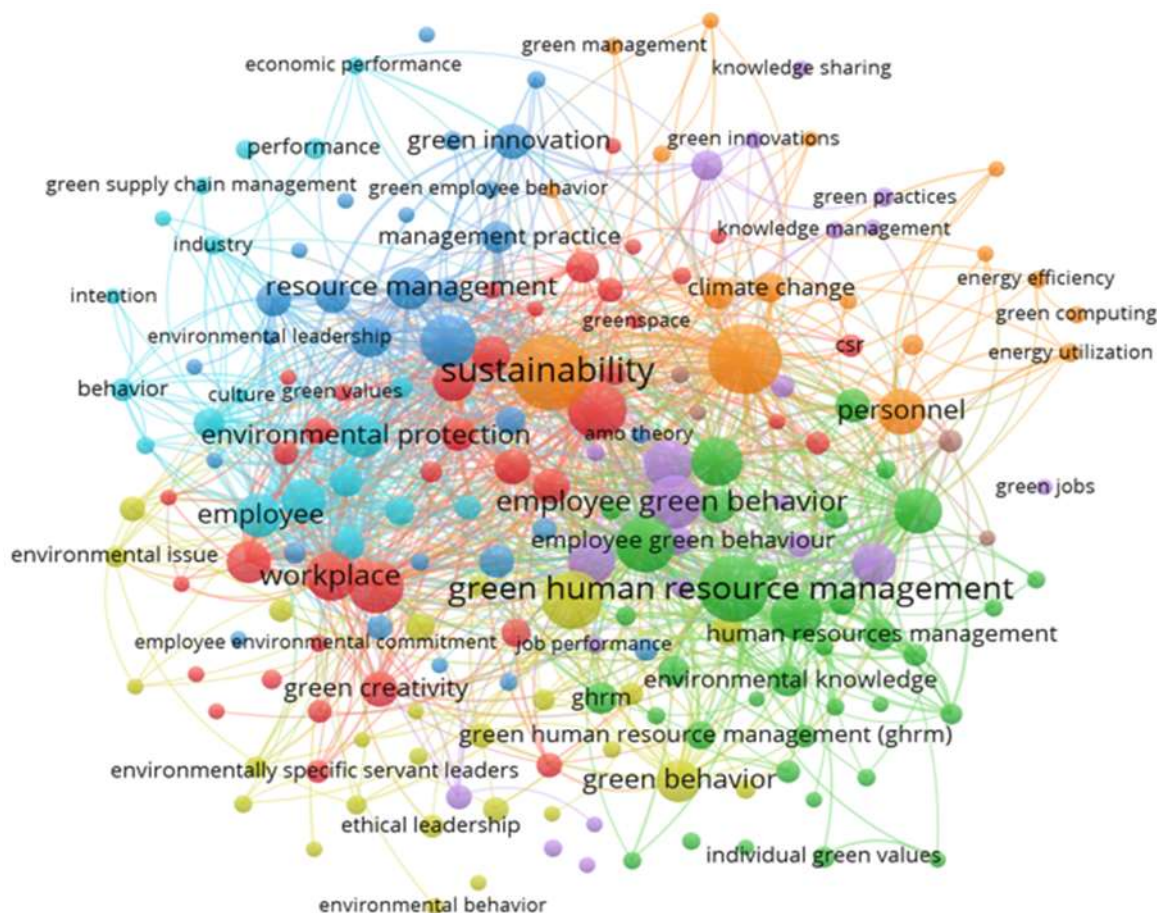


Figure 4. Co-occurrence network of the author’s keywords in EGB research

Table 10. Co-occurrence network of the author’s keywords in EGB research

Cluster 1	Cluster 2	Cluster 3
Attitude	Citizenship	Ability-motivation-opportunity
Corporate strategy	Conservation of natural resources	Employee behavior
Ecological behavior	Culture	Environmental commitment
Employee green behavior	Ecotourism	Environmental consciousness
Environment	Employee environmental commitment	Environmental management
Environmental awareness	Employee protection	Environmental performance
Environmental behavior	Environmentalism	GHRM
Environmental concern	Environmentally specific servant leadership	Green commitment
Environmental knowledge	Green creativity	Green employee empowerment
Environmental policy	Green culture	Green human resource management
Environmental sustainability	Green human resources practices	
Environmental values	Green role identity	
	Green supply chain management	



