The Work Engagement and Job Characteristics: Systematic Review and Guidelines for Future Avenues

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Contents:

Abstract: *This systematic review of forty articles aims to synthesise the increasing number of work done on work engagement and job characteristics by analysing the preferred sources from 2017 to 2021. The research studies were carefully chosen according to the researcher's inclusion criteria. The all-encompassing review of the literature has included an introduction, significance, and review of 'job characteristics theory, 'job demand theory', and elaborates innovative definition of 'work engagement' in the light of the literature review. The analyses were performed in terms of annual scientific production, most relevant sources, Bradford's law, source growth, tree map, and word dynamics through biblioshiny. MS Excel was used to evaluate the research studies. This systematic review will be beneficial to organisations and policymakers to plan the characteristics of jobs effectively to promote employee participation. Emphasis on the employees' work engagement and job characteristics will support apprehending the dream of a perfect workplace.*

Key Words: Job Characteristics, Job Characteristics Theory, Job Demand Resource Theory, Systematic Review, Work Engagement

Introduction

Work engagement is an employee's commitment, affection, determination and introspection to his work and considering work as an integral part of his body and soul. It is associated with the job characteristics involving the skills, demands and knowledge of the employees. These components are supposed to be mandatory to acquire and perform a job in a paramount significant way. In this competitive world, employees are known as the long-term assets for the success of a business. Employee jobs must be designed in ways that are thought-provoking, responsible and meaningful. When they are satisfied, proud and committed to their respective jobs, they demonstrate an important role in the progress of an organisation. This systematic review aims to identify the work that has been done on the selected topic in different fields and try to explore the theories that support it. Wok

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engagement and job characteristics are essential to endure loyal and committed employees within organisations, institutions, hospitals, and hotels. The variables are noteworthy for the literature as they produce positive results at the individual and group level.

The research topic has been designed to conduct a systematic literature review of published research studies regarding employee work engagement (Gillet et al., 2018) and job characteristics from the year 2017 to 2021 (Bakker, 2017; Caniëls et al., 2018; Dong et al., 2020; Green et al., 2017; Grobelna, 2019; Han et al., 2021; Lysova et al., 2019; Maricuțoiu et al., 2017; Penconek et al., 2021; Rai et al., 2017; Sen & Dulara, 2017; Tefera & Hunsaker, 2020; Wan et al., 2018; Woods et al., 2019; Zacher et al., 2018; Zahed-Babelan et al., 2019).

Wok Engagement

Two centuries ago, the word "engagement" became familiar in the field of the business world (Schaufeli, 2013) but still achieved consideration by researchers, policymakers and institutions. Diverse research scholars, disciplines, individuals, institutions, organisations and viewpoints have alienated this concept of engagement in assorted manners (Maricuțoiu et al., 2017; Schaufeli, 2017; Sonnentag, 2017). It was a painstaking challenge to define the concept of engagement in an all-inclusive mode. Several researchers used numerous scales and items to measure the concept of engagement (Robertson & Cooper, 2010).

Job Characteristics

The craftiness of a job is determined by the numerous rubrics and procedures, which lead us to zenith results. Therefore, the characteristics of a job are well thought-out as a gist of a job; it comprises skills, demands and knowledge. In 1960, the concept of redesigning the work of employees was initiated. Before that, all research was devoted to making the job as simple as possible to expand production. The more simplified work is affecting the satisfaction level of employees. The best way is to enrich the job to supplement the motivation level

of the employee (Oldham & Hackman, 2010). These components are believed to be indispensable to learning and executing work in the best meaningfulness approach (Sen & Dulara, 2017).

In prior research studies, job characteristics are described with the help of job characteristics theory (Hackman & Oldham, 1976), job demands-control theory (Karasek, 1979), and job demands-resources theory (Demerouti et al., 2001a), and relational job design theory (Grant, 2007).

