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Source / Izvornik: **Sustainability, 2023, 15, 987 - 1009**

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

<https://doi.org/10.3390/su15020987>

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:277:707726>

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Article

Employee Engagement Management in the COVID-19 Pandemic: A Systematic Literature Review

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Abstract: The COVID-19 outbreak resulted in protracted lockdowns, causing businesses to reconsider keeping their operations running smoothly without interruption. Employee engagement has played a critical role in achieving this. This research aimed to see what strategies business organizations use to keep their employees significantly engaged during the pandemic. A systematic review of empirical studies conducted between 2020 and 2022 is synthesized. The review revealed that offering mental relief care and resilience were the most preferred approaches to enhance employee engagement. Competency building, demonstrating employee empathy, and directing expectations helped in job engagement. The review offers insight and implications for organizations and policymakers on strategizing engagement policies and maintaining the well-being of their employees in tough times. Finally, the review established a call for future research agenda.

Keywords: COVID-19; employee engagement; methods; pandemic; systematic literature review



Citation: Andrić, B.; Priyashantha, K.G.; De Alwis, A.C. Employee Engagement Management in the COVID-19 Pandemic: A Systematic Literature Review. *Sustainability* **2023**, *15*, 987. <https://doi.org/10.3390/su15020987>

Academic Editor: Lucian-Ionel Cioca

Received: 8 November 2022

Revised: 27 December 2022

Accepted: 28 December 2022

Published: 5 January 2023



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1. Introduction

Due to the nature of COVID-19, shops and offices had to close regularly. Travel was also restricted, and personnel had to be managed remotely [1]. The new ways of working made decision-making more difficult for managers in engaging employees to do their jobs [1]. The new working methods had the consequences of isolation, blurring work-family boundaries, and a higher risk of domestic violence [2]. Life-saving operations such as health care, emergency services, and other similar operations continued using traditional methods. Employees in those services had longer working hours and fewer rest breaks, which created stress, anxiety [3], low motivation, emotional exhaustion, the perception of risk, depression, burnout, and suicidal thoughts [2,4,5]. Stress connected to COVID-19 can cause physical symptoms such as gastrointestinal problems, hunger, weight fluctuations, dermatological reactions, and exhaustion symptoms [2]. Other bodily symptoms include cardiovascular illness, musculoskeletal issues, headaches, and other inexplicable aches and pains of COVID-19-related stress [2]. These can lower employee engagement [2,6,7].

Employee engagement is a feeling of enthusiasm, dedication, and absorption associated with work and is pleasant and fulfilling [8]. It induces employees to be energetic, passionate, and involved mentally, physically, and emotionally [9] toward positive organizational outcomes [10,11]. They include higher individual performance [10], financial performance, productivity, sales, and customer satisfaction [12,13]. Moreover, employee engagement predicts well-being, greater life satisfaction, retention [12], and reduced turnover intention [14,15]. Various causes of employee engagement include perceived organizational support [16–18], internal communication [19–21], and human resource development activities [22,23], such as training opportunities, career development opportunities, and

developmental performance appraisal [24]. The psychological capital (self-efficacy, hope, optimism, positive mindset, and resilience) [18,25,26], leader-member relationship [27], transformational leadership style [28,29], the different causes of work-family conflict [30], jobs crafting [31], and CSR activity participation increase meaningfulness and a sense of purpose [32], causing employee engagement. All these causes are addressed by the job demand resource model (JDR) [33], resource-based view [34], and social exchange theory (SET) [35,36] which postulates that providing more resources increases employee engagement [37,38].

Despite its drawbacks, COVID-19 has undergone a transition rooted in human experience, and many lessons have been learned. One such lesson is boosting employee engagement, which should not be disregarded. Notably, the employee engagement level in 2019 and 2020, when the pandemic peaked globally, was 21% [39]. It has been slightly improved compared to the employee engagement rate of 19% in 2018, before the pandemic [39]. Experts say this increase has resulted from innovative practices evolved through the practices of managers during the pandemic [40]. Some of these cutting-edge practices claim that increased communication and the fostering of emotional bonds between workers and their leaders have increased employee engagement [1,41]. Apart from that, what other best practices have been experienced and learned in increasing employee engagement? What is the knowledge in the empirical landscape regarding employee engagement in COVID-19? It is interesting to study the empirical investigations on how organizations have dealt with the employee engagement challenge in COVID-19. Researchers have found a recent estimate that a COVID-19-like pandemic is 38% likely to strike in a person's lifetime [42]. This estimate includes the likelihood of devastating epidemics emerging each year could increase threefold in the coming decades [42,43]. Finding and synthesizing them may help employee engagement initiatives in similar pandemics. Additionally, the findings may help to practice them in the new normal to maintain a higher level of employee engagement, as global disengagement is still high, at 80% [39]. Besides, findings may be helpful as there is proven evidence that increased engagement results in favorable outcomes like improved employee commitment, wellbeing, productivity [13,40], and higher performance in organizations [12,44].

This study mainly focused on the empirical literature published during the 2019 and 2022 periods. We synthesized employee engagement practices investigated referring to the COVID-19 pandemic. To our understanding, there are limited systematic literature reviews on employee engagement practices during a pandemic, particularly concerning COVID-19. There may be related findings from review studies concerning other earlier pandemics. They cannot, however, be connected to COVID-19 because it took place in a different socio-technical environment than the ones that exist today. In order to identify the practices for employee engagement during the COVID-19 pandemic, we therefore carried out a systematic literature review. The objectives of the study were: (1) to find out the common practices driving employee engagement during the COVID-19 pandemic found in the empirical research landscape; (2) to find out what practices are not common in the research landscape for driving employee engagement during the COVID-19 pandemic; and (3) to provide research areas need more attention in the research landscape on methods driving the employee engagement.

Addressing the first and second objectives and the themes developed based on the empirical findings may imply validating the theoretical groundings, finding evidence for testing the hypothesis, and developing measurement instruments. Similarly, the themes developed regarding the first and second objectives imply the application to drive employee engagement in organizations in similar pandemic situations and the new normal. Addressing the third objective may imply that the researchers develop conceptualizations based on such themes and empirically investigate their validity.

The study's methodology and results are summarized in the manuscript's following parts. The Section 2 explains the systematic process used to conduct and analyze the literature review. The findings of the study are described in the results and findings section.

Study selection, study characteristics, study outcomes, and reporting biases are the four sections that make up this section. The discussion, conclusion, practicality, and research implications are then listed one after the other.

2. Methods

2.1. Study Selection Process and Methods

The study used the Systematic Literature Review (SLR) methodology. Since the “Preferred Reporting Items for Systematic Reviews and Meta-Analyses” (PRISMA) are preferred for SLRs [45], it was used for framing article selection and reporting the findings. Typically, a prior protocol must be created for the SLRs, highlighting the inclusion criteria of articles and analysis methods [45]. Thus, we designed a protocol before the article search and used the PRISMA framework for article selection. The PRISMA has three stages, “Identification”, “Screening”, and “Included”, to be completed to include the articles.

Making decisions about search terms, search criteria, databases, and data extraction techniques fall under the category of “the identification stage”. Thus, the search terms of the current study were Employee Engagement and COVID-19. The search criteria were developed based on the similar terms of two keywords of Employee Engagement and COVID-19 using “AND” and “OR” operatives. The keywords used were “Employee Engagement”, “Work Engagement”, “COVID-19”, “COVID-19 Pandemic”, and “Corona Virus”. Scopus, EBSCOHost, and LENS.ORG were used to search the articles. The relevant articles were identified from the initial results using the default limiting options of the databases. To identify the articles at the identification stage, we used the inclusion criteria as “Final Journal Articles” in “English” produced based on “Empirical Studies” relating to “Employee Engagement” or “Work Engagement” in “COVID-19” during “2020–2022”. As COVID-19 happened after 2020, it is reasonable to take the articles published during 2020–2022. The “empirical journal articles” at a final level were chosen because they are suggested for SLRs [46]. They ensure sufficient methodological uniformity to generate relevant results that satisfy internal validity [47].

The “PRISMA flow diagram” requires the identified articles must be screened based on the inclusion criteria. The screening process included automatic screening using database options, manual screening by independent assessors, retrieval of bibliometric data from articles in an Excel file, manual assessment of each article’s methodological eligibility, and downloading the full versions of each screened article. Both in automatic and manual screening, the articles that did not meet the inclusion criteria were removed [48–51]. Figure 1 depicts the full article selection process, and Section 3.1 explains the number of excluded articles and their reasons.

2.2. Study Risk of Bias Assessment

The reviews’ quality is decreased due to the bias of the researchers who chose and analyzed the articles [52]. As a result, review protocols, systematic, objective article selection techniques, and analytic methods [52,53], as well as parallel independent appraisal of articles by two or more researchers [54], are all necessary to eliminate bias in article selection and analysis. Thus, adhering to all such requirements eliminated the risk of bias in the papers.

2.3. Methods of Analysis

The information in the Excel sheet was then loaded into the Biblioshiny and VOSviewer software to generate outputs for the bibliometrics analysis. Mainly, the VOSviewer was used to build the keyword co-occurrence network visualization, a component of bibliometric analysis. It was used to address the first and the second objectives. The first objective was to find the common practices driving employee engagement during the COVID-19 pandemic found in the empirical research landscape. The second objective was to find out what practices are not common in the research landscape for driving employee engagement during the COVID-19 pandemic.

