



Work from home practices as corporate strategy- an integrative review

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ABSTRACT

The Covid 19 pandemic led to major changes at the individual, organisational and institutional levels of policy, productive functions, and organising. During Covid 19 morbidity, public institutions enforced social isolation, mandatory self-isolation, quarantines, and administrative regulatory lockdowns, which led to a movement away from the physical, material world and into an all-consuming digital universe. With growing interest in work-from-home (WFH) opportunities, this article provides an integrative review of 107 papers. It comprises the bibliometric analysis and manual review of the articles, on the basis of which we present an elaborative discussion and agenda for future research. According to the analysis, WFH looks a tad of a double-edged sword in that it may have major but unintended repercussions for institutions, and organizations as well as hidden, positive as well as negative consequences for individuals/employees. One of the significant insight from our analysis was the absence of HR function's strategic or operational input or oversight during corporate WFH strategies. We suggest several theoretical frameworks for further developing, theorizing, and empirically testing various aspects of WFH. Further, we recognise that WFH is becoming increasingly visible as a result of the pandemic scenario and significant technical advancements, which must be reflected in the research. Finally, because WFH represents a significant disruption in how organizations produce work and manage it, we propose employee and managerial consequences as future research agendas.

1. Introduction

Work from home (WFH) is not a novel concept or practice that originated post-2019 pandemic era [1], but since then, WFH practices and scholarship have grown substantially. Pre-pandemic literature around the theme of WFH primarily focused on three aspects, namely – family-friendly employment, business gains from WFH, and barriers to the adoption of WFH practices [2–5]. The Covid-19 pandemic is a watershed moment, compelling organizations, institutions, and individuals to rethink their work systems and

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offerings, reorganize production systems, manage market expectations, realign with client management, and redesign administrative processes and delivery. During the morbid period of rapid Coronavirus transmission and the resulting extreme measures taken by the government, the majority of organizations changed their operational strategies to WFH. The focus of this article is an integrative review of WFH scholarship published primarily in management journals and explores the critical development of the scholarship anchoring the research on managerial, theoretical, technological, and employee levels and further analysed these levels using individual, organisational, and institutional frames. Following the analysis, we suggest future research agenda.

However, what remained an option became a compulsion due to the containment measures adopted worldwide in response to the Covid-19 pandemic. Organizations (particularly those with a high reliance on services) were compelled to discover new and inventive methods to remain productive, innovative, and competitive in the aftermath of Covid-19 lockdowns. Flexible workstations, early use of contemporary technology, increasing investment in technology, and dedicated employees contribute to an organization's capacity to offer a broader range of WFH options. The WFH practices can shorten commute times, alleviate traffic congestion, and minimize vehicle emissions [6]. Conversely, because work is also a social event involving interaction with work colleagues, WFH may result in lower team productivity [7].

During the pandemic context, WFH has been a major institutional shift for both employees and employers, having positive and negative implications on employee motivation, satisfaction, and productivity [8]. Crosbie and Moore [9] suggest that WFH may have a long-term detrimental effect on employee engagement and motivation, and work-life balance by making it more challenging to separate work and home. Kreiner et al. [10] look at the potential conflicts between work and home (family life) from an organizational boundary theory perspective, while Kumar et al. [11] suggest that technologies change the way employees engage in productive activities. WFH is a relatively nascent research area with wide-ranging implications on organizations, labour policies, work-life balance, gender inclusivity, compensation, and performance. Furthermore, Mercer's 2020 Global Talent Trends Study shows only 22% of companies were prepared for WFH work following the COVID-19 outbreak [11]. International Labour Organization [12] survey mentions that the COVID-19 pandemic has severely affected workplace dynamics, where around 68% of the world's total workforce, and 81% of employers had to close down their workplaces [12]. In contrast, during the pandemic, Tata Consultancy Services (TCS) reported that 85% of its employees (40,00,000 in India and outside India) shifted to WFH within a short time and its performance remain unchanged, which was reflected in its higher stock prices [13]. Variance in WFH practices has effects on individuals, families, and organizations and the possibility of state views on tax and labour laws. Keeping these multiple implications in view, our review aims to understand the extant research of WFH literature, and prominent academic themes of inquiry and provide a comprehensive outlook on future avenues for scholarship within the WFH domain.

Several theoretical lenses can be employed to comprehend the evolution of WFH, and its implications for organizations and their stakeholders. Primarily, institutional theory, organizational adaptation theory, high commitment theory, situational theory, workforce differentiation theory [14], dynamic capabilities theory [15], and theory of work gamification [16], provide a critical framework to evaluate the WFH practices and anticipate their continuity leading to value-addition for the businesses. According to *institutional theory*, businesses reflect and conform to societal normative pressures to varying degrees, explained by their need for social and economic legitimacy [17,18]. Due to the pandemic's assault, social pressure groups have increased their demands for WFH as a right, citing the risk of virus transmission. This is causing the majority of firms to behave as 'conformists' during the pandemic, but how they respond once the pressure is relieved requires thorough investigation by the scholarship. Beyond these debates over how companies respond to societal constraints, *organizational adaptation theory* investigates how these forces get known, recognized, and adapted by organizations [19]. Adaptation theory is mostly influenced by workforce pressure and how the moral and ethical compass of management is re-aligned. For example, the conducive attitude of the management (driven by their demographics, experiences, and beliefs) toward helping their workforce plays a lead role in organizational adaptation.

High commitment theory extends the reasoning further and argues that employers can demonstrate further organizational commitment by being receptive to the work-life balance among employees [20,21]. The lightning spread of the Covid-19 infection is underlining the relevance of WFH practices as a gesture of organizational commitment. *The situational theory* posits that organizations respond to the pressure from the circumstances, more than anything else [22]. By maintaining that the well-established pressures towards profitability and productivity drive managers towards acting in the interest of the employees, researchers (for example, Ostermann [23]) also refer to this theory as practical response theory. Since WFH is still in its infancy, *work differentiation theory* essentially advocates for a liberal incentive structure and employee training structure to leverage the WFH's flexibility and full potential for organizational goals. *Dynamic capabilities* help us theorize the current state of an organization and its employee and the resources and structures needed to develop it into the desired level, strength, and productivity. *The theory of work gamification* helps us understand human learning abilities when we are exposed to technologically intensive methodologies of learning and training. These theories help us explain firm behaviors and employee behaviour within firms. These theories help us in reflecting on the current state of employees concerning the external environment and responses that are required to allow competitive changes to ensure organizational development, employee learning, and organizational competitiveness.