Environmental specific Transformational leadership Green behavior Green HRM Green jobs Green training and development Organizational behavior Organizational citizenship Organizational commitment Pro-environmental behavior Theory of planned behavior	Green values Harmonious environmental passion Industry Organizational citizenship Organizational citizenship for the environment Organizational identification Supply chain management Sustainable development goal Voluntary workplace green behavior Work environment Workplace	Green knowledge sharing Green organizational culture Green self-efficacy Human resources management practices Individual green values Natural resources management Organizational Pro-environmental behavior Sustainable human resource
Cluster 4	Cluster 5	Cluster 6
Environmental leadership Green economy Green employee behavior Green human resource management Green organizational climate Green organizational identity Green performance Green training Green transformational leadership Green work engagement Human behavior Human resources In role green behavior Innovation Intention Management practice Manufacturing industry Organizational climate Organizational sustainability Small and medium size enterprise Social exchange theory Textile industry Voluntary green behavior	Corporate environmental strategy Employee Employee pro-environmental behavior Environmental corporate social responsibility Environmental economics Environmental issues Environmental passion Green psychological climate Green shared vision Intrinsic motivation Motivation Organizational culture Organizational green culture Pro-environmental behavior Psychological green climate Psychology Responsible leadership Self-determination theory Social behavior Social identity theory Social learning theory Social responsibility Sustainable society	Cognition Corporate social responsibility CSR Economics Employee engagement Employee green behavior Environmental factor Environmental impact Environmental responsibility Green innovation Green manufacturing Green practices Green space Hospitality Hospitality industry Job performance Knowledge management Knowledge sharing Marketing Perceived organizational support Sustainable performance Well-being
Cluster 7		
AMO theory Behavioral research Business Carbon Climate change Energy conservation	Energy efficiency Energy utilization Green computing Green HRM practices Green information system Green management	Greenhouse gases Perceived behavioral control SME Sustainability Sustainable development Theory of planned behavior

CONCLUSION

This bibliometric analysis provides a comprehensive overview of EGB research, including prominent contributors, significant trends, and notable subjects. This study, based on a dataset of 833 papers from 2013 - 2023, shows a rise in scholarly interest in sustainable behavior at work over the last decade, indicating a growing realization of its importance in the fields.

By developing a network of keyword co-occurrence, the terms "green HRM" and "sustainability" were identified as emerging areas of study in this field. The co-occurrence of numerous keywords demonstrates the integrative

and interdisciplinary nature of EGB research. For instance, research incorporates ideas such as sustainable behavior, pro-environmental behavior, environmental attitude and knowledge, leadership, and CSR to provide a comprehensive knowledge of EGB. Being environmentally conscious is believed to benefit an organization. This strengthens the integration of CSR environmental activities into organizational culture and strategies Williamson et al. (2006). This multidisciplinary approach allows researchers to investigate the intricate interplay of individual, organizational, and environmental factors that influence EGB.

This review also presents a list of significant authors in this field. Notable authors include Boiral et al., (2015); Dumont, (2016); Norton et al., (2015), and Robertson and Barling (2018). Being cited frequently suggests that the author's work is considered important, credible, and influential within the EGB fields, and it can contribute to the author's reputation and recognition in the academic community.

The analysis presented in this paper has certain limitations. This study analyses papers from the Scopus database and suggests additional databases for further investigation. Furthermore, there may be a potential of overlooking some crucial work on EGB while screening in the database. Future studies should build upon these findings by delving deeper into specific topics, validating the trends identified, and generating new knowledge to advance our understanding of EGB. Researchers and practitioners can utilize the findings to inform their work., identify potential collaborators, and stay abreast of the most relevant developments.

By leveraging bibliometric analysis, the study has not only synthesized a large body of literature but has also provided a robust framework for comprehensively understanding the evolution and interrelationships of concepts within this domain. The implications of this study extend to both academic research and practical applications, offering valuable guidance for future investigations and initiatives aimed at promoting EGB and environmental sustainability.

ACKNOWLEDGEMENT

This research received no specific grant from any funding agency in the public, commercial, or not-for profit sectors. The author would like to thank Associate Professor Dr Shereen Noranee and Dr Zuhairah Hasan for the guidance.

REFERENCES

1. Ahmi, A., & Mohamad, R. (2019). Bibliometric analysis of global scientific literature on web accessibility. *International Journal of Recent Technology and Engineering*, 7(6), 250–258.
2. Anwar, A., Younis, M., & Ullah, I. (2020). Impact of urbanization and economic growth on CO2 emission: A case of far east Asian countries. *International Journal of Environmental Research and Public Health*, 17(7). <https://doi.org/10.3390/ijerph17072531>.
3. Bashirun, S. N., Noranee, S., & Hasan, Z. (2025). Employee green behavior at work: Toward organizational environmental sustainability. In E. Shaffie et al. (Eds.), *Sustainable Green Infrastructure* (pp. 269–282). Springer. https://doi.org/10.1007/978-981-96-1486-8_15.
4. Bohlmann, C., van den Bosch, J., & Zacher, H. (2018). The relative importance of employee green behavior for overall job performance ratings: A policy capturing study. *Corporate Social Responsibility and Environmental Management*, 25(5), 1002–1008. <https://doi.org/10.1002/csr.1516>
5. Boiral, O., Paillé, P., & De, D. (2015). The nature of employees' pro-environmental behaviors. *The Psychology of Green Organizations*, 12–32.
6. Burnham, J.F., 2006. Scopus database: a review. *Biomed. Digit. Libr.* 3 (1), 1.
7. Cherian, J., & Sial, M. S. (2022). Advancing the debate on hotel employees' environmental psychology by promoting energy-saving behavior in a corporate social responsibility framework. September, 1–15 <https://doi.org/10.3389/fpsyg.2022.990922>
8. Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human resource management*, 56(4), 613–627.
9. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296.
10. Faheem, A., Nawaz, Z., Ahmed, M., Haddad, H., & Al-Ramahi, N. M. (2023). Past Trends and Future