Job Characteristics Theory

The job characteristics theory (JCT) or job characteristics model (JCM) provides five *characteristics* that state how best to *design work.* Job design indicates the tasks and activities of a job. Job design is also known as the alternative words like task design or work design. It has played a significant role in industrial psychology and organisational psychology (Parker, 2014). JCT is comprehensive with core job characteristics. These five core job characteristics are skill variety, job autonomy, feedback, task identity and significance. Task identity refers to the work from the preliminary to the finishing phase by generating several meaningful results. Task significance depicted that a job should be of some value to any other person or a firm. Skill variety refers to the different tasks and steps that should perform to complete a job. Job autonomy denotes independence and self-sufficiency for a desirable job. Feedback indicates the response of stakeholders about the performance of an employee. An employee is personally responsible for a specific job. In this way, the job has created a sense of responsibility in an employee. Work will be valuable to an employee when it has produced the meaning of working for that employee (Hackman, 1980).

Job characteristics theory (JCT) also includes the three psychological states that are meaningfulness of the job, knowledge about results, and responsibility related to work outcomes. This theory deliberated four variables related to motivation, which are internal work motivation,

growth satisfaction, general job satisfaction and work effectiveness (Hackman, 1980).

Significance of Job Characteristics Theory

JCT is appreciated and admired by many researchers. This theory was considered a mechanism, pedestal, and foundation for many research studies for hundreds of years (Renn & Vandenberg, 1995). The job characteristics theory of Hackman and Oldham supported the understanding of the other advances in the measurement of redesigning of jobs (Kulik et al., 1988). Validation of constructs (Idaszak & Drasgow, 1987) is encouraged to grasp the different conceptualisations of job designing (Campion, 1988). It depicted the loom to the redesigning of work (Hackman, 1980). The JCT is in reviewing process from different perspectives. Work contextual (inclusion of ergonomics) is linked with this model (Campion, 1988). The research studies have proved the association from the point of view of motivations, attitudes, satisfaction, work engagement, and behaviours with job characteristics empirically (Stegmann et al., 2010).

Job Demand Resource Theory (JD-R theory)

In job demand resource theory, unwarranted job demands and inadequate job resources stimulus the process of anxiety which leads to inferior engagement and, at the same time, may generate the issue of burnout (Demerouti et al., 2001b). This is also known as the 'occupational stress model'. This model implies that the strain is the result of the disproportion of job demands with the resources an individual has to fulfil those job demands (Bakker & Demerouti, 2007b; Demerouti et al., 2001a).

Unwarranted job demands and inadequate job resources are responsible for undesirable organisational consequences such as high turnover intention and inferior commitment at the organisational level (Hu et al., 2011). Job demands physically and socially accompany an employee's efforts. Job resources envisaged the positive characteristics of personnel at the job place. Job resources can define as the reduction of physiological and psychological costs that affect treatability in achieving goals at work and

encourage growth and development at a personal level (Bakker & Demerouti, 2007a). Job resources such as clarity of work role, adequate communication, and stumpy ambiguity are the precarious organisational and social phases of JD-R theory which can be served as shields against the destructive influence of traumatic job demands (Bakker & Demerouti, 2017).

The concept of work engagement is included in the JDR theory and introduced as a theoretical extension to the job demands–control model (Sonnentag, 2017). According to Bakker and Demerouti (2017), to achieve optimum task performance in any occupation and in every sector, there are two classifications that is job resources and demands.

Significance of Job Demand Resource Theory

JD-R model has a heuristic nature. JD-R model did not stipulate the restricted and finite job resources and demands. This model has presented the style and method of thinking about how characteristics (personal or job) can affect health, motivation, and well-being. It represented that job demands and resources of any kind can become part of this theory (Parker et al., 2017). Owing to not restricting itself to precise job demands and resources, it has the flexibility to be tailored in altered work settings. The scope of the theory is broad and appealing to the authors, readers, and researchers, but on the other hand, there are no explicit and definite concepts.