The dearth of evidence of strategic or operational considerations, combined with the substantial negative physical, psychological, and social consequences reported in the WFH literature, leads us to express grave reservations about the extent to which digitalization is implemented at an organisational level, as well as the potential for damaging effects at the individual level [24]. As such, the increase in WFH or teleworking is a double-edged sword, with significant concern that such work is not being recognized as a valuable asset [25]. We advocate for more theoretical development and integration of the strategic WFH literature in order to better understand the impact of digitalization and the role of HR in this process. Accordingly, the aim of this article is twofold, first to conduct an integrative review of the literature on WFH and map important themes, and second, to provide directions for future research. This study takes the form of an integrative review [24–26] involving bibliometric analysis and manual review. An integrated review is a useful strategy for

synthesising the literature on an emerging issue or when research is emerging in multiple domains to conceptualise it holistically and to assist in formulating an agenda for subsequent study [27,28]. Our integrative review is based on 107 studies extracted from the Web of Science (WoS) and SCOPUS databases, which are bibliometrically analysed using VOS viewer, Gephi, and bibliometrix R package (details in section two) and also manually reviewed by going through each full-text sample study. We utilise studies conducted before and during the pandemic. We argue that the studies conducted before the pandemic contribute to the knowledge about WFH, which gained significant momentum during the pandemic. The pandemic era also witnessed the application of the knowledge already gained [24,26,29–32].

We also chart the research horizons of WFH by presenting the visualization of the cited number of articles, the author, country, and keyword framework, thematic mapping, as well as the methodology used and theories cited. Following that, we examine the findings in terms of the WFH drivers, and impacts along with outlining the potential areas for future research. The remainder of the paper is organized as follows. The next section outlines our review methodology. The third section presents the general description of extant literature (Figs. 2 and 3) whereas the fourth section portrays thematic mapping (Figs. 4 and 5). The fifth section details the discussion and the agenda for future research and policy; the last section concludes the analysis.

2. Data and methods

2.1. Data retrieval

This study primarily uses the bibliometric technique in order to give a thorough assessment of the work-from-home literature. This strategy aids in reducing the interpretation bias that frequently afflicts reviews using qualitative methodologies. Appropriate material was identified through the use of appropriate databases where the database and journal selections were influenced by the multidisciplinary character of the research focus [26], which spans information systems, human-computer interaction, business and management, and organisational psychology.

Therefore, we performed the search on the Web of Science (WoS) and SCOPUS databases, which provide online indexing services and are one of the renowned sources of quality publications needed for citation activity [33]. We performed the search in October 2021 and fetched 202 documents initially, with the help of keywords such as “work*”, “office”, “online”, “digital”, “virtual”, “home” and “pandemic”; and Boolean operators in both the databases (such as OR, AND, NOT, Near, W/n). In total, 146 documents were obtained

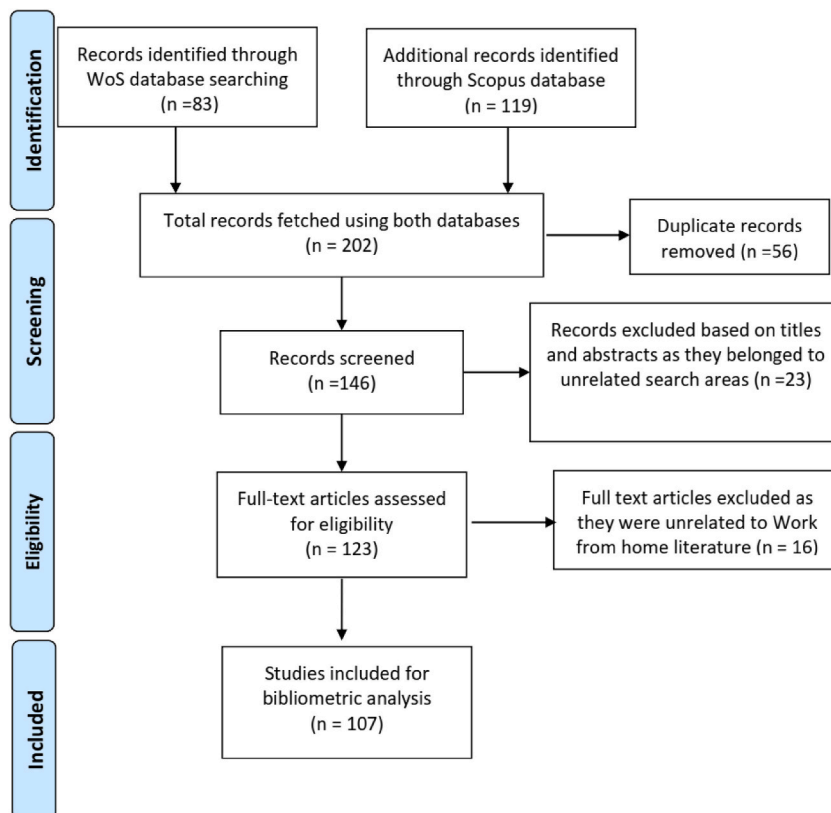


Fig. 1. Study flow PRISMA diagram

Note: The size of the node (circle) represents the number of co-occurrences of keywords in 107 papers.

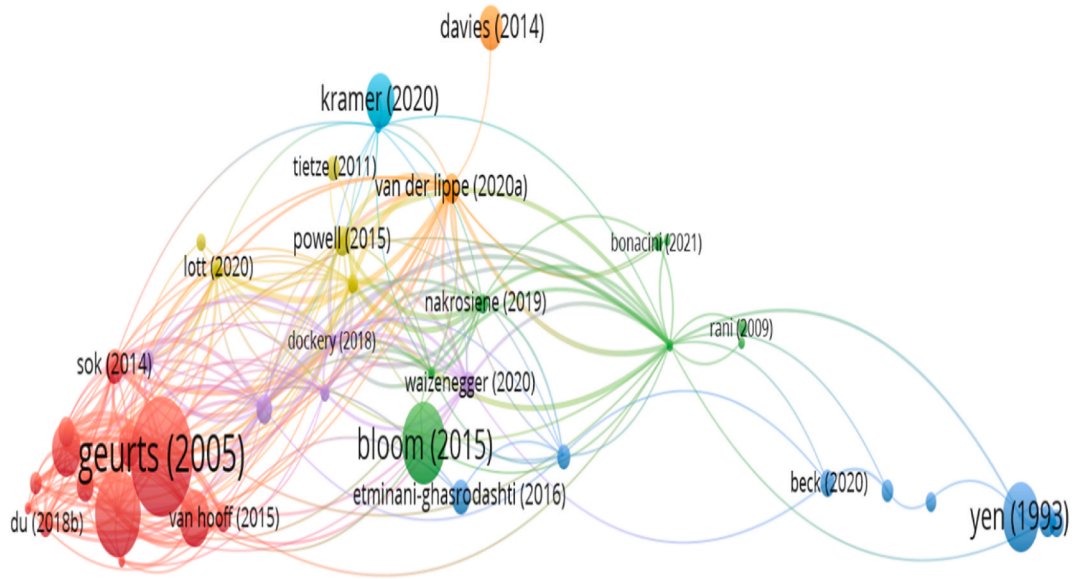


Fig. 2. Visualization for bibliographic coupling of documents
Note: Left side represents the author keywords, the middle part represents the authors and the right side reflects the corresponding countries.

