

A Co-Occurrence Scrutiny of Transformational Leadership, Employee Engagement, Well-Being and Burnout via a Bibliometric Analysis

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Abstract. *In the context of the COVID-19 pandemic, employees anticipate that their leaders will demonstrate greater empathy for the unexpected issues in the workplace. According to recent studies, the present and future require leadership to reimagine human resources leadership and the entire employee experience by focusing on people, cooperation, tight communication, and reestablishing connection and trust. In their 2021 report on the future of work after Covid-19, McKinsey Global Institute notes that hybrid remote work could continue to address the fact that 20 to 25 percent of workers in advanced economies and around 10 percent in emerging economies could work from home three to five days a week, primarily in computer-based office work, including offices of all sizes and corporate headquarters. In this light, the purpose of this research to provide an overview of the relationships between the leadership style, employee engagement, as well as their wellbeing versus burnout. The paper intends to propose a bibliographic analysis of the scientific articles simultaneously tackling the main envisaged constructs, respectively leadership, engagement, well-being and burnout. Given the fact that the inclusion of the Covid-19 pandemic would have narrowed down too much the analysis, the term was not considered in the searches. The bibliometric analysis was performed by means of VOSviewer.*

Keywords: transformational leadership, employee engagement, well-being, burnout, COVID-19 pandemic.

Introduction

Today, the chronic uncertainty that dominates organizations generates emerging modes of thinking and probabilistic models for developing solutions (Murgatroyd, 2015; Bratianu & Bejinaru, 2021), which compel even genuine leaders to conform to a variety of leadership styles. This is mostly due to the fact that they must reinvent the organization's crucial dynamic capabilities based on new knowledge structures and knowledge competencies (Bratianu, Hadad, & Bejinaru, 2020). How COVID-19 is reshaping leadership beyond the crisis, one of Deloitte's research from July 2020, provides evidence in favor of this notion. The work argues that the social and economic crisis brought on by the current epidemic is an extreme but representative illustration of the types of problems leaders confront today. Mastering crisis management necessitates a leadership style that would be viewed as unduly directive and action-oriented during normal operations (Bratianu, 2020). In times of uncertainty, swift judgments are required; these extraordinary circumstances demand a leadership style that is more human-centered and radically driven.

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COVID-19 has greatly altered the world of work, particularly the ways in which firms manage their operations and CEOs interact with their staff. Understanding how firms are adapting to the new normal in working practices and maintaining employee engagement is crucial at this time, when the majority of organizations expect to return their workforces to the workplace. Companies are reinventing work and instituting a new hybrid approach to working that will support their employees in the present and future.

This topic is particularly novel, given that we are still confronting effects of a pandemic, and there is incipient research to support a method of employee engagement and well-being. Ernst & Young (EY) is collaborating with the most prominent worldwide organizations to support a variety of transitions associated with reinventing work. In June and July of 2020, EY commissioned the Physical Return to Work Reimagined (PRWR) survey and JAM analysis (from an interactive crowdsourcing event) via the MillionYou platform. Involved were 3683 employees, 708 employers, and data from the United States, the United Kingdom, and Germany.

The 2021 Work Trend Index can also be used as a starting point for estimating this future hybrid workforce. The 22nd of March, 2021 saw the release of an annual report titled "The next great disruption is hybrid work – are we prepared? The 2021 Work Trend Index details findings from a survey of over 30,000 individuals in 31 countries and studies of trillions of productivity and labor signals across Microsoft 365 and LinkedIn. It also includes viewpoints from specialists who have spent decades studying teamwork, social capital, and workplace space design.

Although leaders recognize the disruptions produced by the COVID-19 epidemic, major behavioral changes are anticipated to adapt to the new situation. In order to prevent employee burnout and disengagement, the leadership style should be altered to match the demands of hybrid work settings.