The most noticeable nominated theories in the selected research studies of this review paper are *job characteristics theory* and j*ob demands–resources theory*. These theories are used frequently because of their precise distinctiveness and uniqueness. The job characteristics theory provided the base for future models of job design (Renn & Vandenberg, 1995). It is shown incredible utility by strengthening the redesigning of characteristics of a job to improve the satisfaction and internal motivation of employees. Job demands–resources theory is considered more flexible, applicable, and rigorous. It did not propose the job demands and resources in particular variables. This model is

considered effortless according to the diverse work settings, nature of jobs, the subcategory of areas, and with fluctuating nature of economic, social, and cultural aspects of the world.

Innovative Definition of Work Engagement

Work engagement has its origins in olden times and rehabilitated concepts from burnout. The personnel can tolerate burnout while engaging with their work (Schaufeli & Taris, 2014) in the workplace. The four types of interventions are highlighted in the meta-analysis. Firstly, the building of personal resources such as self- resiliency, self-optimism, and self-efficacy. Secondly, the building of job resources such as social support, developmental opportunities, feedback, and autonomy. Thirdly, the training of leaders boosts the skills of leaders with the assistance of practical exposure and education. Lastly, promotion of health by enhancing health and well-being. It will encourage the employees to participate in stress management or onsite mindfulness to reduce the stress (Knight et al., 2017).

Work engagement can be defined as "a positive, fulfilling, work–related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli et al., 2002, p.74). In the opinions of the researchers, it can also be defined as "moments of task performance" (Birkeland & Buch, 2015, p.693; Kahn, 1990). Work engagement is reflected as a constructive work experience (Bakker et al., 2014; Leiter & Maslach, 2017). It also implies "a positive, fulfilling, work–related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli & Taris, 2014, p. 74).

From the above definitions of the prior researchers, an innovative and conclusive definition of work engagement can be best defined as:

"*Work engagement defines as a commitment, affection, determination, and introspection of an employee to its work and considering the work as the part & parcel of his body and soul.*"

It explains that an employee is effusively dedicated to working, considering the work important and meaningful to him. In this review, most research studies have used the Utrecht work engagement scale to measure work engagement in different settings, fields, types of studies, and combinations of diverse variables.

Significance of Study

This systematic literature review is original, unique and significant as it has included diverse areas (medical sciences, hospitality industry, education sector organisations), with two important variables that are work engagement and job characteristics from the year 2017–2021

(Bakker & Oerlemans, 2019; Bosmans et al., 2019; Chaudhary & Akhouri, 2018; Chen et al., 2020; Gawke et al., 2017; Kunie et al., 2017; Mérida-López et al., 2019; Monje Amor et al., 2021; Ogbuanya & Chukwuedo, 2017; Othman & Nasurdin, 2019; Rudolph et al., 2017; Santos et al., 2020; Smith & DeNunzio, 2020; Teng et al., 2021; Tsaur et al., 2019; Van der Heijden et al., 2018; Yan et al., 2021).

It has contributed theoretically by reviewing Job Characteristics Theory (JCT) and Job Demand Resource Theory (JDR) and elaborating the ground-breaking definition of work engagement. It highlighted the reason for the preference of one theory over the other theory (Schaufeli, 2017). Moreover, the analyses were conducted in terms of annual scientific production, most relevant sources, Bradfords' Law, Source Growth, Tree Map, and Word Dynamics of research studies through Biblioshiny. MS-Excel was utilised to assess research studies in terms of years, sectors, and country.

Research Questions

The research questions for this systematic literature review can be highlighted in the following manners:-

Q 1: In what preferred sources would scholars intend to publish their research work on work engagement and/or job characteristics?

Q 2: What can steering constructs of work engagement and job characteristics be in future?

Methodology

The methodology comprised of inclusion criteria, exclusion criteria, article selection process, search outcome, and study selection.

Inclusion Criteria

All types of research studies comprised of empirical and conceptual research articles, review papers, and meta-analyses from the diverse sectors (medical sciences, hospitality industry, education sectors, and private sector organisations) for the period of 2017-2021 are incorporated as inclusion criteria. The research studies are carefully chosen from scientific journals of different languages (English, Spanish, French etc.), but these research studies available in English have merely been included. The keywords for searching strategy are *"Job characteristics and work engagement", "Job characteristics", or "work engagement".*

Exclusion Criteria

Research studies published before 2017 were excluded. Research materials from the thesis, books, unpublished research papers etc., are not incorporated. Research articles from tourism, train drivers, non-Government drugs, alcohol employees, flight attendants, drivers, airlines etc., are not encompassed for this review.