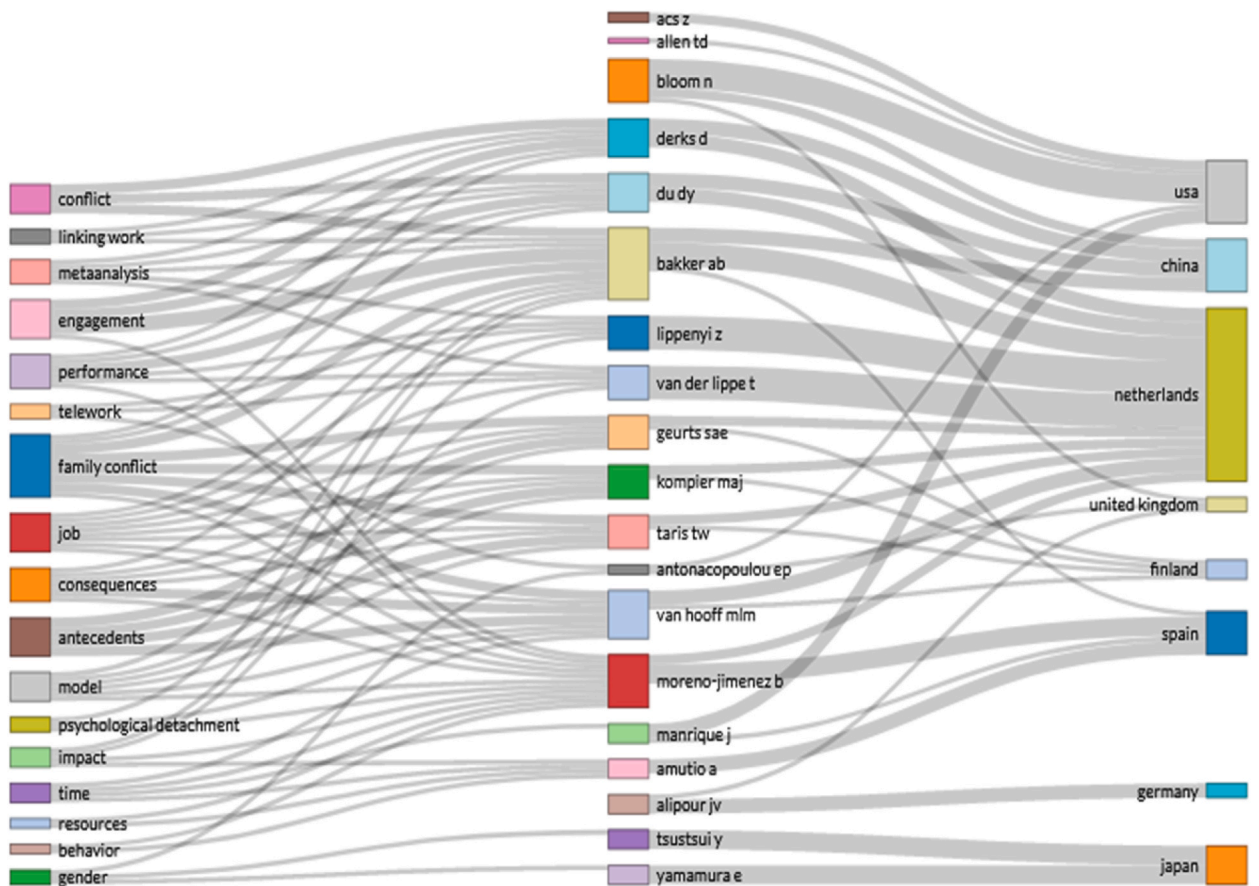


Fig. 3. Author-country-keyword framework.

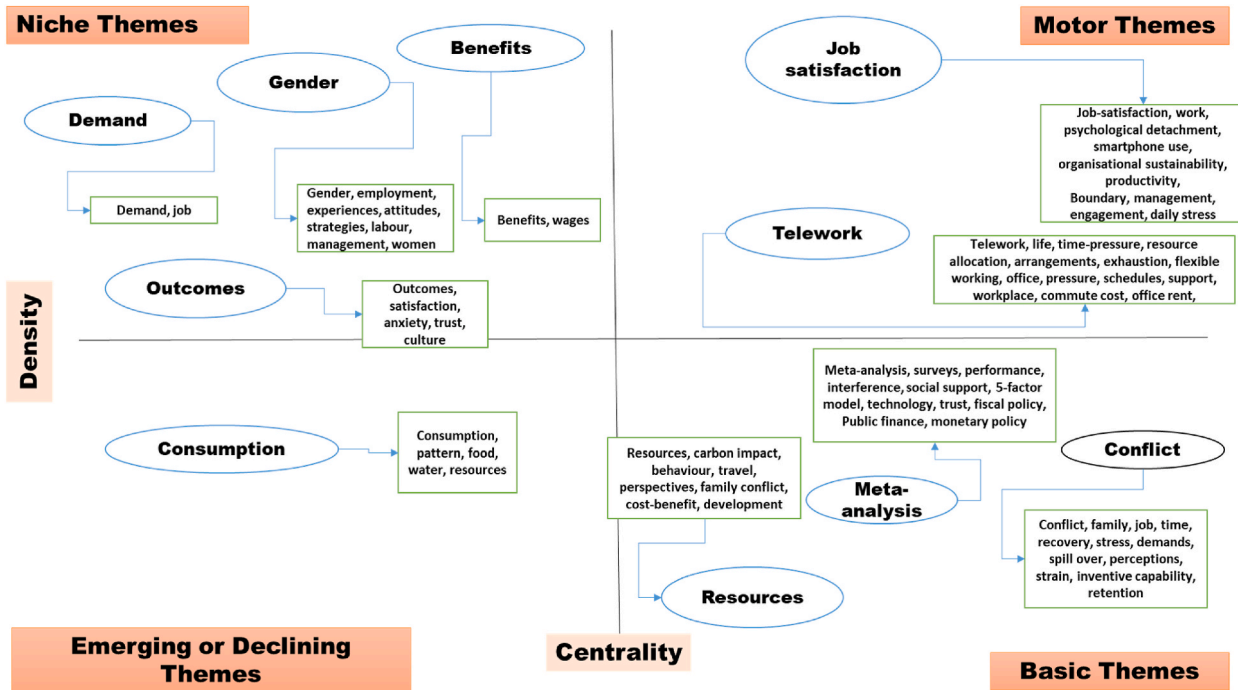


Fig. 4. Thematic map of Work from Home literature.