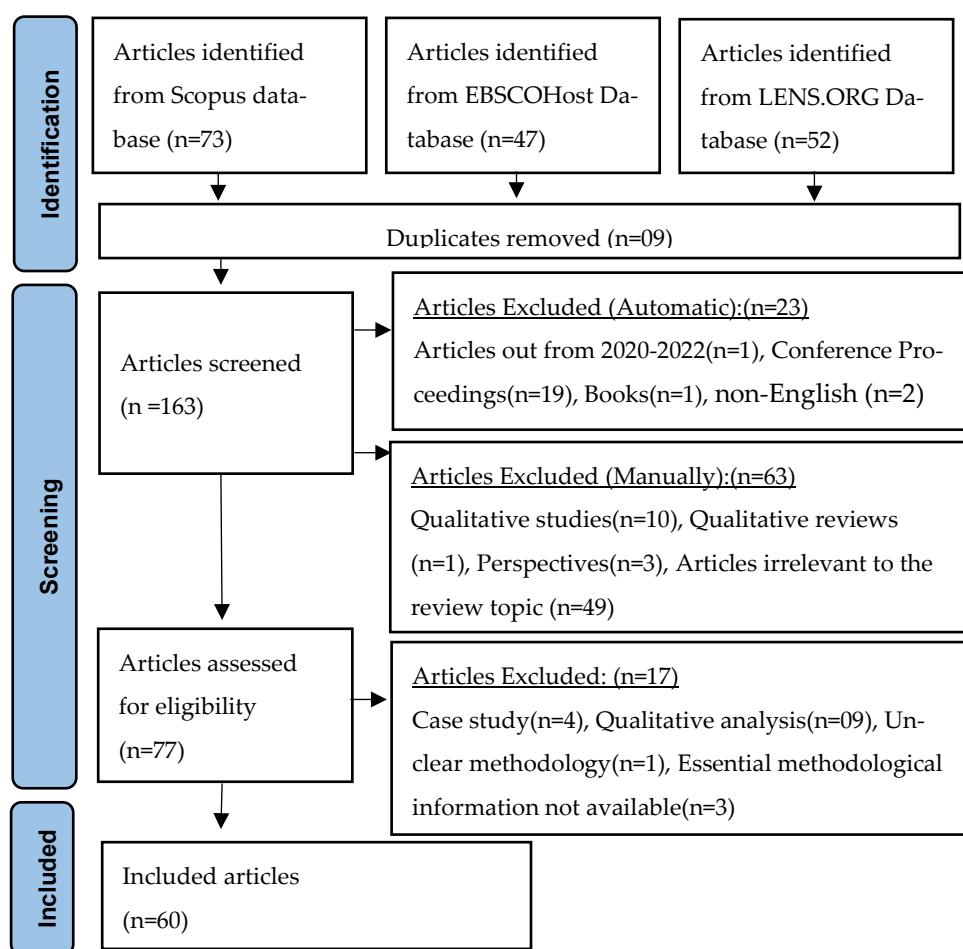


Figure 1. PRISMA flow diagram.

Bibliometrics analysis is a quantitative technique for evaluating scientific activities in research [55,56]. It provides two types of analysis: (1) an examination of scientific production; and (2) scientific maps [57]. The scientific mapping describes the research's organization, development, and significant participants [58]. These maps, also known as bibliometric networks, are made using various pieces of information from an article, referred to as a basis of analysis [59]. Thus, keywords are the most popular basis of analysis as they represent an article's primary content for creating bibliometric networks. Many links in these networks can be built using the co-occurrence of keywords in article [55]. The "keyword co-occurrence network visualization" feature of the VOSviewer maps out these links.

The network visualization must be normalized to relativize the connection between the keywords to get crucial knowledge about the subject being studied. As a result, the VOSviewer constructs a network in two dimensions by default, using the association strength normalization [60]. Strongly linked keywords are represented in that space by circle points close to one another, while weakly related keywords are represented by circle points far away [61]. The circle points were then assigned by the VOSviewer into a network of clusters, with circle points with a high correlation being grouped [62]. VOSviewer employs colors in such clusters.

Consequently, a cluster may stand for a common theme. Finding the common themes helped address the first objective. The second objective was addressed using the themes, which were not common, identified from the same keyword co-occurrence analysis.

The density visualization analysis resulting from keyword co-occurrence analysis is another bibliometric analysis. It was used to address the study's third objective: to provide research areas that need more attention in the research landscape on methods driving employee engagement.

The default color scheme in keyword density visualization at each place ranges from blue to green to red [61]. The position color becomes red as the number of nearby keywords and their position weight increase [61]. The closer the location color is to blue, the fewer nearby keywords and the lighter their weight. Green indicates an average keywords in a position in the map. Accordingly, we thus searched for keywords that were within the blue or green area to address the second objective.

The software also generated “Background information of the included articles for the review”, “annual article production”, “the sources articles published”, and “country-wise article publications”. The review’s article set profile was to be explained by them. Biblioshiny of R generated the first three outputs, and VOSviewer generated the final output.

3. Results and Analysis

3.1. Study Selection

We found 172 articles during the identification stage, as shown by the PRISMA flow diagram. After that, nine duplicate articles were deleted. The total articles then came down to 163. The databases’ automatic screening feature deleted articles published before 2020–2022 and conference proceedings. Then, there were 140 articles retained. As we wanted to incorporate the “empirical articles” in the “final stage” published in “journals” in “English-language”, we downloaded the remaining articles as an MS Excel file. The file contained information about article’s title, abstract, keywords, authors’ names and affiliations, journal name, citation counts, and the year of publication.

Afterwards, each article was independently read by this study’s authors and manually screened against the criteria for including the articles. If there were conflicts over inclusion, they were settled through negotiation and agreement among the authors. They found qualitative studies ($n = 10$), qualitative reviews ($n = 1$), perspectives ($n = 3$), and articles irrelevant to the review topic ($n = 49$). They were also removed as they did not comply with the criterion “empirical studies.” Then the full version of the remaining 77 articles were downloaded for the “eligibility assessment.”

The eligibility assessment is done to assess each article’s methodological quality, which is usually assessed by setting an acceptable threshold level for methodological quality [48]. Articles that adhere to the acceptable threshold level are included, while those that do not are excluded [48]. Accordingly, the acceptable threshold level was “the empirical studies that employed quantitative techniques”. If there was any argument about the inclusion on this this acceptable threshold level it was resolved through consensus between the authors. From this assessment, the authors found articles on case study ($n = 4$), qualitative analysis ($n = 09$), unclear methodology ($n = 1$), and essential methodological information not available ($n = 3$), which were removed. In the end, 60 articles were kept for the review. The article selection process depicts in Figure 1.

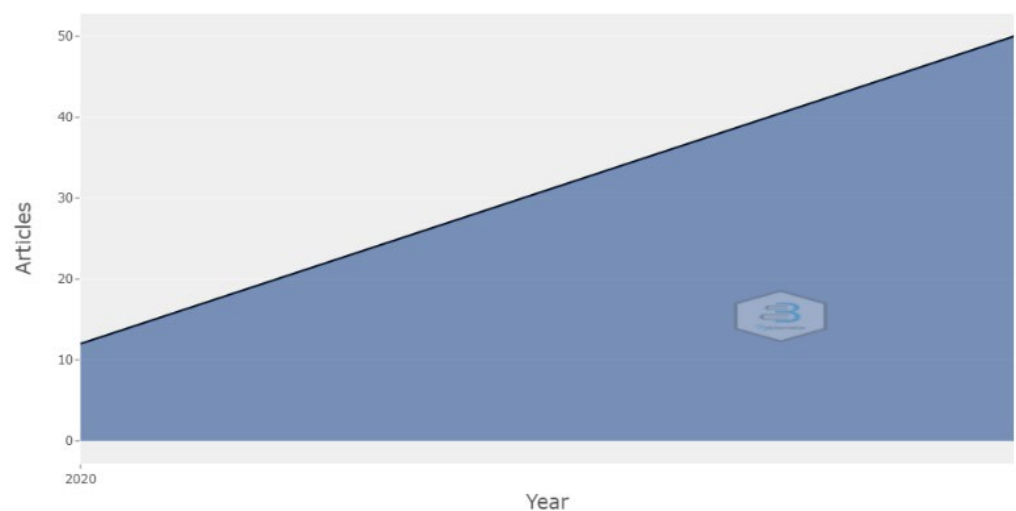
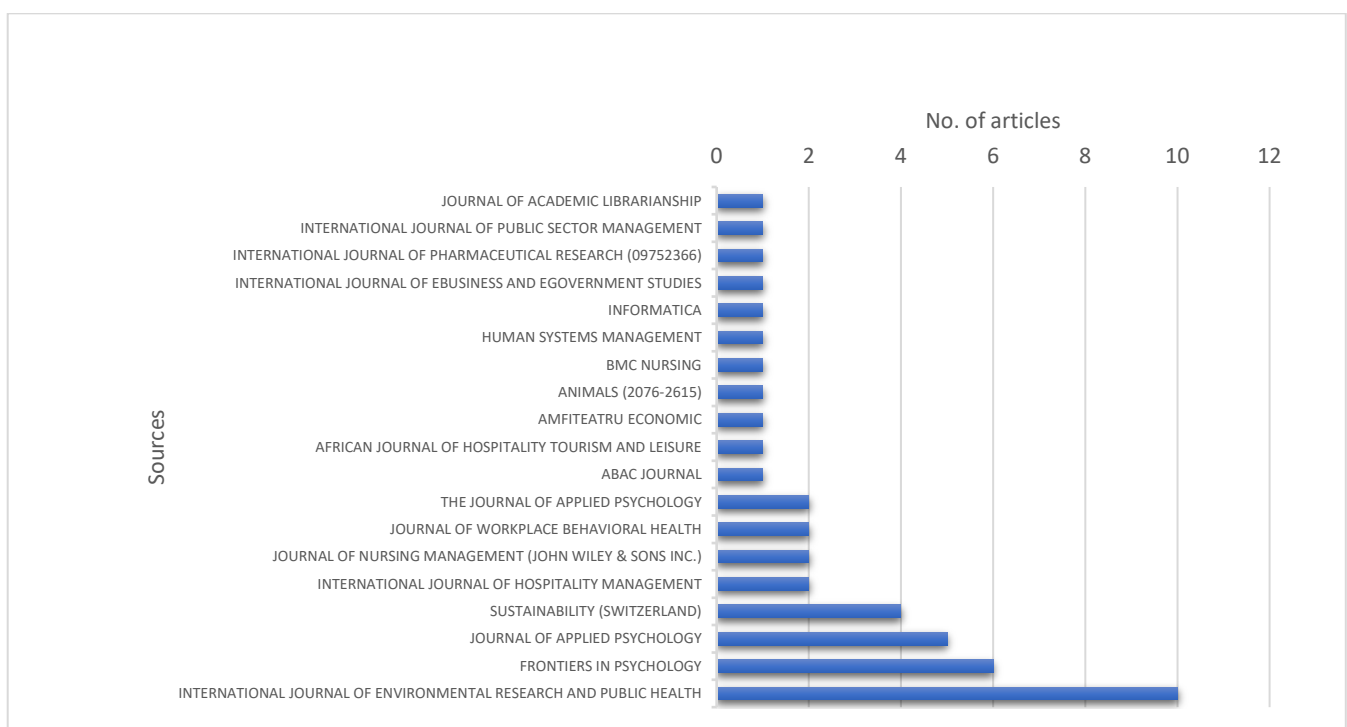
3.2. Study Characteristics

Table 1 provides some background information on the articles that were reviewed. Accordingly, the review included 60 articles published in 36 journals from 27 countries. There were 2721 references and 213 keywords, and their findings were used for the review. The annual article production is shown in Figure 2, revealing that the number of published articles has increased during the period. Figure 3 shows the sources of the articles. It summarizes the 20 journals that published the highest number of related articles out of 36 journals. Thus, the International Journal of Environmental Research and Public Health (10 articles), Frontiers in Psychology (six articles), and Journal of Applied Psychology (five articles) reported having the highest number of publications. Instead, Figure 4 shows countries that have produced articles on the current study’s area. It summarizes how each country is interdependent with the other. In particular, the nodes in the Figure 4 denotes the number of occurrences. Thus, Figure 4 reveals that the USA (11 articles), China (11 articles), Spain (five articles), and Germany (three articles) are leading in the number of publications.