Theoretically, the majority of academics concur that the leadership style has a considerable impact on the amount of employee engagement or disengagement. Employees are more likely to be engaged in their work and to perform well if their leaders exhibit the following characteristics: a. resilience, consistency, trust, and competence (Kahn, 1990); b. engagement (Welbourne, 2007) and commitment to the organization (CIPD, 2006); c. care and support (Kahn, 1990) and recognition for a job well done (Wellins et al., 2005); d. care and support (Kahn, 1990) (Tower Perrin, 2003).

The consequences of authentic leadership in the workplace can result in trade-offs between the dimensions of wellbeing, which can both increase and decrease employee engagement. As further noted by Vui-Yee and Ho (2020), for authentic leadership to have this effect, employees must see the leaders' behaviors as genuine (Hsieh & Wang, 2015). Today, employee engagement is seen as a crucial factor for organizational performance, and many firms enhance employee motivation through employee engagement techniques, with leader conduct being one of the most effective engagement strategies.

There is no doubt that employee well-being is one of the major indicators of excellent return on investment for both individual and organizational growth and productivity. Mohd et al.'s (2020) article - "The roles of authentic leadership, incentives, and meaningful work" reveals that the optimism of authentic leaders indirectly promotes employee well-being via on – financial rewards and meaningful work. It also proposes that financial and non-financial rewards should be evaluated independently in light of the current socioeconomic climate and the motivational demands of employees.

From the standpoint of the organization, leaders can encourage the growth of authenticity among their employees, which contributes to their well-being and performance (Avolio & Gardner, 2005). The reason for this is that authentic leaders are good listeners and responsive to the needs of their people, thereby making them feel important and valued. They are also adept at rewarding staff and fostering a sense of pride and mutual devotion among coworkers. Moreover, it is believed that this link between the true leader and employees would result in a pleasant employee experience with meaningful work.

In light of the fact that we are all confronting something incredibly novel in terms of workforce transition, it is necessary to think on and investigate all of these trends and research findings further. It is a significant mindset shift that will need leaders and companies to fundamentally reassess and rewire their operating mode in order to prioritize employee health. Diversity and culture are at the heart of a reinvented workplace in which working and collaborating with others is likely to remain a fundamental aspect of the entire employee experience (Stratone et al., 2022; Vătămănescu et al., 2022a, 2022b, 2022c).

Starting from these aspects, the present paper intends to propose a bibliographic analysis of the scientific articles simultaneously tackling the main envisaged constructs, respectively leadership, engagement, well-being and burnout. Given the fact that the inclusion of the COVID-19 pandemic would have narrowed down too much the analysis, the term was not considered in the searches. The bibliometric analysis was performed by means of VOSviewer (Visualization of Similarities) (van Eck & Waltman, 2023).

The rest of the paper is organized as follows. Firstly, the methodology is clearly presented with a view to reveal how the analyses were performed. Secondly, the results and discussions are introduced, hence providing an articulate picture of the relationships among the identified publications. Thirdly, the conclusions, the limitations and future research directions are mentioned. The study acknowledges the fact that it was designed as a preliminary and introductory analysis of the inter-linked constructs without going deeper into the content analysis.

Methodology

In order to provide an overarching perspective on the research issue linking four main constructs – transformational leadership, employee engagement, well-being and burnout, the current work makes use of bibliometric research, also known as statistical bibliography, a term that was coined in 1922 by Hulme (2015). Bibliometric analysis is considered to be a statistical assessment of published documents, allowing the measurement of the influence of a publication in the scientific community.

The information was obtained from the Web of Science (WoS) Core Collection during January 2023. WoS is the world's premier scientific citation search and analytical information platform (Li et al., 2017). The retrieval period that was used ranged from 1975 to 2023, and the retrieval model relied on the Advanced search function. The default values that were provided by WoS were used for all of the other retrieval parameters, with the exception of selecting articles that have titles and abstracts written in English because this is the only writing language used. Regarding the type of document, only articles were selected.

Transformation leadership, employee engagement, burnout and well-being were the primary concepts that were searched for in the Title field. The results showed that the first publications appeared in the WoS in 1985 for "transformational leadership", the last five years gathering more than 52% of all-time WoS indexed articles dealing with this subject and in 2002 for "employee engagement", the last five years gathering more than 72% of all-time WoS indexed

articles dealing with this subject; the starting year for the rest of the constructs was 1975 whereas each construct displayed a higher density of publications on the topic during the period 2018-2023 as follows: burnout – 56% and well-being – over 50% out of all the articles ever indexed in WoS.