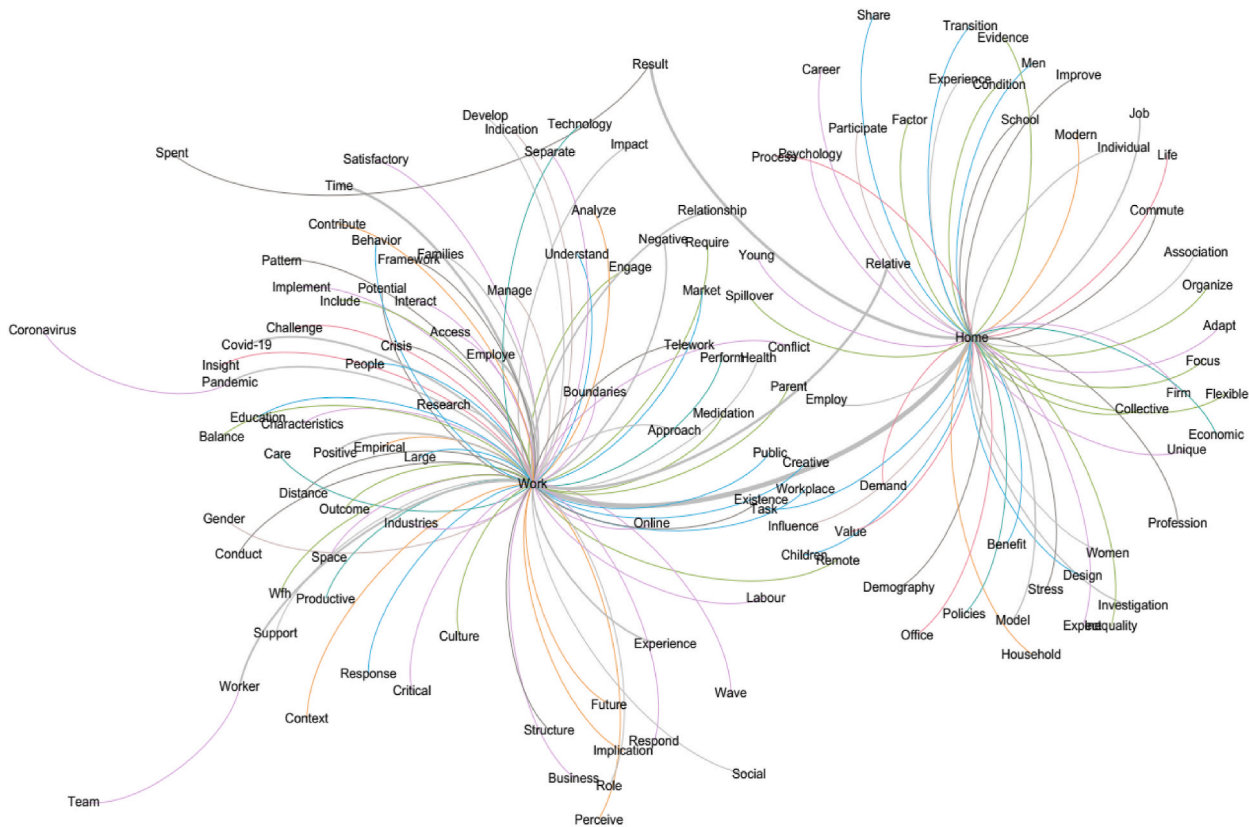


Fig. 5. Maximum spanning tree.

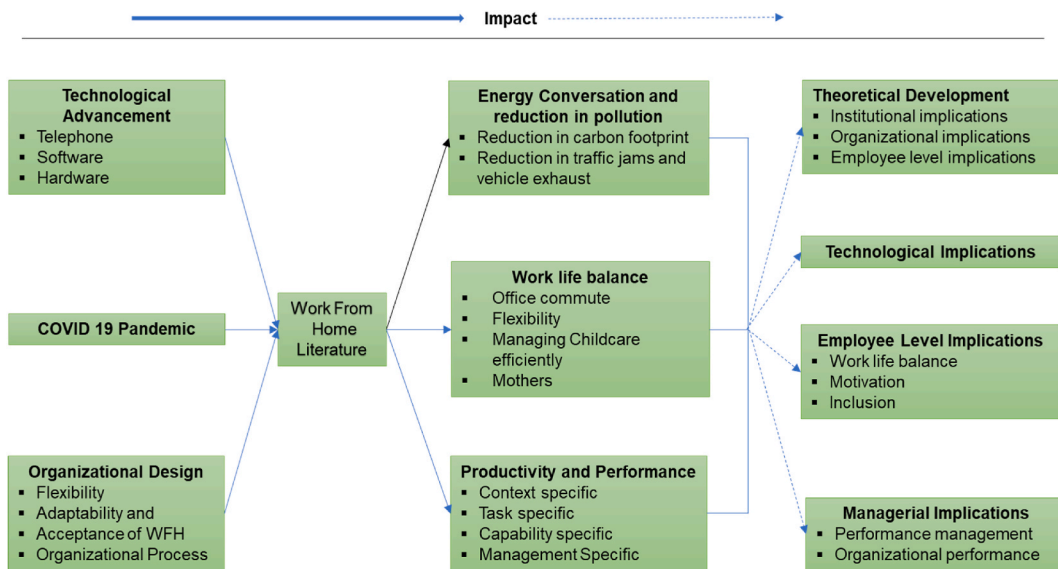


Fig. 6. Agenda for future research in WFH.
Source: Author’s own creation

after removing duplicates (56); that was screened twice based on the title, abstracts, and full-text assessment. Furthermore, we cleaned the data to remove duplicate and extraneous articles. False positives can occur during the search process, for example, when an article references a keyword or phrase that was used to get the article but identifies a distinct or unrelated topic [34].