Articles Selection Process

After searching for relevant articles, a sheet was prepared in MS-Excel. All the research articles are categorised according to different types of information in the excel sheet. After extracting these research studies in excel, duplicate entries have been removed.

Search Outcome

All the included research studies were selected by keeping in mind the criteria for inclusion & exclusion, title, abstract, and contents from the accessible databases (Science Direct, Google scholar, Emerald and Taylor & Francis).

Study Selection

The research studies have been selected for systematic review paper in the following manner:

- The research studies were selected from Taylor & Francis, Science Direct, Emerald, and Google Scholar.
- Total One hundred and eighty-nine (189) articles are extracted from the above-mentioned databases, out of which only forty (40) articles are retained as review papers, meta-analyses, conceptual papers and research papers based on inclusion/exclusion criteria.

Results and Analysis

This section comprised of analysis through Bibliometrix and MS Excel. Bibliometrix has been used to observe the themes for selected review articles and research articles. Through MS-excel, the themes are extracted on the basis of selected research studies to depict the results with different types of charts and tables.

Bibliometrix Analysis

Bibliometrix analysis have been utilized in the field of business and management from the last thirty years (Kaushal et al., 2021). Bibliometrix is well-known for its comprehensive R-tool and fit in graphical and statistical packages. It has a friendly user interface, advanced and integrated interface ((Della Corte et al., 2019). Analyses of research studies performed in Bibliometrix with Biblioshiny. It is incorporated in a package of Bibliometrix and acknowledged as a web-based app. Biblioshiny interface has incorporated the different tabs for analyses purposes like a filter, dataset, sources, authors, documents etc. Sources, authors, and documents are reflected under metrics. All tabs have differently subcategorized to use for multiple and comprehensive analyses of selected research studies. The research studies analyze with the guidance of diverse queries (strategy for research in search fields) like keywords, title, abstracts, authors, journals, affiliations, citations, and documents. Analyses of the twenty-two research studies and seven review

articles has been incorporated by choosing the abstract and title. These research studies have been imported from science direct to biblioshiny in BibTeX format. The maximum supported tabs have been used to analyze these research studies separately.

The seven review articles are comprised of review papers, meta-analysis, and conceptual papers imported from science direct to biblioshiny. The twenty-two research articles are included in this review paper, related to hospitality, education, organizations, and medical sciences imported from the database (Science direct) to biblioshiny. Analyses of seven review papers and twenty two research articles have been accompanied with Biblioshiny in the following manners in order to cater the two research questions of this review. The answer of the first question (In what preferred sources would work engagement and/or job characteristics scholars intended to publish their research efforts) can be accompanies by the analysis of annual scientific production, analysis of most relevant sources, analysis of Bradfords' law, and analysis of source growth. The answer of the second question (What steering constructs of work engagement and job characteristics can be in future) can be accompanies by the analysis of Tree Map and analysis of Word Dynamics.

Analysis of Annual Scientific Production

Annual Scientific production demonstrates the trend of reviewing articles year-wise (see Fig 1a). From 2017 to 2019, there has been a growing trend of review papers on the selected topic. In 2021, the trend of publishing review papers on the selected topic decreased slightly. It depicted that the selected topic is prominent and popular among research scholars.

In 2017, there is a growing trend of research papers on the selected topic (see Fig 1b). In 2020 and 2021, the trend of publishing research papers on the selected topic decreased slightly, but still, the literature witnessed that the selected topic is prominent and popular among research scholars even in the current year (Guo et al., 2022; Raut et