Given the concentration of the vast majority of papers over the last five years, it may be concluded that the envisaged concepts are invested with a growing significance and that a comprehensive model integrating all of them is worth scrutinizing (see Table 1).

Table 1. A synopsis of the published articles indexed in WoS

Construct	No. of articles indexed in WoS	Year of first indexation in WoS	No. of articles published in journals indexed in WoS during 2018-2023	Percent of the latest articles out of the total
Transformational leadership	1995	1985	1045	52.38%
Employee engagement	1212	2002	882	72.77%
Burnout	10056	1975	5632	56%
Well-being	29958	1975	15203	50.75%

Records that were exported from WoS featured a wealth of information, including authors, titles, abstracts, sources, subjects, publication years, and references. This data was exported as a plain text file and included the whole record as well as the references. As a result of this, the full data obtained from the WoS research was directly utilized in the process of performing the analysis.

By employing the full counting method and generating a map based on the aforementioned bibliographic data, the bibliometric software VOSviewer (Visualization of Similarities) (van Eck & Waltman, 2023) was utilized in order to analyze and visualize the co-occurrence of the considered constructs (keywords) and co-citation analysis.

According to Chen et al. (2010), co-citation appears whenever two documents receive a citation from the same third document. Author co-citation analysis shows how authors, as field experts, interlink ideas between different contributions. In fact, co-citation emerges as a semantic similarity measure for papers relying on citation relationships. It is thus indicative of the frequency with which two documents are cited together by other documents – the higher the number of co-citations, the more similar the documents.

Results and discussions

With a view to spot the most important sources co-citing the retrieved articles, a co-citation analysis was performed, establishing the *cited sources* as a unit of analysis – ‘A co-citation link is a link between two items that are both cited by the same document’, Van Eck & Waltman, 2023 p. 27). A synopsis of the most prominent co-citing sources (i.e., journals) is presented in Table 2 and Figure 1.

Table 3. Prominent co-citing authors

Author	Citations	Total link strength
"Schaufeli, WB"	72	559
"Bakker, AB"	44	448
"Demerouti, E"	39	382
"Maslach, C"	37	307
"Shanafelt, TD"	31	151
"Hobfoll, SE"	13	136
"Bass, BM"	12	133
"Dyrbye, LN"	17	130
"Podsakoff, PM"	11	106
"Haslam, SA"	10	74
"Luthans, F"	14	68