Table 1. Background information of articles included for the review.

Description	Results
Timespan	2020:2021
Sources (Journals)	36
Documents (articles)	60
Average years from publication	0.194
Average citations per document	3.984
Average citations per year per doc	2.806
References	2721
Author's Keywords (DE)	213
Authors	286
Countries	27

Source: Authors' construct, 2022.

**Figure 2.** Annual article production.**Figure 3.** The sources the articles published.

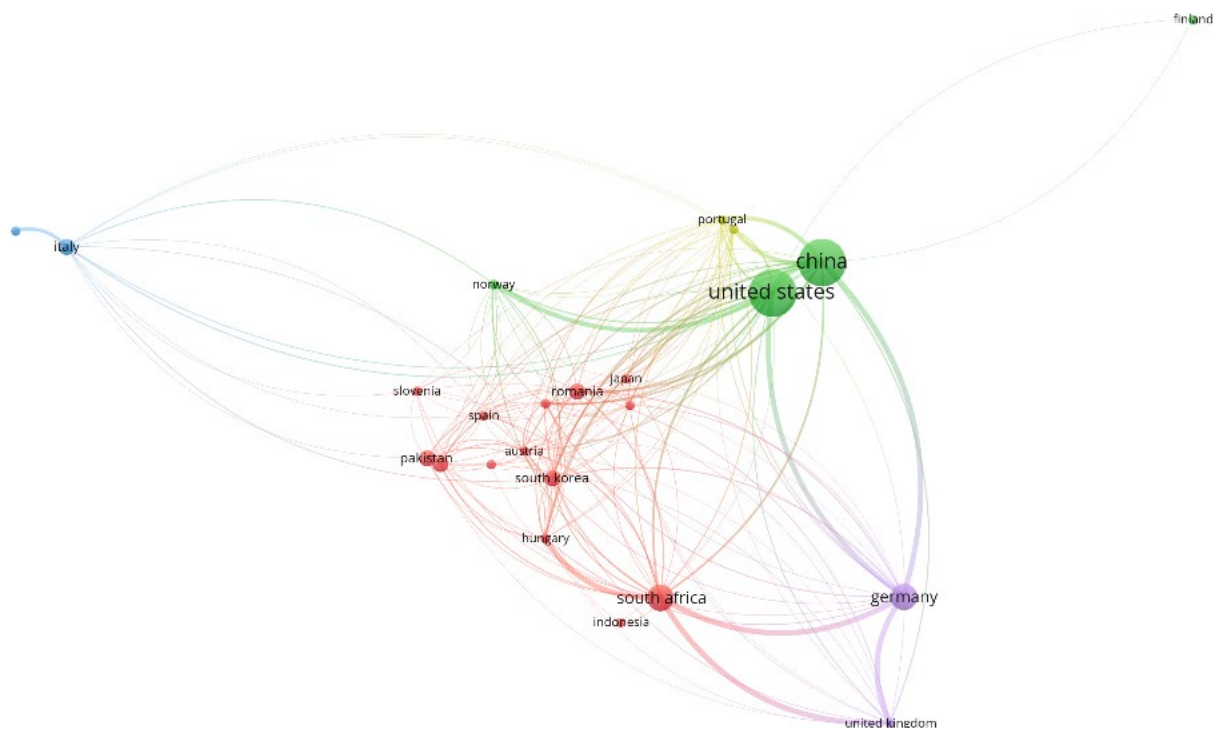


Figure 4. Country-wise article publications.

3.3. Results of Studies

The primary purposes of this part are to present the study's first and second objectives. The first objective, to find out the common practices driving employee engagement during the COVID-19 pandemic found in the empirical research landscape, was handled explicitly by the keyword co-occurrence network visualization explained in Section 3.3.1. The keyword co-occurrence density visualization addressed the second objective, which was to find out what practices are not common in the research landscape for driving employee engagement during the COVID-19 pandemic. It is explained in Section 3.3.2.

3.3.1. The Practices Common in Research for Driving Employee Engagement during COVID-19 Pandemic

The keyword co-occurrence network visualization generated by the VOSviewer software was used in this task. The frequency of their occurrence and co-occurrence can reflect the areas focusing on a particular field of investigation. Hence, a higher occurrence of a specific keyword is treated as a common area tested [49,61]. Accordingly, to find out the common areas investigated, we gradually increased the number of keywords in the software until the threshold level of keywords came to a level that covered more keywords. Different threshold keyword levels were obtained when the minimum occurrences increased one by one, starting from one. Table 2 shows the number of keywords that co-occurred at different levels of minimum occurrences. The co-occurrence here means that an area represented by a keyword has been tested the minimum number of times. Hence, as given in Table 2, 213 keywords have been tested at least once. Only three keywords have been tested a minimum of six or more times. As there were 15 keywords reported at a minimum of three or more investigations, we decided to take them for review. We finally refined nine of these 15 keywords by removing unnecessary ones such as country or quantitative study with the software, shown in Table 3.

Table 2. Keyword occurrences at different levels.

Occurrences	1	2	3	4	5	6
Number of keywords	213	42	15	10	5	3

Source: Authors' construct, 2022.

Table 3. Top keywords co-occurred in studies.

Keyword	Occurrences
Work Engagement	34
COVID-19	28
Mental Health	5
Work from Home	4
Resilience	4
Nurses	3

Source: Authors' construct, 2022.

Accordingly, Table 3 shows the keyword tested at least three times or more, indicating that they are the keywords that have gained the attention of the researchers during the period. As the information is given in Table 3, work engagement and COVID-19 have been the highest occurrences in studies. Having the highest occurrences for such keywords is practical, as we targeted employee engagement research in COVID-19. Thus, we excluded those two terms for the detailed analysis as they were the subjects of our analysis. It also reveals that work engagement is the term researchers have used; even the term is interchangeably used with employee engagement in the literature. Other than that, the other keywords in Table 3 were targeted for the review.

The keyword co-occurrence network visualization in Figure 5 shows the keyword by circles connecting each keyword. The circles' size in the map denotes the number of occurrences. Thus, the higher the number of occurrences, the larger the circle's size [50,51,60,61,63]. Accordingly, employee engagement and work engagement are denoted in larger circles. The rest of the keywords are denoted in circles depending on the frequency of their occurrences. Hence, the size of the circle in the visualization further confirms the information in Table 3. The circles in the map in Figure 5 are in three red, green, and blue clusters. Thus, each cluster includes keywords likely to represent the same topic [50,51,62,64]. Hence, as shown in Table 4, the red, green, and blue clusters reflect common themes such as "mental health risks of employees", "social and organizational support", and "resilience and work arrangements", respectively, which are explained in detail as follows.

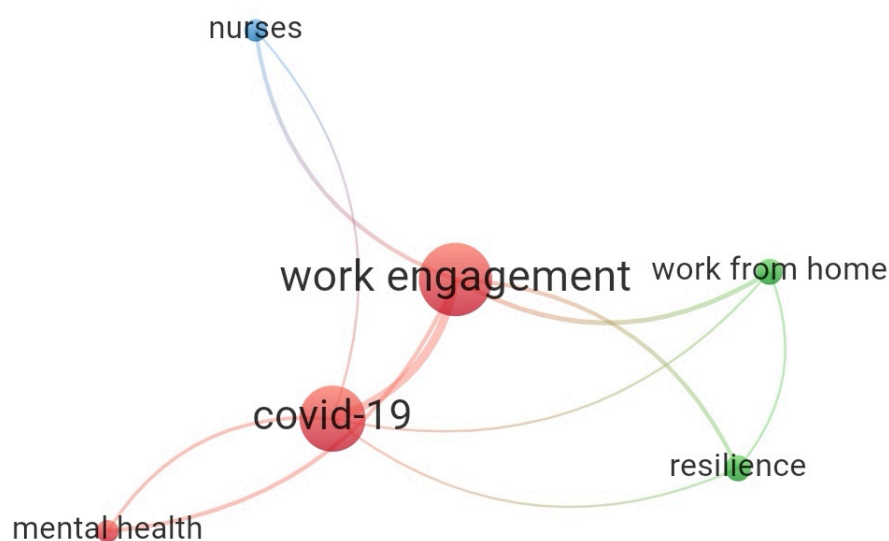
**Figure 5.** Keyword co-occurrence network visualization. Note: total keywords-213, total keywords more than 3 occurrences-6, clusters-3, links-10.

Table 4. Keywords categorize into clusters.

Clusters	Keywords
Red	COVID-19, Mental Health, Work Engagement
Green	Resilience, Work from Home
Blue	Nurses

Source: Authors' Construct, 2022.

The Red Cluster-Providing Mental Health Care

Research has been conducted to determine the factors associated with employees' mental health and work attitudes due to misinformation threats, the lack of facilities and support provided, and the feeling of the virus getting infected during the COVID-19 pandemic. Thus, employee mental health risks such as negative emotions (e.g., loss of hope and fears) and perceived job constraints [65] are factors in lowering employee engagement. Moreover, anxiety [66,67], depression [68], stress [65,68], distress [69–71,71], and worrying about unemployment [72] are significant factors that cause lower employee engagement. Specifically, worrying about unemployment was a major risk factor for anxiety, depression, and insomnia [72] during the COVID-19 pandemic. Indeed, jobs are an essential part of life for any working adult. Being unemployed means, they will lose their source of income, and have no security, which may make them anxious, depressed, and have low sleep quality. Instead, most organizations adopt technologies to work from home initiatives. Among such technologies, social media use has caused employee fatigue and lowered work engagement [66]. Thus, providing mental relief and care is vital in driving employee engagement.

Blue Cluster-Increasing Resilience

Resilience represents social support (creating self-efficacy, facilitating conditions, and support from families and friends [73]) or professional support. They can increase the decreased employee engagement due to mental health problems caused by COVID-19 related health risks [65,66]. During the COVID-19 pandemic, the common work arrangement was to work from home; that has been taken into investigation by the researchers. Specifically, the factors driving work engagement in working from home were: close communication with superiors; refraining from working long hours; obtaining adequate sleep [74]; satisfaction with work-related needs (autonomy, competence, and relatedness) [75]; convenience; and psychosocial safety [76].

Green Cluster-Boosting Line Employee Morale

Nurses are critical workers categories who have direct contact with COVID-19 patients. Their levels of engagement during the pandemic have also been investigated. Thus, nurses' COVID-19 exposure was found to cause high cognitive workload, increased subjective fatigue [77,78], stress (infection control, personal protective equipment (PPE) discomfort [78], and distress [69,70], which caused lower work engagement. Moreover, nurses' perceptions of colleagues' and hospitals' low levels of preparedness for COVID-19 and high levels of family responsibility [79] were found to lower work engagement.