It was decided to keep only articles that were closely related to the work-from-home literature (see Fig. 1). This left us with 107 documents for bibliometric analysis, for which the comma-separated values (CSV) or Text file was extracted containing the bibliographic data.

2.2. Bibliometric analysis

Bibliometric analysis is a quantitative study that quantifies the research presented in academic papers. It enables the identification of the most pertinent papers, authors, and institutions, and frequently used keywords within a study domain [35]. A bibliometric analysis of the available literature on WFH can provide crucial empirical insights that can aid future scholars in widening the scope of knowledge in their respective fields. We conducted an integrated review of our study, which entailed integrating the results of bibliometric analysis and manually reviewing each sample study. Conducting an integrated review entails taking a broad picture of the literature on a given subject while adhering to the highest standards of rigour. Henceforth, in order to get a more comprehensive grasp of the WFH domain, we also carefully read or manually reviewed each of the 107 shortlisted publications, based on which we offer the discussion, reflections, and suggestions for future study and policy in the WFH domain.

The bibliographic data of 107 papers is analysed through the following bibliometric software packages, i.e., VOS viewer, Gephi, and bibliometrix R package. Each software provides unique visualization that is presented in our study to present an exhaustive and comprehensive analysis relevant to “work from home” literature. VOS viewer is a freeware program that visualizes and analyses the links between journals, documents, keywords, references, authors, organizations, and countries [36,37]. The bibliometrix R-tool is the most popular R package for bibliometric analysis and has been extensively used in a growing number of publications [38–40]. It allows the users to import bibliographic data fetched from Scopus or the Web of Science, stored either as a Bibtext (.bib) or Plain Text (.txt) file [39]. Gephi is also free software used for network analysis and visualization and is gaining massive attention in the social network analysis community [41]. We undertake an integrative review of the WFH literature to shed light on emerging topics in human resource literature that have been curtailed by conflicting results [42,43] and to demonstrate the prevailing state of the literature in this prominent field of research. The integrative review approach is well-suited for studying an issue across multiple research designs and methodologies in order to gain a more comprehensive view of the phenomenon being examined. We assessed the literature using bibliometric analysis and personally inspected the retrieved material to ascertain the present level of knowledge and to propose a research and policy agenda.

3. General description of WFH literature

3.1. Bibliographic coupling of references

Bibliographic coupling quantifies the similarity of two texts based on the number of references they share. Thus, the more closely

related the two articles' bibliographies are, the greater the connection between them [41]. We generated a visualization map for bibliographically linked documents using the VOS viewer and produced the map for 43 interconnected articles after restricting the number of citations per document to two. Seven clusters are created, and they are portrayed in the following colours: red (13), green (8), blue (8), yellow (5), purple (5), sky blue (2), and orange (2). Each cluster's publications have a common trait. Geurts et al. [44] is the top-ranked publication as compared to other publications due to the highest number of citations (273), due to which its node size is also the largest among all the papers (see Fig. 2). It is based on developing a questionnaire for measuring work-home interaction from a work-psychological perspective [44]. Furthermore, Kramer & Kramer [45] has the highest normalized citations (8.2857) which highlight the potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility. As a result, research on "work from home" soared following the Covid-19 pandemic, providing a new path for this field of study.

3.2. Author-country-keyword (ACK) framework

The ACK framework (Fig. 3) is used to visualize the relationships between the authors, author's country, and keywords. Rectangles of a different colour denote the diagram's relevant elements. The height of the rectangles is defined by the relationships between the rectangle's displayed element (one of the keywords, author, or nation) and the other components [38]. When an element holds a greater number of relations, the rectangle used to depict it grows larger.

Three authors ("Bakker, AB", "Lippenyi, Z", "van der Lippe, T") from the Netherlands and seven keywords (job, family conflict, engagement, consequences, impact, performances) have a strong association with the publication. Interestingly, authors from Japan mainly focus on gender and behaviour keywords. "Moreno-Jimenez, B" from Spain has focused on almost every possible keyword (performance, telework, family conflict, job, consequences, model, psychological detachment, impact, time, resources, behavior).

4. Thematic mapping of WFH literature

The thematic map shows the emergence of trends in the studied domain. In Fig. 4, every cluster is represented on the diagram according to the twin criteria of centrality and density. Centrality denotes the degree of interaction or strength of ties of a theme with other themes, while density measures the strength of internal ties within a theme. The average of all external connections' affiliations is used to compute centrality, while the average of all internal connections' associations is used to calculate the density (sometimes referred to as internal cohesiveness). The higher the density, the more coherent the cluster and the more likely it is to contain inseparable expressions. The higher the value of this mean, the more closely the cluster represents a reference topic (central) in the corpus [46]. Based on the degree of centrality and density, a strategic diagram displays four quadrants and represents four types of themes, i.e., the motor theme (upper right quadrant, high centrality, and high density), niche theme (upper left quadrant, high density, and low centrality), emerging or disappearing (lower left quadrant, with low density and low centrality) and transversal, general or basic theme (lower right quadrant, with low density and high centrality) [46]. Further, the bigger size of the circle in Fig. 4 represents the higher number of publications compared to the smaller size circle [47].

The first quadrant contains two motor themes, namely job satisfaction, and telework. Feng & Savani [48], Nakrošienė et al. [49] and Schade et al. [50] discuss the intersectional issues of gender quality and work-life balance. The theme "job satisfaction" addresses its overall relationship with the individual, family, management, and productivity in the larger context of WFH. The second theme, "telework," explored by Giménez-Nadal et al. [51] and Powell & Craig [52], helps in the construction and conceptualization of WFH practice, with the papers focusing on the technological and organizational aspects of telework.

The second quadrant represents the niche themes of demand [45], benefits [53], outcome [54], and gender [7,55,56]. "Gender" is the largest circle highlighting the importance of gender in the context of working from home. Also, gender is a stand-alone institution of scholarship within management and social sciences. The criticality of gender is underlined by the family balance, gender intersectionality at workplaces, and work-life balance for working women. Other themes "demand", "benefits" and "outcome" represent the drivers that help the organizations to base their decisions and strategic policies.

The only emerging theme, "consumption," focuses on consuming resources, energy, and computing power [57]. It is the relational link between work from home and sustainability. The size of the circle is relatively small, indicating a lower number of publications. Although, since the field is emerging, we might see higher publications at a later stage.