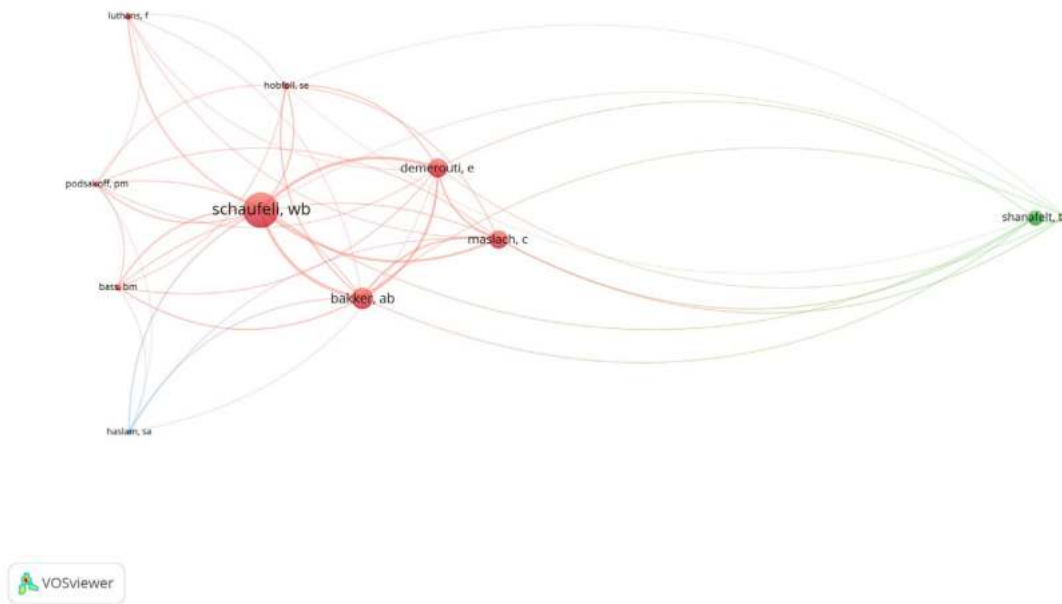


Figure 2. Prominent co-citing authors and their clusters

Source: authors' own research

In what concerns the countries of the main co-cited authors, Table 3 is descriptive of the distribution. As shown below, most co-cited authors come from Australia, Canada and Finland, followed by Netherlands and USA. Consequently, it results that the researchers and / or research teams who have a keen interest in the underlying relationships among the targeted constructs are residents of the aforementioned regions.

Table 3. Countries of the co-cited authors

Country	Documents	Citations	Total link strength
Australia	3	63	261
Canada	3	49	102
Finland	8	95	323
Netherlands	3	178	164
USA	9	101	196

Moving to the citation analysis (i.e., A citation link is a link between two items where one item cites the other, as posited by Van Eck & Waltman, 2023 p. 27), the most prominent authors cited are displayed in Table 4 and Figure 3.

Table 4. Most prominent authors retrieved from the citation analysis

Document	Citations	Links
Schaufeli (2015)	167	4
Miyasaki (2017)	42	0
Stevanin (2018)	40	0
Steffens (2018)	35	0
Bass (2016)	28	0
Adil (2020)	21	1
Coetzer (2017)	21	0
Angelo (2013)	20	0
Huang (2021a)	10	1
O'donoghue (2016)	9	0
Boelhouwer (2020)	7	0
Kaltainen (2022)	7	0
Bernard (2019)	7	0

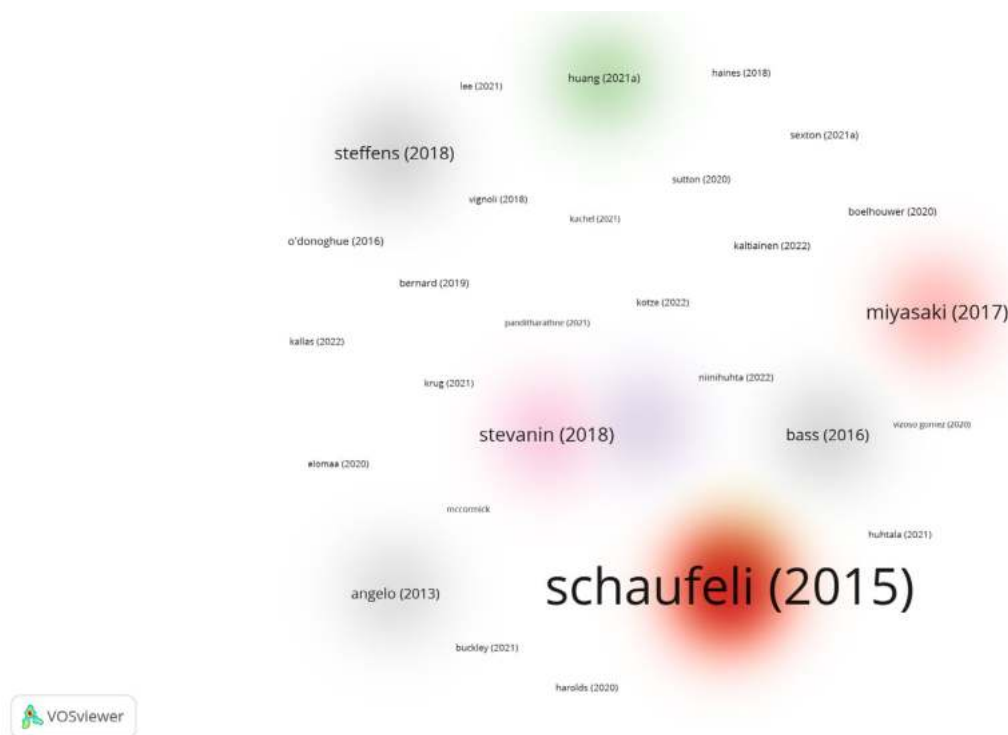


Figure 3. Prominent cited authors

Source: authors' own research.