3.3.2. The Practices Not Common in Research Driving Employee Engagement during the COVID-19 Pandemic

To discover the practices not common in the empirical research to drive employee engagement, we used keywords that had less than three occurrences. Thus, Figure 6 shows the keyword co-occurrence network visualization of one or two occurrences of keywords in the included articles for review. Since the keywords in the visualization (Figure 6) have different colored clusters, they were listed in Table 5 and can be regarded as uncommon and infrequently tested practices for employee engagement in the COVID-19 pandemic. The detailed analysis of the findings related to those keywords found four common themes and many employee engagement practices listed in Table 5.

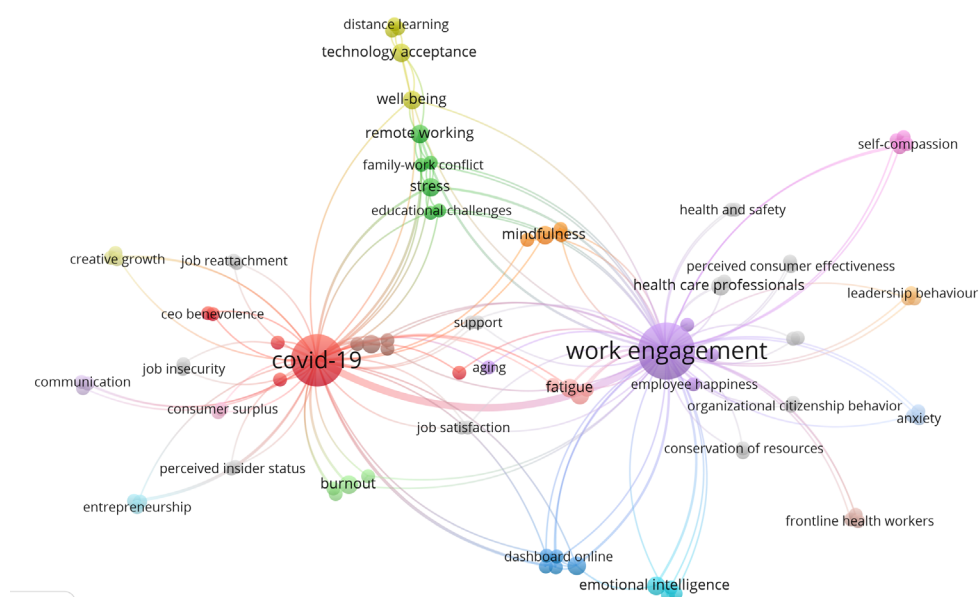


Figure 6. Keyword co-occurrence network visualization for less than two occurrences of keywords.

Table 5. Themes created for practices of work engagement.

Cluster	Theme	Practices of Employee Engagement	Keyword	Source
1	Providing support	Employee assistance	virtual communication platforms	[80]
			Employee compensation	[81]
2		Resource provision for avoiding family interference to work	Family work conflict in working from home	[82]
7		Facilitating mindfulness	Mindfulness	[83,84]
10		Reducing technostress	Social media fatigue	[66]
			Mental workload	[77]
			Telecommuting	[85]
12		Increase Self-confidence	Mortality salience and COVID-19 anxiety	[86]
			social media misinformation	[66]
29		Support	Perceived social support	[71,87]
			Perceived organizational support	[88]
			Supervisor support, coworker support with work engagement	[87]
			Perceived team support,	[89]
			Task resources	[71]
12		Effective Communication	Informational, relational internal communication	[90]
	Communication Quality		[91]	
16	Directing employees	Leadership, teamwork, and flexibility	Transformational leadership	[91]
			Leaders support	[92]
			Leadership behavior	[93]
			Team effectiveness	
			Technological flexibility	
21	Securing a job concerning the generational characteristics	Generational characteristics, job insecurity	[94]	

Table 5. Cont.

Cluster	Theme	Practices of Employee Engagement	Keyword	Source
5	Innovative work practices and competence building	Innovative work practices and Competence Building	Innovative work behavior	[87]
			Work-related basic needs (higher competence need satisfaction)	[75]
8		Creating organizational health climate	Job crafting	[95]
			Leader health mindset	[96]
			Perceived organizational health climate	
11		Work from home	Working from home	[74]
23		Job reattachment with safety concerns	Job reattachment, leader safety commitment	[97]
24		Learning organization	Learning organization	[98]
25		Concern about people who have high recovery capacities	Recovery level	[99]
6	Empathy for the employees' situations	Emotional Intelligence	Emotional intelligence	[100, 101]
19		Concern for Health and Safety	Leader safety commitment	[97]
			Perceived psychological safety	[76]

Source: Authors' Construct, 2022.

As per the information in Table 5, the main practices and general themes that drive employee engagement were created based on these findings, which are explained below.

Providing Support

Providing support for the employee is essential in driving their engagement toward jobs in a pandemic like COVID-19. One way of supporting employees is through “employee assistance” (cluster 1) since the findings, such as providing virtual communication platforms [80] and employee compensation [81], justify it. Almost all organizations practiced work from home during the pandemic; the family-work conflict has resulted in lower employee engagement [82]. Supporting that, “resource provision for avoiding family interference to work” (cluster 2) is another way of driving employee engagement. The “facilitation of mindfulness” (cluster 7) supports the driver for work engagement. That has been proven as mindfulness increases employee engagement [83] and buffers the negative effect of COVID-19 stressors and employee engagement [84]. Technology-related stress like social media fatigue [66], mental workload [77], and telecommuting [85] have been found to hinder employee engagement. Thus, “arrangements for reducing techno-stress” (cluster 10) relating to those drive employee engagement. Increasing “self-confidence” (cluster 12) of employees is another support the organizations can provide as mortality salience, COVID related anxiety [86], and social media misinformation [66] were found to reduce employee engagement. Other than that, different kinds of “support” (cluster 29), such as perceived social support [71,87], organizational support [88], supervisor support, coworker support [87], and perceived team support [89], drive work engagement. Instead, providing task resources also helps to increase employee engagement [71].

Directing Employees

Directing employees through proper communication, leadership, teamwork, flexibility, and motivation is vital in getting their engagement in work. Concerning communication, “effective communication” (cluster 14) can be treated as a way of driving performance since investigations have been done on the impacts of informational and relational internal communication [90] and communication quality [91] on driving work engagement. Concerning “leadership, teamwork and flexibility” (cluster 16), transformational leadership [91], lead-

ers' support [92], leadership behavior, team effectiveness, and technological flexibility [93] were the drivers of employee engagement. "Securing jobs concerning the generational characteristics" (cluster 21) helps motivate employees as job insecurity perceptions due to COVID-19 impact lower employee engagement that is highly moderated by generation Y than generation X employees [94].

Innovative Work Practices and Competence Building

"Innovative work practices and competence building" (cluster 5) is another crucial consideration to drive engagement in a pandemic. Accordingly, the COVID-19 pandemic's drivers of work engagement are innovative work behaviors and meeting work-related basic needs such as developing technology proficiency at home [75]. Concerning innovative work practices, "creating organizational health climate" (cluster 8) is another driver for work engagement during the pandemic. Instead, the job crafting complying with health guidelines [95], leader health mindset, and employees' perceived organizational health climate increased employee engagement [96]. Other than that, generally, "work from home" (cluster 11) is the best innovative work practice in a pandemic to promote employee engagement in work [74]. Moreover, "job reattachment with safety concerns" (cluster 23) is another innovative practice that can be done as research prove that job reattachment and employee engagement relationship is moderated by leader safety commitment [97]. The "learning organizations" (cluster 24) can quickly adapt to the changes in the environment. Hence, it is another innovative practice facilitating work engagement as research found that learning organization drives engagement during the COVID-19 pandemic [98]. Besides, "concern for people who have high recovery capacities" (cluster 25) is another practice that can be used in driving employee engagement [99].

Empathy for the Employees' Situations

Another crucial area for employee engagement in the COVID-19 pandemic is empathy for the employees' situations. One way for that is being emotionally intelligent, as research found that "emotional intelligence" (cluster 6) [100,101] drives the employees' engagement in COVID-19. Another way is placing much "concern for employees' health and safety" (cluster 19), as researchers have found that leader safety commitment [97] and employees' perceived psychological safety [76] drive engagement towards the jobs.

3.3.3. The Areas Need More Attention in the Research Landscape on Methods Driving the Employee Engagement

The density visualization map created by the VOSviewer (Figure 7) shows that more research is available on the keywords of employee engagement and COVID-19. Other than that, there is a shortage of studies regarding the other keywords on the map (Figure 7). It highlights that the circle points in the map are displayed in red background when there is more research on that area. Conversely, it is determined that the research is significantly less when a node in the map is denoted in the green background [61]. Thus, even though more research is available on employee engagement and COVID-19, there is a shortage of studies regarding keywords displayed in the green area. Therefore, more research is needed on the keywords in the green area.

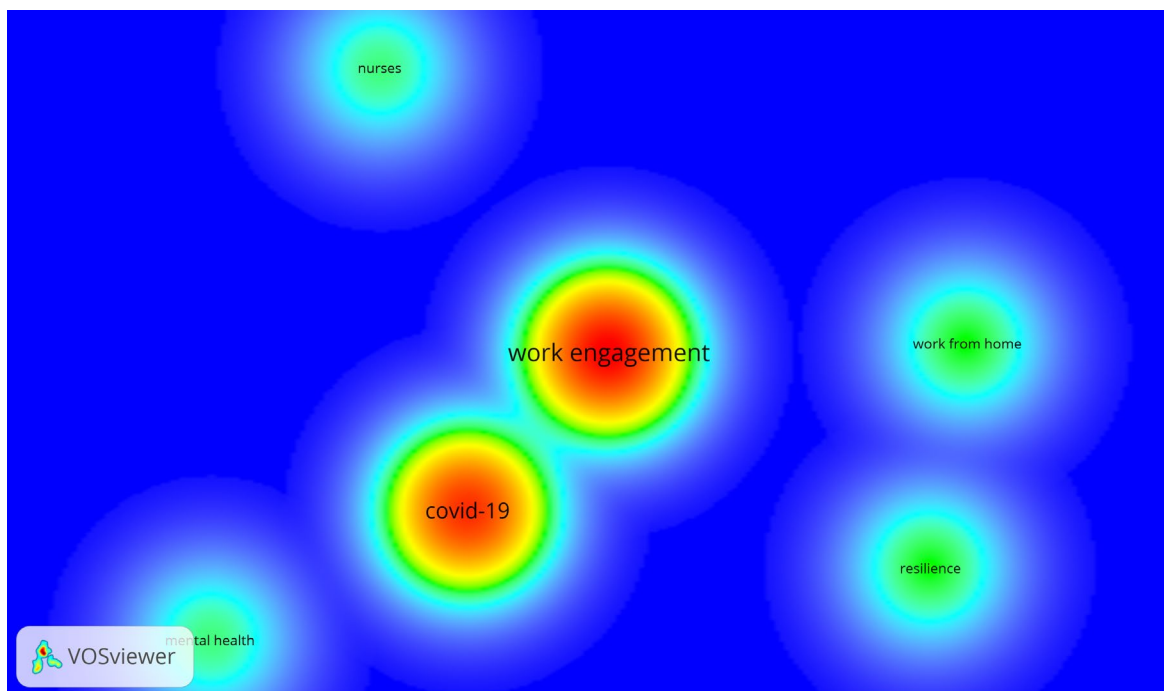


Figure 7. Keyword density visualization map for methods common for driving the engagement.