Basic themes such as "resources", "conflict", and "family conflict" are dominant areas of scholarship. The research around "resources" highlights the resources needed to move from office to home while maintaining the same productivity levels. It constitutes elements like employee training [58], technologies [59], and resources and setup needed to move from work or office to home. The other major themes in the fourth quadrant, namely – "conflict" [7,60,61] and "family conflict", can be looked at from two different perspectives. The first theme, "conflict," represents conflicts, issues, and disagreements that arise in day-to-day working between individuals and their organization; and the potential conflicts and issues between the working individual and family (wife, children, home space) [62–65].

To advance the understanding of the results pertaining to WFH literature, we prepare a maximum spanning tree using Gephi software. We performed MST-based pathfinder network scaling for an abstract set of networks with weight attribute set to similarity and edge weight set to unweighted. Many kinds of networks, including citation networks, random networks, and social networks, are pruned using scaling algorithms such as the Pathfinder algorithm [34]. The key concept is based on the fact that the union of all Minimum Spanning Trees extracted from some kind of given network is equivalent to the PFNET that results from the Pathfinder algorithm parameterized by a particular set of values ($r = \text{infinity}$ and $q = n-1$) [66]. We extracted the results from sci tools and import these to Gephi (Gephi.Org). We perform the modularity community detection algorithm and apply the default resolution setting to one

to identify the different “communities” structures within our tree. A total of 6 distinct communities can be seen (Fig. 5), and each one has a unique colour assigned to it. By creating communities, we can learn how words from abstracts are connected within our dataset and this may help new researchers to understand the various communities of research and the important issues that exist within them [34].

Two prominent clusters – work and home emerged. A closer look at the detailed network topography between the words and cluster reveals that the WFH research mainly focuses on the organizational outcomes of such studies and tries to explain how WFH impacts the work set up in the organization and the association between satisfaction and behaviour of employees [67,68]. The words emerging on a similarity basis connected to home show an altogether different scenario of these studies, mainly focusing on adapt, focus, process, psychology, stress, household, benefit, and value.

5. Discussion and future research agenda

In this section, we discuss our findings and present future research agendas (Fig. 6) based on our analysis in the previous section. The practice, which was never as widespread earlier, is almost certain to persist in the post-pandemic period. The scholarship of WFH took a steep turn during the Covid-19 pandemic. Our integrative review found some of the major drivers of WFH are technological advancement in software, internet speed, cloud computing, and digitalization of organizations that have made it relatively easier for organizations to transform towards work from home. Digitalization of organization, particularly the migration of organizational databases into cloud systems have ensured flexibility that allowed workers to engage in value creation remotely and relatively seamlessly. These advancements have made it easier for organizations to implement remote work arrangements by providing the necessary infrastructure and tools for employees to effectively work from home. As a result, organizations can leverage these technologies to transform their work environments and enable remote work options for their employees. Further, the other major driver is the perceived convenience, costs, and benefits that it offers to employees and employers.

WFH reduces the traffic jams, use of automobiles, and office heating or cooling together, leading to an overall reduction in energy consumption and vehicular pollution. The research is divided on whether WFH leads to work-life balance, ensures greater engagement of women in the workforce, employee flexibility, employee productivity, childcare, and child-mother interaction. For example, earlier the boundaries between work and home were very distinct but the same blur when transitioning towards WFH. Such a major institutional shift can have both positive and negative influences on organizations and individuals. Some studies [59,69,70] suggest that WFH can improve work-life balance by allowing employees to have more control over their schedules and reduce commuting time. It may also facilitate greater participation of women in the workforce by providing flexibility to balance work and family responsibilities. However, other research highlights [55,71,72] potential challenges, such as blurred boundaries between work and personal life, increased work hours, and difficulties in maintaining work-life separation. The impact on employee productivity is also variable, with some studies showing positive effects due to reduced distractions and increased autonomy, while others indicate potential productivity challenges arising from inadequate infrastructure or difficulties in collaboration. Childcare and child-mother interaction may be influenced by WFH, with some studies suggesting that it provides more opportunities for parental involvement, while others raise concerns about the potential impact on childcare arrangements and the need for an effective balancing of work and caregiving responsibilities. Overall, the research on these aspects of WFH is mixed, and further investigation is needed to better understand the complex dynamics and outcomes associated with remote work practices.

Anticipating the increased interest in WFH research in the future, we suggest a future research agenda based on three premises. We believe the WFH will have implications for institutions, organizations, and employees. To study these, we propose the following. First, an underdeveloped field requires a theoretical frame to anchor its arguments and thesis. We propose some theoretical frameworks on which the field can be further developed, theorised, and empirically tested. We propose studying WFH institutions using institutional theory and institutional logic. Within organizations, employers and employees share a degree of uncertainty. Second, we realise that WFH is becoming far more evident following the pandemic situation and major technological breakthroughs, which need to be reflected in the research. A variety of actions encompasses entrepreneurship and innovation as organisational, management, and behavioural concepts. Working from home requires future academics to consider innovation, business entrepreneurship, and new product development. For team performance, organisational innovation, and entrepreneurship, ethnographic methods, surveys, and interviews must be used. Moreover, employers and employees alike face uncertainty within organizations. However, there are drawbacks to WFH, such as increased stress, constant labour, and lack of control and privacy. Thus, high commitment theory and situational leadership theory should be used to examine organisational phenomena. Finally, WFH is a major disruption in how organizations produce work and how they can be managed, therefore, we propose employee-level implications and managerial-level implications as a third and fourth research direction. The employee-level implications emphasise the privileges given to employees while being in the workplace. It is suggested for these rights be waived if they work from the office. However, new labour regulations must be enacted to assure the protection of employee rights in WFH. The managerial implications highlight that delegation becomes extremely difficult in the WFH scenario. Future research may examine how trust, leadership, and management styles can be effectively integrated into the art of delegation in these unusual contexts. The work-from-home study may examine potential conflicts, team-building approaches, and management and leadership capacities to make delegating decisions based on trust and outcomes.

5.1. Theoretical implications

Since WFH is a new field of inquiry and a nascent field, scholars must draw theoretical underpinnings from established theoretical frameworks. WFH has institutional-level implications, organisational-level implications, and employee-level implications. Each of

these levels should be studied using a variety of theoretical perspectives.

Institutional level: There is a clear distinction between the workplace and the house, between work and family life, and between the function of gender, as seen in Fig. 5. The intersectional distinction between work from home and work from the office reflects two institutional mind-sets that need distinct approaches to decision-making, reasoning, and sense making. There is a clear and distinct creation of an institution of WFH, which has its normative worldview. Thus, institutional logic should be one of the theoretical lenses through which to examine the intersectionality of work-from-home and work-from-office. Institutional logic is a theoretical framework for examining how actors inside organizations react in response to supra-institutions such as culture, family, ideology, and organizational value [73,74]. Future studies may view work from home and work from the office as two independent institutions and theorize them using the theoretical framework of institutional logic. This would assist in our knowledge of how these institutions differ or complement one another, how they compete or collaborate, and how these two institutions could reconcile to promote organizational flexibility, resilience, competitiveness, and performance. Building on the work of Goodstein [19], future scholarship may deliberate how companies might hybridize their work-from-home with work-from-office practices using institutional logic theory.