The use of a keywords' co-occurrence can positively represent the research hotspots in the discipline domains, offering additional support for scientific and academic study in the process. In this respect, in order to identify the relevant articles integrating the main envisaged constructs, the following search was performed in WoS: (((AB=(Burnout)) AND AB=(leadership)) AND AB=(engagement))) AND AB=(well-being). It should be mentioned here that the initial search

which included the more specific terms “transformational leadership” and “employee engagement” did not retrieve any results. Consequently, with a view to broaden the search, the newly searched terms were the more generic ones, respectively “leadership” (instead of “transformational leadership”) and “engagement” (instead of “employee engagement”). The analyzed section was the abstract as it would have been highly unlikely to find all the concepts in the titles or keywords whereas searching for the terms in the body of the papers would have led to too vague results.

Of the 265 keywords from the 37 retrieved results, only 26 met the threshold (i.e., appeared at least three times). As previously indicated, the VOSviewer program was responsible for the processing and construction of the keyword co-occurrence network (Figure 4). The size of the nodes and words in the figure that follows represents the importance of the information they contain. The weight is proportional to the size of both the node frequency and the word frequency. The length of the path separating two nodes is directly proportional to the quality of the connection that exists between them; hence, a shorter path often reflects a more robust connection. If there is a line connecting two keywords, it indicates that those keywords have appeared together at some point. The thicker the line, the more times the two keywords have occurred together (an illustration of such relationships is presented in Table 5 and Figure 4).

Table 5. Keywords, occurrences and total link strength

Keyword	Occurrences	Total link strength
Burnout	25	109
Work Engagement	16	79
Transformational Leadership	9	58
Leadership	12	56
Engagement	13	52
Mediating Role	8	46
Performance	8	43
Job Demands	7	42
Satisfaction	8	36
Stress	8	36
Model	5	31
Employee Engagement	5	30
Health	6	27
Resources	4	25
Impact	5	21
Well-Being	4	20
Behaviors	3	19
Job-Satisfaction	6	18
Outcomes	3	18
Member Exchange	3	17
Emotional Exhaustion	3	16
Demands	3	14
Nurses	3	10
Quality	3	10
Care	3	9
Occupational Stress	3	8