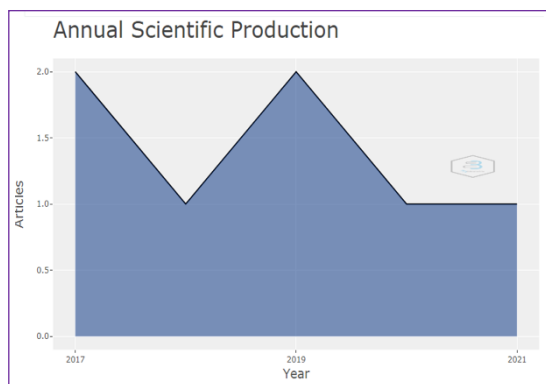al., 2022; van der Baan et al., 2022; Verma & Singh, 2022; Wright & Silva, 2022)

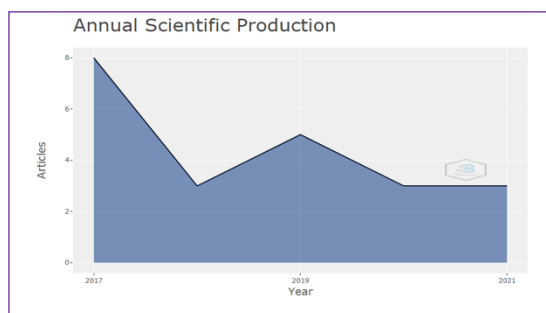**Figure 1(a):** Analysis of Annual Scientific Production (Review Papers)

Figure 1(b): Analysis of Annual Scientific Production (Research Articles)

Analysis of Most Relevant Sources

The following Fig. 2 (a) shows the most relevant sources for the selected review papers. There are two articles selected from the Journal of Vocational Behavior. One research article is selected from each of the journals named Burnout Research, Heliyon, International Journal of Nursing Studies, Organizational Dynamics and Research in Organizational Behavior.

From the following Fig. 2 (b), five articles are chosen from the Journal of Vocational Behavior. The two research articles are selected from four journals named International Journal of Hospitality Management, International Journal of Nursing Studies, Organizational Dynamics, and Personality & individual differences. One research article is chosen from remaining each of the nine Journal
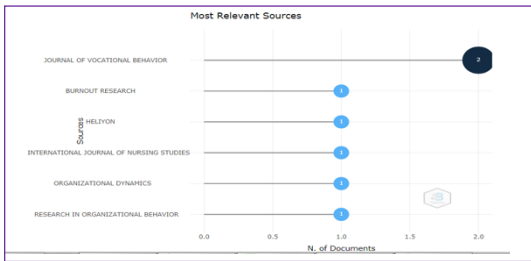
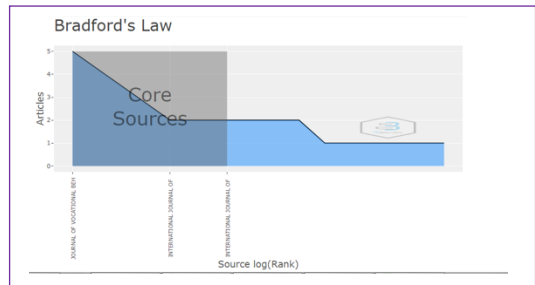**Figure 2(a):** Analysis of Most Relevant Sources (Review Papers)
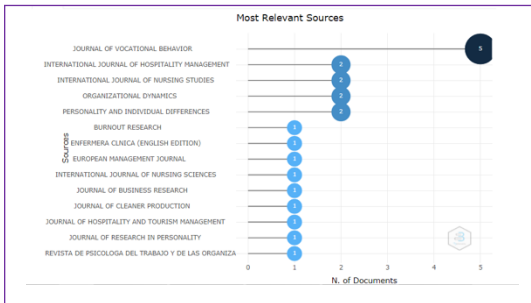

Figure 2(b): Analysis of Most Relevant Sources (Research Articles)

Analysis of Bradfords' Law

Law of Bradford in Fig. 3(a) depicts how the literature is related to the subject distributed in the journals (Drott, 1981). The Journal of Vocational Behavior and Burnout Research is mainly the core source for selected research review papers for this review paper.