- Directions in Green Human Resource Management and Green Innovation: A Bibliometric Analysis. *Sustainability*, 16(1), 133.
11. Francoeur, V., Paillé, P., Yuriev, A., & Boiral, O. (2019). The Measurement of Green Workplace Behaviors: A Systematic Review. *Organization and Environment*, 34(1), 18–42.
 12. Katz, I. M., Rauvola, R. S., Rudolph, C. W., & Zacher, H. (2022). Employee green behavior: A meta-analysis. *Corporate Social Responsibility and Environmental Management*, January, 1–12.
 13. Khan, A.N., Moin, M.F., Khan, N.A. and Zhang, C. (2022), “A multi study analysis of abusive supervision and social network service addiction on employee’s job engagement and innovative work behaviour”, *Creativity and Innovation Management*, Vol. 31No. 1, pp. 77-92.
 14. Lai, S.-F., Lim, W.-L., & Kho, G.-K. (2023). Employees’ Green Value Creation in the Post Covid-19 Pandemic Through Green Management Practices (Issue 2021). Atlantis Press SARL. https://doi.org/10.2991/978-2-494069-99-2_16
 15. Mi L, Sun Y, Gan X, Yang H, Lv T, Shang K, Qiao Y and Jiang Z (2020) Promoting Employee Green Behavior Through the Person-Organization Fit: The Moderating Effect of Psychological Distance. *Front. Psychol.* 11:568385. doi: 10.3389/fpsyg.2020.568385
 16. Norashikin, S., Shereen, & Zuhairah. (2022). What Influences Employee Green Behaviour? A Scoping Review. *AIP Conference Proceedings*, 2644 (November).
 17. Norton, T. A., Parker, S. L., Zacher, H., & Ashkanasy, N. M. (2015). Employee Green Behavior: A Theoretical Framework, Multilevel Review, and Future Research Agenda. *Organization and Environment*, 28(1), 103–125.
 18. Norton, T. A. (2016). A multilevel perspective on employee green behaviour.
 19. Ones, D. S., & Dilchert, S. (2012). Environmental Sustainability at Work : A Call to Action. *Industrial and Organizational Psychology*, 5(December), 447–469
 20. Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders’ influence on employees’ pro-environmental behaviors. *Journal of Organizational Behavior*, *J. Organiz. Behav.*, 34(February), 176–194.
 21. Robertson, J. L., & Carleton, E. (2018). Uncovering How and When Environmental Leadership Affects Employees’ Voluntary Pro-environmental Behavior. *Journal of Leadership & Organizational Studies*, 25(2), 197–210.
 22. Sabokro, M., Masud, M. M., & Kayedian, A. (2021). The effect of green human resources management on corporate social responsibility, green psychological climate and employees’ green behavior. *Journal of Cleaner Production*, 313(November 2020), 127963.
 23. Su, W., Bataa, B., & Hahn, J. (2023). Does green human resources management (ghrm) promote employee environmental performance? A multilevel time-lagged study from Mongolia. *Journal of Environmental Planning and Management*, 1–22. <https://doi.org/10.1080/09640568.2023.2198666>
 24. Sumayya, U., Amen, U., & Hameed, I. (2023). Adapting to uncertainty: navigating the pandemic with green and traditional HR practices. *Future Business Journal*, 9(1). <https://doi.org/10.1186/s43093-023-00260-x>
 25. United Nations. 2018. “UN General Assembly 2018: Everything You Need to Know about the 73rd Session of the UNGA.” <http://sdg.iisd.org/events/73rd-session-of-the-un-general-assembly/>
 26. Unsworth, K. L., Davis, M. C., Russell, S. V., & Bretter, C. (2021). Employee green behavior: How organizations can help the environment. *Current Opinion in Psychology*, 42, 1–6.
 27. Van Eck, N. J., & Waltman, L. (2014). Visualizing Bibliometric Networks. In Y. Ding, R. Rousseau, & D. Wolfram (Eds.), *Measuring Scholarly Impact* (pp. 285–320). Springer International Publishing. https://doi.org/10.1007/978-3-319-10377-8_13
 28. World Health Organization. (2018). Climate change and health. www.who.int/news-room/fact-sheets/detail/climate-change-and-health
 29. Zacher, H., Rudolph, C. W., & Katz, I. M. (2023). Employee Green Behavior as the Core of Environmentally Sustainable Organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 465–494.
 30. Zhang, B., Yang, L., Cheng, X., & Chen, F. (2021). How does employee green behavior impact employee well-being? An empirical analysis. *International Journal of Environmental Research and Public Health*, 18(4), 1–19.
 31. Zheng S, Jiang L, Cai W, Xu B and Gao X (2021) How Can Hotel Employees Produce Workplace Environmentally Friendly Behavior? The Role of Leader, Corporate and Coworkers. *Front. Psychol.* 12:725170. doi: 10.3389/fpsyg.2021.725170