Organizational level: Organizations enjoy a greater social and political prominence, which enables them to advance their point of view and management style. When employees work from home, it is easier for employers to neglect their working circumstances. Figs. 4 and 5 demonstrate the importance of further examination of topics such as gender intersectionality, gender-based division of labour during WFH, stress management, and family stressors during WFH. To investigate these challenges, scholars may employ High Commitment Theory and Situational Theory to make sense of circumstances outside the manager's direct control. Typically, businesses are motivated by a desire to optimise output, results, and customer satisfaction at the price of employee satisfaction and well-being [75]. Instead of relying on a single higher authority, High Commitment Theory stresses personal responsibility, independence, and empowerment of employees at all levels. These are the elements that establish an organization's management style [20,21]. In the context of WFH, management supervision is lax and employee autonomy is great, which might result in anxiety, procrastination, or over-commitment. The idea of high commitment enables us to comprehend the link between employee commitment and management control under a variety of conditions and levels of organisational performance. Another perspective through which to view the role of TMT (top management teams) in maintaining organisational productivity, management, and performance throughout transitions to WFH is situational leadership theory [22,23]. Additionally, scholars may employ both High commitment theory and Situational leadership theory to better understand the internal dynamics of organizations and their responses to external stimuli while splitting labour between WFH and WFO. Dynamic capabilities and organizational adaptation theories are some theoretical frames that can be used to understand the organizational transformation needed for firms to undertake a shift toward WFH. The technological changes and adaptation, employee training and engagement, and organizational value creation need innovative thinking and learning and dynamic capabilities, and the organisational adaptation theory framework helps in theorizing the same. Furthermore, scholars should look at organisational strategies in South America and Africa and how organizations in these continents innovating to incorporate WFH.

The transition from WFO to WFH is a strategic and economic choice for enterprises that may have financial ramifications in the short and long term. While WFH acquired attention during the pandemic, its long-term implications on organizations are required to be investigated. While WFH enables businesses to save money on office rent, employee commute costs, and employee meal costs, they risk losing control over employee productivity, inventive capability, trust, and corporate culture [76,77], as well as increasing the risk of corporate espionage. Cost-benefit analysis is an appropriate theoretical framework for assessing the advantages and costs associated with organizational decisions about the strategic relocation of people from WFO to WFH [78]. Individuals may also utilise a cost-benefit analysis to determine the influence of their actions on their personal life, profession, and productivity. Although the benefits of WFH appear to exceed the costs at first, its long-term impact on employees and their families must be examined and overall organisational performance needs to be studied.

Employee level: Employees are the fundamental unit of value creation in organizations. WFH has a major influence on the employees and it may either increase their productivity and satisfaction or may demotivate them. Cardador et al. [16] suggest that the theory of work gamification or the theory of gamified learning should be used to theorize the impact of using technological tools in employee training, particularly, employee automated training simulation games for employee training. The assumption behind the theory of gamified learning is that the games increase engagement, teamwork, team trust, and productivity while ensuring a high level of motivation. Since WFH has a major impact on employees, Work gamification theory should be applied to theorize employee training and its impact. Some other theories could be motivation, gender lens, and work-life balance theories.

5.2. Technological implications

Our study highlights the essential significance of technology innovation in expanding prospects for WFH [79]. Telework through telephone (as seen in Fig. 4) was a long-standing WFH technique, but advancements in mobile and internet technologies have permitted the spread of WFH into new verticals such as healthcare, education, and programming in addition to sales. Recent technical breakthroughs have hastened telework's progression into a more complex and realistic experience that we refer to as WFH. Since the Covid-19 pandemic's lockdowns, technologies including Zoom, Microsoft Teams, and the Google office suite have been customized to meet the demands of organizations and employees [59,80]. Increased technological developments are essential to further boost WFH's authenticity and efficiency while maintaining the organization's rights, privacy, and intellectual property protection. More research is needed to create a seamless virtual environment where work productivity is high, stress is low and injury risks are lower. As one moves further towards working from home, the energy consumption of computers and central servers will also increase. Therefore, from a sustainability position, one needs to explore low-carbon computers and central servers.

Employee productivity (as seen in Fig. 4) is a fundamental idea that informs business strategy, compensation, and growth [48,81]. Working from home requires a rethinking of company management practices and employee productivity. Conflicts may emerge as a result of mistrust between the employee and the organization, inconsistencies in input, output, and expectations, or discontent with remote work. Conflicts (a subtheme in Fig. 6) that may occur as a result of low productivity may be handled by co-creating new productivity indicators and reframing expectations in the context of working from home. Additionally, experts must investigate the influence of prolonged exposure to technology on employees' health and productivity. The human-technology interaction is one area that future WFH scholarship should investigate. Recent developments at Facebook (Now Meta) and Alphabet (Google) towards metaverse suggest greater development of virtual reality software that would further reduce the physical boundaries between WFH and WFO. Research is needed towards developing effective virtual reality tools and interfaces. Future research may focus on virtual technologies that may be used to assess employee productivity, inadequacies, and the ability to manage compensation and development plans.

5.3. Employee level implications

The review findings suggest that work-life balance, gender equality, inclusivity, and child care are important elements that influence employee motivations toward WFH. The research seems to be divided between the positive and negative effects of WFH among employees and especially among women employees. For example, in some cases, the responsibility of WFH increased while in some cases it has decreased. Scholars cited that WFH has significantly blurred the boundaries between home and office. The home and office boundaries ensured that the work stayed in the office and the remaining time was devoted to the home. In the WFH setting, the employees are strongly under the influence of work and work-related problems. The effect of office and home boundary-blurring needs scholarly engagement. Earlier men and women used to work in different offices but with WFH, many working families have both members of the couple working on the same premises. Among working families where both partners work, the WFH is revealing greater complexities in the personal lives of employees.

5.4. Managerial implications

Institutional level: Usually, when employees work on office premises, their employers pay commercial taxes on public utilities. While the tax structure for WFH has not been conceptualised. Institutions and managers should explore different tax structures in order to pre-empt any litigations from rights bodies. Further, the employees have special rights when they work within office premises. These rights may not exist when they work within the home office. Therefore, one needs to develop new labour laws that ensure the protection of employee rights in WFH. Currently one observes WFH mainly in the service industry. It is important to explore WFH implications in blue-collar jobs, particularly, by combining elements of industry 4.0 and WFH.