Fig. 3(b) depicts the three journals are the core sources for the selected research papers for this review paper. These three journals are the Journal of Vocational Behavior, the International Journal of hospitality management, and the International Journal of nursing studies
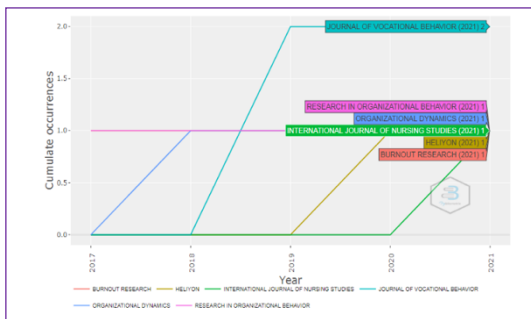

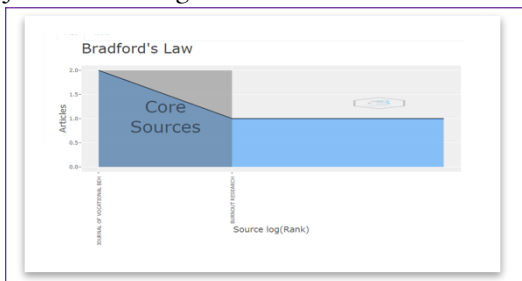**Figure 3(a):** Analysis of Bradford's Law (Review Papers)

Figure 3(b): Analysis of Bradford's Law (Research Articles)

Analysis of Source Growth

Fig. 4 (a) portrays that the number of publications is rising in the Journal of vocational behaviour concerning the other journals in case of review papers (Burnout Research, Heliyon, International Journal of Nursing Studies, Organizational Dynamics and Research in Organizational Behavior). Fig. 4 (b) shows that the publications improved in the Journal of Vocational Behavior compared to the other remaining journals in the case of research articles.

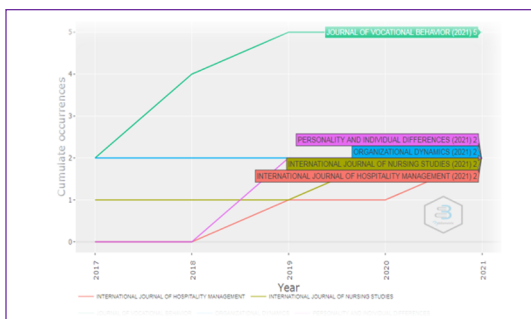**Figure 4(a):** Analysis of Source Growth (Review Articles)

Figure 4(b): Analysis of Source Growth (Research Articles)

Analysis of Tree Map

Fig. 5(a&b) depicts that a Tree map is another technique of displaying the utmost relevant words in the selected research studies (by choosing the query as abstracts). In case of Analysis of Tree Map (review papers) is also directing the future researcher to explore more about individuals' and teams' Job characteristics and work engagement with emotional, social, and personality characteristics. The construct of autonomy, cohesion, behaviours, OCB (Organizational Citizenship Behaviors), change and development should be explored with job characteristics and work engagement of individuals and teams. Job characteristics and work engagement should be researched in the field of electronics.

Fig. 5(b) depicts the Analysis of Tree Map (research papers) and also directs the future researcher to explore more about individuals' and teams' Job characteristics and work engagement with emotional and social behaviours. The construct of team support, employee support, and emotional and social support needs more consideration from research scholars regarding job characteristics and work engagement. Job characteristics and work engagement should be researched more in the context of front-line employees.

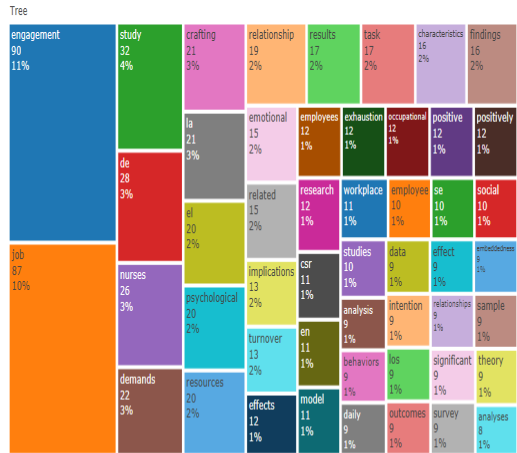**Figure 5(a):** Analysis of Tree Map (Review Articles)