Besides, the themes in Table 5 and Figure 6 were created depending on one or two occurrences of respective keywords. Such a low level of occurrences of keywords indicates an insufficiency of findings related to such keywords to generalize. Thus, more research is needed regarding the themes in Table 5 and Figure 6. That is further justified by the keywords in the green circle points of Figure 8, indicating less research on such keywords in the green circle points.

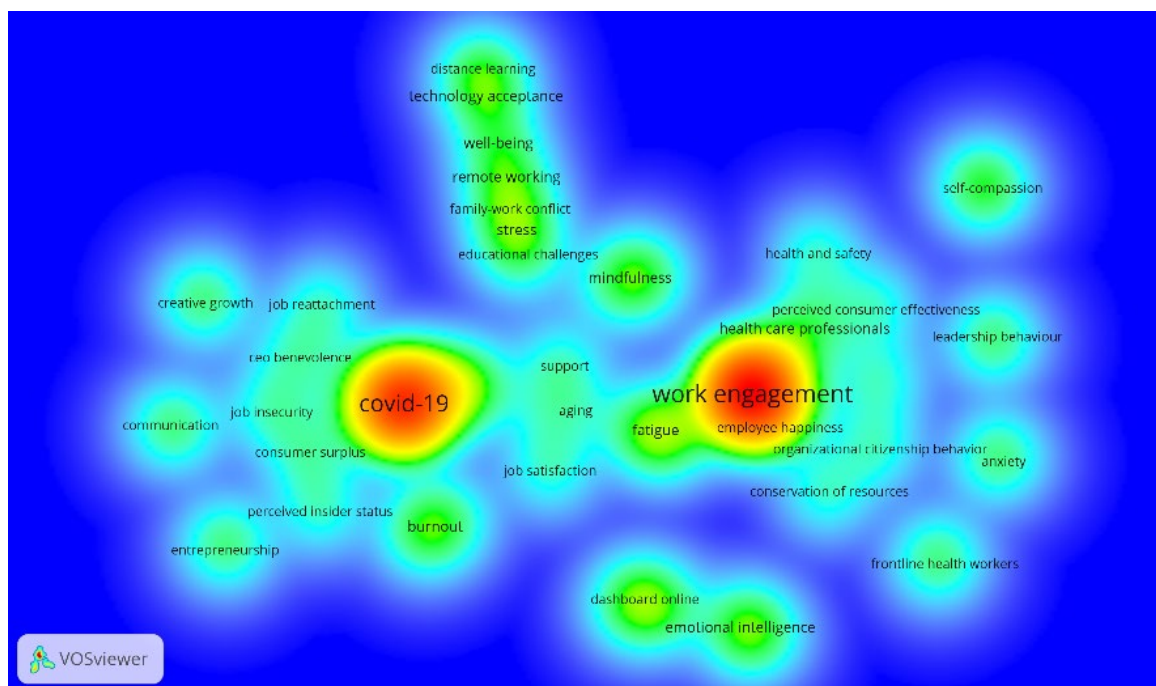


Figure 8. Keyword density visualization map for methods not common for driving the engagement.

4. Discussion

This systematic literature review was conducted to address three main objectives. The first objective was: (1) to find out the common practices driving employee engagement during the COVID-19 pandemic found in the empirical research landscape. It was addressed by performing two types of keyword co-occurrence analysis for more than three occurrences and less than three occurrences of keywords in articles. The first analysis found three themes; “providing mental health care”, “increasing resilience”, and “boosting line employee morale”, which can drive employee engagement in a pandemic.

Providing mental health care is vital in a pandemic to drive employee engagement as employees are subject to mental health risks such as anxiety [66,67], negative emotions, perceived job constraints [65], stress [65,68], or distress [69–71,71]. These risks can occur during a pandemic due to misinformation threats, lack of facilities and support to prevent getting infected with the virus, fear that the virus is getting infected, or worrying about unemployment [72]. Providing mental health care in the new normal is vital to employee engagement, as these mental health risks can occur from various work-related factors. For example, working overtime is associated with increased anxiety and depression [102] moreover, work overload, interpersonal problems, frustration at work, organizational changes, a threat of job loss, and work-family interface problems cause negative emotions, stress, or distress.

Employee resilience is a flexible and resource-using ability that enables employees to cope, adapt and thrive to changes and adversity at work [103]. Remarkably resilient employees have psychological resources to cope with the changes and challenges at work. They view the changes or challenges as more favorable opportunities for learning and developing. Thus, their engagement is high [104]. It has been found that employee resilience is strengthened when supported and facilitated by the organization [105]. Thus, increasing resilience through social support (creating self-efficacy, providing facilitating conditions, and friends and families support [73]) or professional support is vital to drive employee engagement during a pandemic. One professional support is working from home through close communication, refraining from long working hours, adequate sleep opportunities [74], increase satisfaction by fulfilling work-related needs (provision of autonomy, competence, and relatedness) [75], convenience, and psychosocial safety [76]. These practices increase resilience, which promotes employee engagement. All these support forms and facilities can be practiced even in the new normal to increase employee engagement. Because resilience is an ability of employees, managers must further try to develop this in employees to have more employee engagement.

During a pandemic, line employees in the health sector play a crucial role. Reduction of their cognitive workload, subjective fatigue [77,78], PPE discomfort and infection stress [78], and distress [69,70], can increase work engagement in the health sector. Additionally, increasing employees’ perception that the organization has been well-prepared for the pandemic [79] can increase employee engagement. It implies that boosting the morale of any employee whose engagement is low in a pandemic can increase their engagement in the job. As noted under the providing mental healthcare, cognitive workload and subjective fatigue [77,78] can also occur from other factors. It typically can be seen in day-to-day employment set up in the new normal. Thus, boosting employees’ morale can also increase employee engagement in the new normal.

The second objective was to find out what practices are not common in the research landscape for driving employee engagement during the COVID-19 pandemic. To address that, we found four themes relating to practices not common in driving employee engagement. They include “providing support”, “directing employees”, “innovative work practices”, “competence building”, and “empathy for the employees’ situations”. We found various practices driving employee engagement under these themes.

“Support” that promotes employee engagement can come in many different kinds. They include employee assistance [80], resource provision for minimizing family interference to work from home [82], and facilitation of mindfulness [83]. Further, arrangements for;

reducing techno-stress [77], increasing self-confidence [86], supplying task resources [71], and reducing techno-stress are also covered. Increasing perceived; supervisory, coworker, organizational, social [71,87], and team support [89] can also be considered for providing support. All these supports have been proven to be the causes of employee engagement during the COVID-19 pandemic. Thus, providing all these supports in pandemic situations can quickly increase employee engagement. Additionally, engagement literature highlights that various forms of support are resource provisions to employees according to the resource-based view, SET, and the JDR, which can drive employee engagement in normal conditions. Thus, all these supports can be practiced boosting employee engagement in the new normal.

“Directing employees” is another theme we derived based on the empirical findings for driving employee engagement in the COVID-19 pandemic. Effective communication [90,91], transformational leadership [91], leader support [92], teamwork effectiveness, flexibility [93], and motivation through securing jobs [94] represent the common theme of directing employees. They can be used to drive employee engagement in similar pandemics. Moreover, all the factors categorized under this theme can also be practiced in the new normal as the direction of employees utilizing all these factors are usual practices in day-to-day managerial activities.

“Innovative work practices and competence building” are novel ways of employee engagement that the researchers have proved during the COVID-19 pandemic. Innovative work practices include crafting jobs complying with health guidelines [95], motivating leader health mindset, increasing employees’ perceived organizational health climate [96], and working from home [74]. Moreover, job reattachment with safety concerns [97], becoming a learning organization [98], and concern for high recovery capacity people getting work done [99] are other factors that represent innovative work practices. Concerning competency building, developing technology proficiency at home [75] is a factor of employee engagement. Thus, innovative work practices and competency building can be a factor for employee engagement in similar pandemics. Moreover, the same factor is practical for boosting employee engagement in the new normal.

Another crucial area for employee engagement in the COVID-19 pandemic is empathy for the employees’ situations. Being emotionally intelligent [100,101], being concerned for employees’ health and safety through safety commitment [97], and ensuring employees’ perceived psychological safety [76] are the ways of being empathetic to employees in a pandemic. If superiors show such behavior in similar pandemics, employees can be more engaged in their jobs. Additionally, it is possible to instill empathy for employees in the context of the factors grouped under this specific theme.

Considering all these seven themes discussed above (three from more than three occurrences analysis and four from less than three occurrences analysis) revealed the practices for driving employee engagement in a pandemic. They can be considered more realistic as all these were synthesized based on the empirical findings. Moreover, all these are supported by strong theoretical foundations. For example, the JDR model [33], SET [35,36], and resource-based view [34] address that resource provisions to employees can boost their engagement levels in the job. Thus, all seven themes in this study highlight the resources provided to employees, whether mental, social, or physical, which were proven to be the factors for employee engagement. Since these seven themes are grounded in solid theoretical and empirical support, their validity is high. Even though these practices were developed for COVID-19, they can, when necessary, be applied to a pandemic and the new normal. Although pandemics do not happen every day, these seven practices for boosting employee engagement provide practitioners an implication on how to practice them in daily life since we have higher disengagement (80%) globally [39].

Research Implications

This research provides implications to the theory, practice, and future researchers. Theoretical implications include the seven themes that validate the idea postulated by JDR

SET and the resource-based view to boosting employee engagement. The seven themes are new knowledge promoting employee engagement in a pandemic contributing to the literature. Moreover, the seven themes found can be treated as factors for employee engagement in a pandemic and can be incorporated into a conceptual model. The hypothesis can be developed for each factor as they have been found based on empirical evidence. Thus, the conceptual model may be empirically tested, and the measurement instruments for each factor can be developed using the factors clustered under each theme.

Concerning the findings' implication to practice, the total of all the empirical studies done in two years (2020–2022) is presented in terms of seven themes that drive employee engagement. Thus, the practitioners can refer them to drive employees' engagement in their employee setup, particularly during pandemics, and the findings provide insights to apply in the new normal.