Organizational level: WFH needs a rethinking of management and management art (part of the motor theme in Fig. 6). While managers and supervisors have the ability to ignore people and report departures from standards in a WFO environment, this is not available in a WFH environment. Rethinking and redesigning employee compensation, training, engagement, and career growth is necessary. Entrepreneurship and innovation are organizational, managerial, and behavioural constructs that entail contributions from a variety of activities [82]. It may be incredibly difficult to develop innovation and new product lines in a work-from-home environment, and in the lack of long-term innovation, brand value, and competitive advantage may suffer. Thus, future scholarship must consider innovation, corporate entrepreneurship, and new product development in light of work-from-home prospects. To determine the optimal collaboration models, team size, online interaction patterns, and technology for team performance, organizational innovation, and entrepreneurship, ethnographic approaches, surveys, and interviews should be employed.

Employee level: Effective delegation is another managerial skill that gets increasingly difficult in the WFH scenario. Future studies may investigate the ideas of trust, leadership, and management styles in the work-from-home context, as well as how these structures might be integrated effectively into the art of delegation in these novel circumstances. Additionally, future research may evaluate potential conflicts, techniques for team trust development and processes for assessing management and leadership capacities to make delegation decisions based on trust and outcomes in a work-from-home environment. Additionally, human resource management involves compensation, training, engagement, and career development for employees. Effective human resource management has a long-term impact on the competitiveness, management, employee retention, talent retention, and growth of a firm. Scholars must evaluate these qualities in light of the growing number of work-from-home options.

5.5. Study contribution

The following integrative review concluded that these arrangements are a double-edged sword in that, if not properly supported, they may eventually destroy value inside the organisation. We argue that this value destruction occurs primarily at the personal level, as flexible global work may have considerable negative effects on the individuals who execute these roles. Thus, organizations must establish and develop structures and procedures to ensure that WFH practices provide a more sustainable career path, cost savings for individuals who work on this type of schedule, and unhindered organisational growth during times of crisis.

The study contributes to the body of knowledge by providing the major drivers of WFH namely, technological advancements in software, internet speed, cloud computing, and the digitalization of organizations, all of which have made it relatively easier for organizations to transform to WFH environments. The digitalization of organizations, particularly the translation of organisational databases into cloud platforms, has provided flexibility, allowing people to participate in value creation from a distance relatively

easily. Furthermore, the perceived convenience, affordability, and benefits that it provides to both individuals and companies are significant drivers of adoption.

In terms of theoretical contribution, we recommend that institutional logic be used as one of the theoretical lenses through which to investigate the intersectionality of WFH and work from office-based businesses. Researchers may also utilise High Commitment Theory and Situational Theory to make sense of circumstances that are beyond the manager's direct control when investigating issues such as gender intersectionality, gender-based division of labour during WFH, stress management, and family stressors during WFH. Moreover, the work gamification theory should be applied to theorize employee training and its impact. Moving forward, in technological contributions, to build a seamless virtual environment where workers can be more productive, stress can be reduced, and injury risks can be reduced, further research must be conducted. The energy consumption of PCs and central servers would certainly increase as the trend toward working from home continues. Consequently, from a sustainability perspective, it is necessary to investigate low-carbon computers and central servers. It is necessary to undertake research in order to produce good virtual reality tools and interfaces. Possibly, future studies will concentrate on virtual technologies that can be used to evaluate staff productivity, shortcomings, and the capacity to manage remuneration and development plans, among other things.

Additionally, employees have particular privileges like union formation, and specific insurances when they work from the office. These rights may be waived if they work from home. As a result, new labour regulations must be enacted to assure the protection of employee rights in WFH. Furthermore, entrepreneurship and innovation are organisational, management, and behavioural concepts that encompass a range of actions. Thus, future academics must take into account innovation, corporate entrepreneurship, and new product development in light of the notion of working from home. Ethnographic methodologies, surveys, and interviews must be used to establish the ideal collaboration models, team size, online interaction patterns, and technology for team performance, organisational innovation, and entrepreneurship. A company's competitiveness, management, employee retention, talent retention, and growth are all impacted by effective human resource management. Researchers must assess these characteristics against the expanding number of work-from-home opportunities.

6. Conclusion

The reasoning behind this article was inspired by the event of covid 19 and how actors and organizations changed their strategies of productivity, and we try to present a review and research agenda on the same. Given the multiplicity of the implications of WFH for organizations, employees, shareholders, commercial tax, and other stakeholders, the scholarly work from various disciplines approaches the topic of WFH from a variety of angles, and the resulting conclusions are fragmented, and incoherent, and often misunderstood. To concretely inform managers, employees, and even policymakers, there is a growing need to synthesize existing research as well as to conduct new studies across various geographies, demographics, and cultural settings. This study attempts to create the groundwork for guiding organizational and institutional policies to better design WFH practices by conducting an integrative review of the WFH literature, suggesting how the field has evolved across practices and scholarly verticals. Furthermore, our work establishes a research agenda for the future in the fields of WFH and hybrid workspaces, focusing on managerial, technological, employee, and theoretical implications.

We review the literature on work from home, where, we searched articles using the Web of Science and Scopus databases and reviewed 107 articles. We used multiple bibliometric software(s) such as VOS, bibliometrix R-tool, and Gephi to analyse and visualize the articles and explore unique insights. We found WFH is a major institutional shift and that organizations and institutions (government, society, and markets) are co-creating the new normal. We propose studying WFH institutions using institutional theory and institutional logic. Within organizations, employers and employees share a degree of uncertainty. While WFH has multiple positives, there are negatives as well, such as higher stress, continuous work, lack of control, and privacy. Therefore, it is important to study organisational phenomena using the High commitment theory and Situational leadership theory. Finally, we found organisational change happens not only because of cost-benefits logic but also due to changes in technology, society, and gender norms.

We acknowledge multiple limitations in both data, research method, and future research agenda proposed. This research is an integrative review-based study, and while we have attempted to make it neutral and comprehensive, greater empirical evidence is required to substantiate our claims. Second, the scope and coverage are confined to the keywords employed and the period covered by the sample research; however, this limits the scope and coverage of the present paper, which may result in ignorance of recent publications.

Author contribution statement

All authors listed have significantly contributed to the development and the writing of this article.

Data availability statement

Data will be made available on request.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

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