Figure 5(b): Analysis of Tree Map (Research Articles)

Analysis of Word Dynamics

Fig. 6 exhibits that the factors such as job satisfaction, job expectations, job meaningfulness, and burnout should be more explored with job characteristics and work engagement in the context of Nurses and Managers of the organisation in future. Future researchers should discover more about the Managers' expectations and organisational expectations in relation to the construct of job characteristics and work engagement.
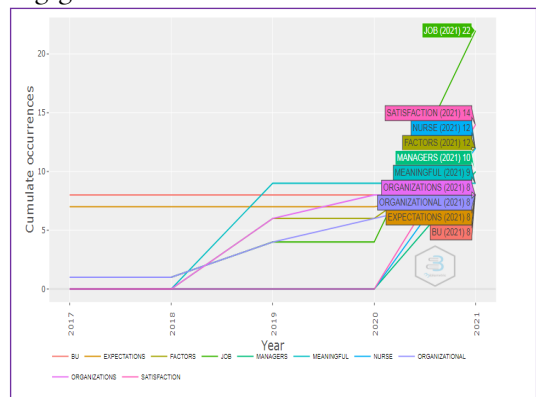

Figure 6(a) Analysis of Word Dynamics.

Analysis by MS Excel

The selected research studies are adopted from the year 2017-21, out of which most research is

conducted in the year 2017 about the job characteristic at work and work engagement of the employees (See Fig. 7). It is fair to presume the research on this topic as in 2020 and 2021, the research studies are less in numbers.
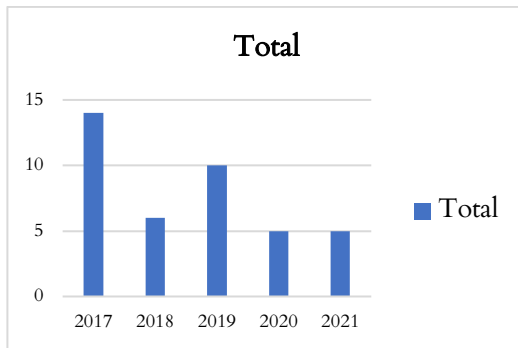

Figure 7: Year Wise Distribution of Research Studies

Figure 8 shows that usually, research articles are from the hospitality sector. The minimum research articles are from the medical sciences and industry. The pie of 14 in number depicts the review papers, meta-analyses and conceptual papers. These research studies represent the combination of mentioned sectors.
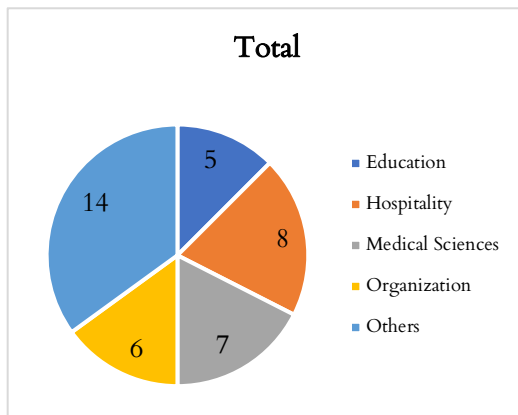

Figure 8: Sector Wise Distribution of Research Studies

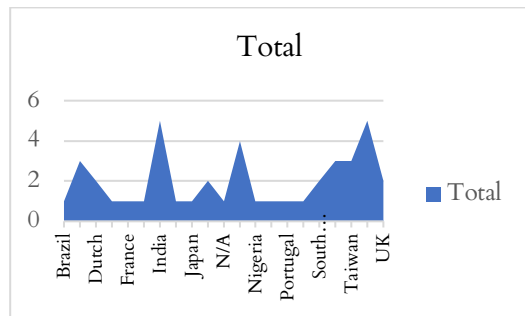Country-wise distribution of research studies represents that most research studies are from US and India.