As highlighted in Section 3.3.3, regarding the study's third objective, there are implications for future research. The keyword density maps in Figures 7 and 8 systematically and mathematically identified the areas that need further research regarding the practices driving employee engagement in COVID-19 pandemic. Thus, as mentioned in Section 3.3.3, the seven themes we derived lack generalizability as there were minimal investigations; we found that current research is no longer enough for established knowledge in each area. Thus, (1) "providing mental health care", (2) "increasing resilience", (3) "boosting line employee morale", (4) "providing support", (5) "directing employees", (6) "innovative work practices", and "competence building", and (7) "empathy for the employees' situations" are the areas for more research. Future researchers can develop conceptual framework/s incorporating these themes to test empirically. Notably, the findings categorized under each theme can be used as dimensions in measurement development when the themes are investigated empirically.

5. Conclusions

The COVID-19 pandemic made organizations rethink how work was carried out through their employees. The current study attempted to discover the practices investigated to drive employee engagement during the pandemic. The systematic literature review methodology was adopted using keyword co-occurrence analysis, a type of bibliometric analysis. The employee engagement empirical studies conducted during 2020–2022 were considered for review. The main objectives were; (1) to find out the common practices driving employee engagement during the COVID-19 pandemic found in the empirical research landscape, (2) to find out what practices are not common in the research landscape for driving employee engagement during the COVID-19 pandemic and (3) to provide research areas need more attention in the research landscape on methods driving the employee engagement.

Regarding the first objective (addressed in Section 3.3.1), the most common themes investigated, the study found that providing mental health care, increasing resilience through social support or professional support, and boosting line employee morale in the health sector can increase employee engagement. Concerning the second objective (addressed in Section 3.3.2), the employee engagement practices not common in research, we found that providing support, directing employees, innovative work practices, competence building, and empathy for the employees' situations can drive employee engagement. By addressing these two objectives, we found seven common themes that drive employee engagement in the COVID-19 pandemic. As they were no such synthesis regarding employee engagement practices in a pandemic, we were able to develop such a synthesis for factors driving employee engagement. Those factors can be used for similar pandemics. Moreover, they can be practiced even in the new normal, where most of them can be implemented in regular managerial activities as there is still employee engagement is in crisis globally with a higher disengagement level of 80% [39].

Finally, the third objective was to find the areas for future research. That was addressed in Section 3.3.3. Accordingly, we found seven areas for further research on whether

they drive employee engagement in the pandemic or the new normal. They include: (1) “providing mental health care”; (2) “increasing resilience”; (3) “boosting line employee morale”; (4) “providing support”; (5) “directing employees”; (6) “innovative work practices” and “competence building”; and (7) “empathy for the employees’ situations” as the areas for more research.

Author Contributions: Article searching and identification, K.G.P.; article screening and eligibility checking, K.G.P., B.A. and A.C.D.A.; resources, B.A.; software, K.G.P.; analysis, K.G.P.; writing—original draft preparation, K.G.P.; writing—review and editing, K.G.P., B.A. and A.C.D.A.; visualization, K.G.P.; supervision, A.C.D.A.; project administration, B.A.; funding acquisition, B.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Kewalramani, A.R. What Has COVID-19 Taught Us about Employee Engagement? Deloitte Malta. Available online: <https://www2.deloitte.com/mt/en/pages/human-capital/articles/mt-employee-engagement-and-covid-19.html> (accessed on 5 August 2022).
2. International Labor Organisation. Managing Work-Related Psychosocial Risks during the COVID-19 Pandemic. Available online: http://www.ilo.org/global/topics/safety-and-health-at-work/resources-library/publications/WCMS_748638/lang-en/index.htm (accessed on 29 November 2021).
3. De-la-Calle-Durán, M.-C.; Rodríguez-Sánchez, J.-L. Employee Engagement and Wellbeing in Times of COVID-19: A Proposal of the 5Cs Model. *Int. J. Environ. Res. Public Health* **2021**, *18*, 5470. [CrossRef]
4. Galli, F.; Giancamilli, F.; Palombi, T.; Vitale, J.A.; Borghi, S.; De Maria, A.; Cavicchiolo, E.; Diotaiuti, P.; La Torre, A.; Zelli, A.; et al. Anxiety, Motives, and Intention for Physical Activity during the Italian COVID-19 Lockdown: An Observational Longitudinal Study. *Int. J. Environ. Res. Public Health* **2022**, *19*, 4689. [CrossRef] [PubMed]
5. Diotaiuti, P.; Valente, G.; Mancone, S.; Falese, L.; Bellizzi, F.; Anastasi, D.; Langiano, E.; Dominski, F.H.; Andrade, A. Perception of Risk, Self-Efficacy and Social Trust during the Diffusion of COVID-19 in Italy. *Int. J. Environ. Res. Public Health* **2021**, *18*, 3427. [CrossRef] [PubMed]
6. Chang, K.-C.; Hsu, Y.-T.; Cheng, Y.-S.; Kuo, N.-T. How Work Engagement Influences Relationship Quality: The Roles of Work Motivation and Perceived Service Guarantee Strength. *Total Qual. Manag. Bus. Excell.* **2021**, *32*, 1316–1340. [CrossRef]
7. Karatepe, O.M.; Saydam, M.B.; Okumus, F. COVID-19, Mental Health Problems, and Their Detrimental Effects on Hotel Employees’ Propensity to Be Late for Work, Absenteeism, and Life Satisfaction. *Curr. Issues Tour.* **2021**, *24*, 934–951. [CrossRef]
8. Schaufeli, W.B.; Salanova, M.; González-romá, V.; Bakker, A.B. The Measurement of Engagement and Burnout: A Two Sample Confirmatory Factor Analytic Approach. *J. Happiness Stud.* **2002**, *3*, 71–92. [CrossRef]
9. Schaufeli, W.B.; Bakker, A.B. Defining and Measuring Work Engagement: Bringing Clarity to the Concept. *Work Engagem. Handb. Essent. Theory Res.* **2010**, *12*, 10–24.
10. Saks, A.M. Antecedents and Consequences of Employee Engagement. *J. Manag. Psychol.* **2006**, *21*, 600–619. [CrossRef]
11. Shuck, B.; Wollard, K. Employee Engagement and HRD: A Seminal Review of the Foundations. *Hum. Resour. Dev. Rev.* **2010**, *9*, 89–110. [CrossRef]
12. Macey, W.H.; Schneider, B. The Meaning of Employee Engagement. *Ind. Organ. Psychol.* **2008**, *1*, 3–30. [CrossRef]
13. Rana, S.; Ardichvili, A.; Tkachenko, O. A Theoretical Model of the Antecedents and Outcomes of Employee Engagement. *J. Workplace Learn.* **2014**, *26*, 249–266. [CrossRef]
14. Sandhya, S.; Sulphey, M.M. Influence of Empowerment, Psychological Contract and Employee Engagement on Voluntary Turnover Intentions. *Int. J. Product. Perform. Manag.* **2020**, *70*, 325–349. [CrossRef]
15. Memon, M.A.; Salleh, R.; Mirza, M.Z.; Cheah, J.-H.; Ting, H.; Ahmad, M.S.; Tariq, A. Satisfaction Matters: The Relationships between HRM Practices, Work Engagement and Turnover Intention. *Int. J. Manpow.* **2021**, *42*, 21–50. [CrossRef]
16. Bentley, T.A.; Teo, S.T.; Catley, B.; Blackwood, K.; Roche, M.; O’Driscoll, M.P. Factors Influencing Leave Intentions among Older Workers: A Moderated-Mediation Model. *Pers. Rev.* **2019**, *48*, 898–914. [CrossRef]
17. Nazir, O.; Islam, J.U. Enhancing Organizational Commitment and Employee Performance through Employee Engagement: An Empirical Check. *South Asian J. Bus. Stud.* **2017**, *6*, 98–114. [CrossRef]