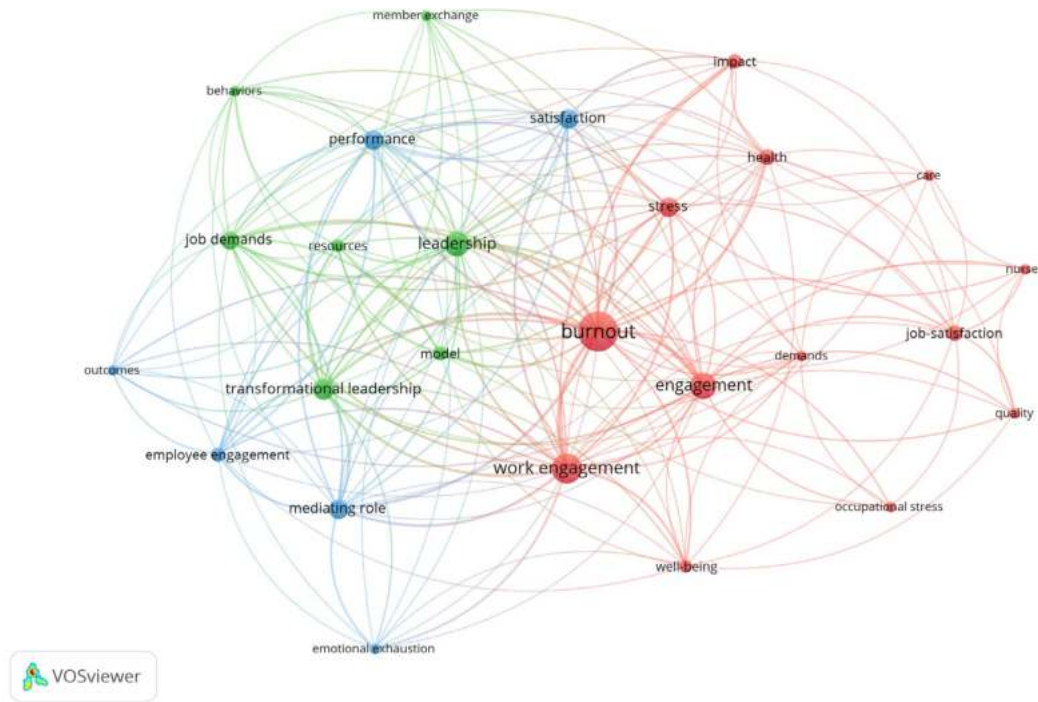


Figure 4. Keywords’ co-occurrence network of WoS publications - by VOSviewer

Source: authors’ own research.

The nodes that all share the same color have been reorganized into a cluster with them. Here, the retrieved keywords were organized by VOSviewer into three different clusters (please see Table 6 and Figure 5).

Table 6. Keyword clusters

Cluster 1 (13 items)	Links	Total link strength	Occurrences
Burnout	25	109	25
Care	9	9	3
Demands	12	14	3
Engagement	22	52	13
Health	17	27	6
Impact	12	21	5
Job satisfaction	12	18	6
Nurses	7	10	3
Occupational stress	6	8	3
Quality	7	10	3
Stress	17	36	8
Well-being	14	20	4
Work engagement	24	79	16
Cluster 2 (7 items)			
Behaviors	13	19	3
Job demands	18	42	7
Leadership	20	56	12
Member exchange	11	17	3
Model	14	31	5
Resources	14	25	4
Transformational leadership	19	58	9

Table 7. Dyads and total link strength

Dyads	Total link strength
Burnout – (Work / Employee) Engagement	25
Burnout – Well-being	3
Burnout - (Transformational) Leadership	16
(Work / Employee) Engagement – Well-being	6
(Work / Employee) Engagement – (Transformational) Leadership	23
Well-being - (Transformational) Leadership	3

As shown in Table 7, the most interconnected constructs are Burnout – (Work / Employee) Engagement (25 links) and (Work / Employee) Engagement – (Transformational) Leadership (23 links), followed by Burnout - (Transformational) Leadership (16 links). Given this situation, the premises of an articulate conceptual model covering at least these three constructs seem viable from a theoretical point of view.

Conclusion

COVID-19 has greatly altered the world of work, particularly the ways in which firms manage their operations and CEOs interact with their staff. Understanding how firms are adapting to the new normal in working practices and maintaining employee engagement is crucial at this time, when the majority of organizations expect to return their workforces to the workplace. Companies are reinventing work and instituting a new hybrid approach to working that will support their employees in the present and future.

Despite the fact that many leaders recognize the disruptions produced by the COVID-19 epidemic, major behavioral changes are anticipated to adapt to the new situation. In order to prevent employee burnout and disengagement, the leadership style should be altered to match the demands of hybrid work settings.

Given the newly emerged context, the present bibliometric research sought to examine the interrelationships between leadership, employee engagement, well-being and burnout as a topical and compelling subject matter. The aim was to provide an overview of the main publications simultaneously tackling these issues by unfolding a bibliometric analysis covering keyword co-occurrences and co-citation coupling. In this way, valuable insights into the most prominent articles, authors and publications were brought forward as a prerequisite for further content scrutiny.

The main limitation of the current endeavor refers to the presentation of facts and figures without going deeper into content analysis. Therefore, future research on this topic should study the theoretical and empirical developments on the topic more in-depth, beyond bibliometric reports.

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