Figure 9: Country-wise Distribution of Research Studies

Conclusion

It has been concluded that the theories related to job characteristics and work engagement are in the process of falsification, addition, and manipulation. The characteristics of a job of an employee are complex, challenging, and worthy. The features of all jobs of an employee should be designed to achieve maximum efficiency with inadequate resources. No doubt, employees are assets and an indispensable part of the organisation. The better enclosing of job characteristics is guiding the organisations to engage the employees at their best level. The more the employee engages with the job, the more efficient work outcomes, effectiveness, and performance will result.

Thus, this systematic review paper will be constructive, knowledgeable and advisable for the imminent academics, governments, companies and policymakers to plan the job characteristics efficaciously to develop the engagement of personnel at work. The prominence and consideration of the employee's work engagement and characteristics of the job will be obliged to accomplish the vision of ecological organisations.

Managerial & Practical Implications

This systematic review paper can be utilised by the organisation, governmental bodies, and related human resource departments especially to make unique, exclusive, and convincing strategies. The characteristics of the job supported the magnificent quality of production and related to remarkable tactical consequences (Schmid & Dowling, 2022).

Prior research witnessed that the leaders were deemed to amplify the engagement of employees. Support from the co-worker plays as a shield in case of the role stress on engagement at a job. Therefore, social support within the departments is important to be encouraged by the managers. Employees and management can boost work engagement by adopting various approaches and tools (Wright & Silva, 2022).

Work engagement is important in redesigning job characteristics. Especially during the crisis of COVID-19, it was a major challenge on the shoulders of the management and organisations to design the characteristics of a job in such a way that personnel engagement at work should not suffer at any cost. In order to deal with crisis management, the role of supportive administration, workforce agility, and augmented job characteristics are vital. Thus, for a responsive workforce, it is mandatory for government agencies to concentrate on the job characteristics of the employees (Raut et al., 2022).

Limitations

This review paper is related to the published research articles with the three keywords only ("job engagement", "work engagement", and "job characteristics") from the year 2017 to 2021. Using more keywords in this review can produce more productive results. The numbers of selected research studies are less here, as there were fewer articles available on the selected topic in the accessible databases according to the inclusion criteria of the published research articles only. If this review includes all the types of documents such as conference proceedings, books etc., the number of research studies can be increased, but it may affect the quality of this review paper. The analysis of the results was carried out with the assistance of Microsoft Excel and Biblioshiny only. The analysis of the results through other techniques like VOSviewer can produce more fruitful results.

Future Avenues

The following are the future avenues for research Scholars:-

- The combinations of other techniques like VOSviewer should be used to analyse the research studies.
- The findings of this narrative systematic literature review reveal some future direction in the analysis of word dynamics as factors such as job satisfaction, job expectations, job meaningfulness, and burnout should be more explored in relation to the job characteristics and work engagement in the context of nurses and managers of the organisation. Future researchers should discover more about the manager's expectations and organisational expectations.
- The researcher should explore the association of EL (team-level variable) and job complexity (job-level variable) with the effects of EL on employees' innovative behaviours (Guo et al., 2022) and work engagement from the lenses of the job demand resource Model.
- Future researchers can explore the role of workplace learning (van der Baan et al., 2022) with the work engagement of employees and from the perspective of job characteristic theory and the job demand resource model.
- The association of job characteristics with innovative work behaviours were examined in the literature, but the inclusion of other variables such as innovation climate, leadership, and support of organisation (Verma & Singh, 2022) should be explored in future.
- This review paper highlighted the future direction in the analysis of Tree Map to discover more about individuals' and teams' job characteristics and work engagement with emotional, social, and personality characteristics. The construct of autonomy, cohesion, behaviours, Organizational Citizenship Behaviour, change and development should be explored with job characteristics and work engagement of individuals and teams. Job characteristics and work engagement should be researched in

the field of electronics.

- Analysis of Tree Map of research papers also directs the future researcher to explore more about individuals' and teams' job characteristics and work engagement with emotional and social behaviours. The construct of team support, employee support, and emotional and social support needs more consideration from research scholars regarding job characteristics and work engagement. Job characteristics and work engagement should be researched more in the context of front–line employees.

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