18. Sihag, P. The Mediating Role of Perceived Organizational Support on Psychological Capital–Employee Engagement Relationship: A Study of Indian IT Industry. *J. Indian Bus. Res.* **2021**, *13*, 154–186. [\[CrossRef\]](#)
19. Ruck, K.; Welch, M.; Menara, B. Employee Voice: An Antecedent to Organisational Engagement? *Public Relat. Rev.* **2017**, *43*, 904–914. [\[CrossRef\]](#)
20. Kang, M.; Sung, M. How Symmetrical Employee Communication Leads to Employee Engagement and Positive Employee Communication Behaviors: The Mediation of Employee–Organization Relationships. *J. Commun. Manag.* **2017**, *21*, 82–102. [\[CrossRef\]](#)
21. Duthler, G.; Dhanesh, G.S. The Role of Corporate Social Responsibility (CSR) and Internal CSR Communication in Predicting Employee Engagement: Perspectives from the United Arab Emirates (UAE). *Public Relat. Rev.* **2018**, *44*, 453–462. [\[CrossRef\]](#)
22. Presbitero, A. How Do Changes in Human Resource Management Practices Influence Employee Engagement? A Longitudinal Study in a Hotel Chain in the Philippines. *J. Hum. Resour. Hosp. Tour.* **2017**, *16*, 56–70. [\[CrossRef\]](#)
23. Soliman, M.; Wahba, M.S. Investigating Influencers of Employee Engagement in Travel Agents in Egypt. *Anatolia* **2019**, *30*, 75–89. [\[CrossRef\]](#)
24. Kura, K.M.; Shamsudin, F.M.; Umrani, W.A.; Salleh, N.M. Linking Human Resource Development Practices to Counterproductive Work Behaviour: Does Employee Engagement Matter. *J. Afr. Bus.* **2019**, *20*, 472–488. [\[CrossRef\]](#)
25. Chen, S.-W.; Peng, J.-C. Determinants of Frontline Employee Engagement and Their Influence on Service Performance. *Int. J. Hum. Resour. Manag.* **2021**, *32*, 1062–1085. [\[CrossRef\]](#)
26. Li, Y.; Castaño, G.; Li, Y. Linking Leadership Styles to Work Engagement: The Role of Psychological Capital among Chinese Knowledge Workers. *Chin. Manag. Stud.* **2018**, *12*, 433–452. [\[CrossRef\]](#)
27. Breevaart, K.; Bakker, A.B.; Demerouti, E.; van den Heuvel, M. Leader-Member Exchange, Work Engagement, and Job Performance. *J. Manag. Psychol.* **2015**, *30*, 754–770. [\[CrossRef\]](#)
28. Edelbroek, R.; Peters, P.; Blomme, R.J. Engaging in Open Innovation: The Mediating Role of Work Engagement in the Relationship between Transformational and Transactional Leadership and the Quality of the Open Innovation Process as Perceived by Employees. *J. Gen. Manag.* **2019**, *45*, 5–17. [\[CrossRef\]](#)
29. Popli, S.; Rizvi, I.A. Leadership Style and Service Orientation: The Catalytic Role of Employee Engagement. *J. Serv. Theory Pract.* **2017**, *27*, 292–310. [\[CrossRef\]](#)
30. Kengatharan, N.; Kunatilakam, S. Work-Family Conflict among Female Nurses in the Healthcare Sector. *Int. J. Work Organ. Emot.* **2020**, *11*, 213. [\[CrossRef\]](#)
31. Tims, M.; Bakker, A.B.; Derks, D. Job Crafting and Job Performance: A Longitudinal Study. *Eur. J. Work Organ. Psychol.* **2015**, *24*, 914–928. [\[CrossRef\]](#)
32. Nazir, O.; Islam, J.U.; Rahman, Z. Effect of CSR Participation on Employee Sense of Purpose and Experienced Meaningfulness: A Self-Determination Theory Perspective. *J. Hosp. Tour. Manag.* **2021**, *46*, 123–133. [\[CrossRef\]](#)
33. Bakker, A.B.; Demerouti, E. The Job Demands-Resources Model: State of the Art. *J. Manag. Psychol.* **2007**, *22*, 309–328. [\[CrossRef\]](#)
34. Wernerfelt, B. A Resource-Based View of the Firm. *Strateg. Manag. J.* **1984**, *5*, 171–180. [\[CrossRef\]](#)
35. Emerson, R.M. Social Exchange Theory. *Annu. Rev. Sociol.* **1976**, *2*, 335–362. [\[CrossRef\]](#)
36. Cook, K.S.; Cheshire, C.; Rice, E.R.; Nakagawa, S. Social Exchange Theory. In *Handbook of Social Psychology*; Springer: Dordrecht, The Netherlands, 2013; pp. 61–88.
37. Bellamkonda, N.; Santhanam, N.; Pattusamy, M. Goal Clarity, Trust in Management and Intention to Stay: The Mediating Role of Work Engagement. *South Asian J. Hum. Resour. Manag.* **2021**, *8*, 9–28. [\[CrossRef\]](#)
38. Kahn, W.A. Psychological Conditions of Personal Engagement and Disengagement at Work. *Acad. Manag. J.* **1990**, *33*, 692–724. [\[CrossRef\]](#)
39. Gallup. *State of the Global Workplace 2021 Report*; Gallup, Inc.: Washington, DC, USA, 2021; p. 191. Available online: https://www.google.com/search?q=state+of+the+global+workplace+2021+report&rlz=1C1CHZN_enLK971LK971&oq=state+of+the+global+&aqs=chrome.2.69i57j0i512l9.6802j1j15&sourceid=chrome&ie=UTF-8 (accessed on 14 February 2022).
40. Chanana, N.; Sangeeta. Employee Engagement Practices during COVID-19 Lockdown. *J. Public Aff.* **2021**, *21*, e2508. [\[CrossRef\]](#)
41. Tyler, K. Measuring Employee Engagement during a Crisis. SHRM. Available online: <https://www.shrm.org/hr-today/news/hr-magazine/winter2020/pages/measuring-employee-engagement-during-covid-19.aspx> (accessed on 14 February 2022).
42. Marani, M.; Katul, G.G.; Pan, W.K.; Parolari, A.J. Intensity and Frequency of Extreme Novel Epidemics. *Proc. Natl. Acad. Sci. USA* **2021**, *118*, e2105482118. [\[CrossRef\]](#)
43. Joy, P. New Study Suggests Risk of Extreme Pandemics Like COVID-19 Could Increase Threefold in Coming Decades. Available online: <https://www.gavi.org/vaccineswork/new-study-suggests-risk-extreme-pandemics-covid-19-could-increase-threefold-coming> (accessed on 12 September 2022).
44. Purcell, J. Disengaging from Engagement: Disengaging from Engagement. *Hum. Resour. Manag. J.* **2014**, *24*, 241–254. [\[CrossRef\]](#)
45. Liberati, A.; Altman, D.G.; Tetzlaff, J.; Mulrow, C.; Gøtzsche, P.C.; Ioannidis, J.P.A.; Clarke, M.; Devereaux, P.J.; Kleijnen, J.; Moher, D. The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies That Evaluate Health Care Interventions: Explanation and Elaboration. *PLoS Med.* **2009**, *6*, e1000100. [\[CrossRef\]](#)
46. Tranfield, D.; Denyer, D.; Smart, P. Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *Br. J. Manag.* **2003**, *14*, 207–222. [\[CrossRef\]](#)

47. Petticrew, M.; Roberts, H. *Systematic Reviews in the Social Sciences: A Practical Guide*; Blackwell Pub: Malden, MA, USA; Oxford, UK, 2006.
48. Meline, T. Selecting Studies for Systemic Review: Inclusion and Exclusion Criteria. *Contemp. Issues Commun. Sci. Disord.* **2006**, *33*, 21–27. [\[CrossRef\]](#)
49. Priyashantha, K.G.; De Alwis, A.C.; Welmilla, I. Gender Stereotypes Change Outcomes: A Systematic Literature Review. *J. Humanit. Appl. Soc. Sci.* **2021**, ahead of print. [\[CrossRef\]](#)
50. Priyashantha, K.G.; De Alwis, A.C.; Welmilla, I. Outcomes of Egalitarian Gender Role Attitudes: A Systematic Literature Review. In Proceedings of the Business Law and Management (BLM2): International Conference on Advanced Marketing (ICAM4) An International Joint e-Conference-2021, Kelaniya, Sri Lanka, 11 September 2021; Department of Marketing Management, Faculty of Commerce and Management Studies, University of Kelaniya: Kelaniya, Sri Lanka, 2021; p. 281.
51. Priyashantha, K.G.; De Alwis, C.; Welmilla, I. The Facets of Gender Stereotypes Change: A Systematic Literature Review. In Proceedings of the 12th International Conference of Business and Information, Bali, Indonesia, 7–8 November 2018; Faculty of Commerce and Management Studies, University of Kelaniya: Rochester, NY, USA, 2021; pp. 862–883. [\[CrossRef\]](#)
52. Kitchenham, B.; Charters, S. *Guidelines for Performing Systematic Literature Reviews in Software Engineering*; Technical Report EBSE 2007-001, Keele University and Durham University Joint Report; Keele University: Keele, UK, 2007.
53. Xiao, Y.; Watson, M. Guidance on Conducting a Systematic Literature Review. *J. Plan. Educ. Res.* **2019**, *39*, 93–112. [\[CrossRef\]](#)
54. Brereton, P.; Kitchenham, B.; Budgen, D.; Turner, M.; Khalil, M. Lessons from Applying the Systematic Literature Review Process within the Software Engineering Domain. *J. Syst. Softw.* **2007**, *80*, 571–583. [\[CrossRef\]](#)
55. Aparicio, G.; Iturralde, T.; Maseda, A. Conceptual Structure and Perspectives on Entrepreneurship Education Research: A Bibliometric Review. *Eur. Res. Manag. Bus. Econ.* **2019**, *25*, 105–113. [\[CrossRef\]](#)
56. Paule-Vianez, J.; Gómez-Martínez, R.; Prado-Román, C. A Bibliometric Analysis of Behavioural Finance with Mapping Analysis Tools. *Eur. Res. Manag. Bus. Econ.* **2020**, *26*, 71–77. [\[CrossRef\]](#)
57. Cobo, M.J.; López-Herrera, A.G.; Herrera-Viedma, E.; Herrera, F. SciMAT: A New Science Mapping Analysis Software Tool. *J. Am. Soc. Inf. Sci. Technol.* **2012**, *63*, 1609–1630. [\[CrossRef\]](#)
58. Noyons, E.C.M.; Moed, H.F.; Luwel, M. Combining Mapping and Citation Analysis for Evaluative Bibliometric Purposes: A Bibliometric Study. *J. Am. Soc. Inf. Sci.* **1999**, *50*, 115–131. [\[CrossRef\]](#)
59. Callon, M.; Courtial, J.-P.; Turner, W.A.; Bauin, S. From Translations to Problematic Networks: An Introduction to Co-Word Analysis. *Soc. Sci. Inf.* **1983**, *22*, 191–235. [\[CrossRef\]](#)
60. Priyashantha, K.G.; De Alwis, A.C.; Welmilla, I. Disruptive Human Resource Management Technologies: A Systematic Literature Review. *Eur. J. Manag. Bus. Econ.* **2022**, ahead of print. [\[CrossRef\]](#)
61. Van Eck, N.J.; Waltman, L. Visualizing Bibliometric Networks. In *Measuring Scholarly Impact*; Ding, Y., Rousseau, R., Wolfram, D., Eds.; Springer International Publishing: Cham, Switzerland, 2014; pp. 285–320. [\[CrossRef\]](#)
62. Chen, X.; Chen, J.; Wu, D.; Xie, Y.; Li, J. Mapping the Research Trends by Co-Word Analysis Based on Keywords from Funded Project. *Procedia Comput. Sci.* **2016**, *91*, 547–555. [\[CrossRef\]](#)
63. Priyashantha, K.G.; De Alwis, A.; Welmilla, I. Work-Family Conflicts in the Context of Labour Market Change: A Systematic Literature Review. *Manag. Econ. Rev.* **2022**, *7*, 330–359. [\[CrossRef\]](#)
64. Priyashantha, K.G.; Dahanayake, W.E.; Maduwanthi, M.N. Career Indecision: A Systematic Literature Review. *J. Humanit. Appl. Soc. Sci.* **2022**, ahead of print. [\[CrossRef\]](#)
65. Obrad, C. Constraints and Consequences of Online Teaching. *Sustainability* **2020**, *12*, 6982. [\[CrossRef\]](#)
66. Khan, A.N. A Diary Study of Psychological Effects of Misinformation and COVID-19 Threat on Work Engagement of Working from Home Employees. *Technol. Forecast. Soc. Chang.* **2021**, *171*, 120968. [\[CrossRef\]](#)
67. Talavera-Velasco, B.; Luceño-Moreno, L.; García-Albuérne, Y.; Martín-García, J. Perception of Health, Resilience, and Engagement in Spanish Police Officers During the COVID-19 Pandemic. *Psicothema* **2021**, *33*, 556–563. [\[CrossRef\]](#)
68. Kotera, Y.; Mayer, C.-H.; Vanderheiden, E. Cross-Cultural Comparison of Mental Health between German and South African Employees: Shame, Self-Compassion, Work Engagement, and Work Motivation. *Front. Psychol.* **2021**, *12*, 627851. [\[CrossRef\]](#)
69. Domínguez-Salas, S.; Gómez-Salgado, J.; Guillén-Gestoso, C.; Romero-Martín, M.; Ortega-Moreno, M.; Ruiz-Frutos, C. Health Care Workers' Protection and Psychological Safety during the COVID-19 Pandemic in Spain. *J. Nurs. Manag.* **2021**, *29*, 1924–1933. [\[CrossRef\]](#)
70. Gómez-Salgado, J.; Domínguez-Salas, S.; Romero-Martín, M.; Romero, A.; Coronado-Vázquez, V.; Ruiz-Frutos, C. Work Engagement and Psychological Distress of Health Professionals during the COVID-19 Pandemic. *J. Nurs. Manag.* **2021**, *29*, 1016–1025. [\[CrossRef\]](#)
71. Oksa, R.; Kaakinen, M.; Savela, N.; Hakanen, J.J.; Oksanen, A. Professional Social Media Usage and Work Engagement among Professionals in Finland Before and during the COVID-19 Pandemic: Four-Wave Follow-Up Study. *J. Med. Internet Res.* **2021**, *23*, e29036. [\[CrossRef\]](#)
72. Song, L.; Wang, Y.; Li, Z.; Yang, Y.; Li, H. Mental Health and Work Attitudes among People Resuming Work during the COVID-19 Pandemic: A Cross-Sectional Study in China. *Int. J. Environ. Res. Public Health* **2020**, *17*, 5059. [\[CrossRef\]](#) [\[PubMed\]](#)
73. Ojo, A.O.; Fawehinmi, O.; Yusliza, M.Y. Examining the Predictors of Resilience and Work Engagement during the COVID-19 Pandemic. *Sustainability* **2021**, *13*, 2902. [\[CrossRef\]](#)

74. Amano, H.; Fukuda, Y.; Shibuya, K.; Ozaki, A.; Tabuchi, T. Factors Associated with the Work Engagement of Employees Working from Home during the COVID-19 Pandemic in Japan. *Int. J. Environ. Res. Public Health* **2021**, *18*, 10495. [\[CrossRef\]](#)
75. Schade, H.M.; Digutsch, J.; Kleinsorge, T.; Fan, Y. Having to Work from Home: Basic Needs, Well-Being, and Motivation. *Int. J. Environ. Res. Public Health* **2021**, *18*, 5149. [\[CrossRef\]](#) [\[PubMed\]](#)
76. Mehta, P. Work from Home—Work Engagement amid COVID-19 Lockdown and Employee Happiness. *J. Public Aff.* **2021**, *21*, e2709. [\[CrossRef\]](#) [\[PubMed\]](#)
77. Wu, J.; Li, H.; Geng, Z.; Wang, Y.; Wang, X.; Zhang, J. Subtypes of Nurses' Mental Workload and Interaction Patterns with Fatigue and Work Engagement during Coronavirus Disease 2019 (COVID-19) Outbreak: A Latent Class Analysis. *BMC Nurs.* **2021**, *20*, 206. [\[CrossRef\]](#)
78. Zhang, M.; Zhang, P.; Liu, Y.; Wang, H.; Hu, K.; Du, M. Influence of Perceived Stress and Workload on Work Engagement in Front-line Nurses during COVID-19 Pandemic. *J. Clin. Nurs.* **2021**, *30*, 1584–1595. [\[CrossRef\]](#)
79. Hughes, D.; Fairley, A. The COVID Chronicles: An Employee Assistance Program's Observations and Responses to the Pandemic. *J. Workplace Behav. Health* **2021**, *36*, 177–196. [\[CrossRef\]](#)
80. Steinbach, A.L.; Kautz, J.; Korsgaard, M.A. Caring for Their Own: How Firm Actions to Protect Essential Workers and CEO Benevolence Influenced Stakeholder Sentiment during the COVID-19 Pandemic. *J. Appl. Psychol.* **2021**, *106*, 811–824. [\[CrossRef\]](#)
81. Galanti, T.; Guidetti, G.; Mazzei, E.; Zappalà, S.; Toscano, F. Work from Home during the COVID-19 Outbreak: The Impact on Employees' Remote Work Productivity, Engagement and Stress. *J. Occup. Environ. Med.* **2021**, ahead of print. [\[CrossRef\]](#)
82. Klatt, M.; Bawa, R.; Gabram, O.; Westrick, A.; Blake, A. Synchronous Mindfulness in Motion Online: Strong Results, Strong Attendance at a Critical Time for Health Care Professionals (HCPs) in the COVID Era. *Front. Psychol.* **2021**, *12*, 725810. [\[CrossRef\]](#)
83. Zheng, M.X.; Masters-Waage, T.C.; Yao, J.; Lu, Y.; Tan, N.; Narayanan, J. Stay Mindful and Carry on: Mindfulness Neutralizes COVID-19 Stressors on Work Engagement via Sleep Duration. *Front. Psychol.* **2020**, *11*, 610156. [\[CrossRef\]](#)
84. Palumbo, R. Let Me Go to the Office! An Investigation into the Side Effects of Working from Home on Work-Life Balance. *Int. J. Public Sect. Manag.* **2020**, *33*, 771–790. [\[CrossRef\]](#)
85. Hu, J.; He, W.; Zhou, K. The Mind, the Heart, and the Leader in Times of Crisis: How and When COVID-19-Triggered Mortality Salience Relates to State Anxiety, Job Engagement, and Prosocial Behavior. *J. Appl. Psychol.* **2020**, *105*, 1218–1233. [\[CrossRef\]](#)
86. Saad, D.; Umair, A.; Munwar Hussain, P. Innovative Work Behavior during COVID-19 for Medical Representatives in the Pharmaceutical Industry: Test of a Moderation Model in Bahrain. *Int. J. Pharm. Res.* **2020**, *12*, 1927–1934. [\[CrossRef\]](#)
87. Alshaabani, A.; Naz, F.; Magda, R.; Rudnák, I. Impact of Perceived Organizational Support on OCB in the Time of COVID-19 Pandemic in Hungary: Employee Engagement and Affective Commitment as Mediators. *Sustainability* **2021**, *13*, 7800. [\[CrossRef\]](#)
88. Shamsi, M.; Iakovleva, T.; Olsen, E.; Bagozzi, R.P. Employees' Work-Related Well-Being during COVID-19 Pandemic: An Integrated Perspective of Technology Acceptance Model and JD-R Theory. *Int. J. Environ. Res. Public Health* **2021**, *18*, 11888. [\[CrossRef\]](#)
89. Einwiller, S.; Ruppel, C.; Stranzl, J. Achieving Employee Support during the COVID-19 Pandemic—The Role of Relational and Informational Crisis Communication in Austrian Organizations. *J. Commun. Manag.* **2021**, *25*, 233–255. [\[CrossRef\]](#)
90. Dwiedienawati, D. Transformational Leadership, Communication Quality Influences to Perceived Organization Effectiveness and Employee Engagement and Employee Retention during the COVID-19 Pandemic. *J. Adv. Res. Dyn. Control Syst.* **2020**, *12*, 773–787. [\[CrossRef\]](#)
91. Reinwald, M.; Zimmermann, S.; Kunze, F. Working in the Eye of the Pandemic: Local COVID-19 Infections and Daily Employee Engagement. *Front. Psychol.* **2021**, *12*, 654126. [\[CrossRef\]](#)
92. Koekemoer, L.; de Beer, L.T.; Govender, K.; Brouwers, M. Leadership Behaviour, Team Effectiveness, Technological Flexibility, Work Engagement and Performance during COVID-19 Lockdown: An Exploratory Study. *SA J. Ind. Psychol.* **2021**, *47*, 8. [\[CrossRef\]](#)
93. Jung, J.Y. Occupational/Career Amotivation and Indecision for Gifted and Talented Adolescents: A Cognitive Decision-Making Process Perspective. *J. Psychol. Couns. Sch.* **2018**, *28*, 143–165. [\[CrossRef\]](#)
94. Ren, T.; Cao, L.; Chin, T. Crafting Jobs for Occupational Satisfaction and Innovation among Manufacturing Workers Facing the COVID-19 Crisis. *Int. J. Environ. Res. Public Health* **2020**, *17*, 3953. [\[CrossRef\]](#) [\[PubMed\]](#)
95. Shin, Y.; Hur, W.-M. Do Organizational Health Climates and Leader Health Mindsets Enhance Employees' Work Engagement and Job Crafting Amid the Pandemic? *Int. J. Environ. Res. Public Health* **2021**, *18*, 12123. [\[CrossRef\]](#) [\[PubMed\]](#)
96. Yuan, Z.; Ye, Z.; Zhong, M. Plug Back into Work, Safely: Job Reattachment, Leader Safety Commitment, and Job Engagement in the COVID-19 Pandemic. *J. Appl. Psychol.* **2021**, *106*, 62–70. [\[CrossRef\]](#)
97. Ativetin, T. The Impact of the Learning Organization on the Essential Behaviors Regarding Employee Retention During the COVID-19 Pandemic. *ABAC J.* **2021**, *41*, 20–45.
98. He, J.; Liu, S.; Li, T.; Mai, T.H.T. The Positive Effects of Unneeded Consumption Behaviour on Consumers during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health* **2021**, *18*, 6404. [\[CrossRef\]](#)
99. Huang, S.Y.B.; Li, M.-W.; Lee, Y.-S. Transforming the Emotional Intelligence of the Feeders in Agribusinesses into the Development of Task Performance and Counterproductive Work Behaviors during the COVID-19 Pandemic. *Animals* **2021**, *11*, 3124. [\[CrossRef\]](#)
100. Sanchez-Gomez, M.; Sadovyy, M.; Bresó, E. Health-Care Professionals Amid the COVID-19 Pandemic: How Emotional Intelligence May Enhance Work Performance Traversing the Mediating Role of Work Engagement. *J. Clin. Med.* **2021**, *10*, 4077. [\[CrossRef\]](#)

101. Kleppa, E.; Sanne, B.; Tell, G.S. Working Overtime Is Associated with Anxiety and Depression: The Hordaland Health Study. *J. Occup. Environ. Med.* **2008**, *50*, 658–666. [[CrossRef](#)]
102. Rossi, A.M.; Meurs, J.A.; Perrewe, P.L. *Improving Employee Health and Well Being*; IAP: Cape Canaveral, FL, USA, 2013.
103. Grunberg, L.; Moore, S.; Greenberg, E.S.; Sikora, P. The Changing Workplace and Its Effects: A Longitudinal Examination of Employee Responses at a Large Company. *J. Appl. Behav. Sci.* **2008**, *44*, 215–236. [[CrossRef](#)]
104. Prayag, G.; Chowdhury, M.; Spector, S.; Orchiston, C. Organizational Resilience and Financial Performance. *Ann. Tour. Res.* **2018**, *73*, 193–196. [[CrossRef](#)]
105. Ke, Q.; Chan, S.W.; Kong, Y.; Fu, J.; Li, W.; Shen, Q.; Zhu, J. Frontline Nurses' Willingness to Work during the COVID-19 Pandemic: A Mixed-methods Study. *J. Adv. Nurs.* **2021**, *77*, 3880–3893. [[CrossRef](#)]

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