A Bibliometric and Co-Occurrence Analysis of Work-Life Balance:
Related Literature Published Pre- and During COVID-19 Pandemic

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ABSTRACT

Work-life balance helps to maintain an attractive organizational culture and remove work-life conflicts and show the path to employees of how to be more efficient in different work roles. This balanced practice is giving a care and feeling of protection to the employees. It motivates better performance that contributes to employee engagement indices. The main purpose of this study is to report work-life balance pre- and during the COVID-19 pandemic by bibliometric analysis. This study analyzed 4,030 "work-life balance" studies published between January 1, 2010 and December 31, 2019, from the pre-pandemic era, and 1,143 studies published during the pandemic (between January 1, 2020-March 24, 2021). The data were extracted from the Scopus database using keywords "work-life balance" and keywords in titles (items) analyzed using VOSviewer software. Co-occurrence connection between keywords in titles and density visualization based on the total link strength clearly shows that COVID-19 significantly impacted work-life balance and related research.

KEYWORDS

Bibliometric Analysis, COVID-19, Publications, Work-Life Balance

INTRODUCTION

The best part of the quality of work-life of employees in an organization is the best practice on work-life balance. Work-life balance is a concept under human resource management that refers to perfect management between personal and professional activities of an individual's life. Work-life balance helps in stress reduction, prevents burnout in the workplace, and creates a healthy work environment. Due to the increase in technology in the workplace the importance of work-life balance (Rashmi et al. (2021), De Clercq et al. (2021), Liu et al. (2021), Perreault et al. (2021)) is going to enhance very much day by day, though it was difficult to take work at home earlier and could not be managed time for both phases personal as well as professionals.

In modern days the challenges of work-life balance in the organization are rising to the top of the consciousness among most employers and employees. In today's fast-paced society and the competitive

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structure of economy the human resource management is getting very crucial activity of the business, by satisfying them the company can earn a high level of productivity which leads to organizational development in near future. Improvement of employees' morale, retention of employees, protection of human capital, and knowledge management are the striking parts for any company in the market. The factors like personal loves, family values, global competition in business, an aging workforce, etc. are the present challenges of work-life balance. The human resource professionals can assist their companies by taking initiatives on these factors to make the organization capitalize in the marketplace (Köse et al. (2021), Hammer et al. (2021), Le et al. (2020)).

The term work-life balance is becoming more enthusiastic when it gives a focus on the quality of life, perfect life balance, and flexible work options, and so on. It has been seen that work-family conflict is a push and pull mechanism between work and family obligations. An individual can take effective participation in both the fields of life when he or she can meet all sort of family and work demands. As mentioned earlier, stress is the cause of poor work-life balance. Mental strength has been recognized as one of the health and significant economic problem and it has arrived when people are not so much comfortable to maintain all the needs of personal and professional life. Stressed-out employees are making errors at work and less productive as well. It is the responsibility of employers to provide a stress-free work environment for these human assets for making work-life balance practice successful and helps to increase organizational effectiveness.

Over the last few months, the Covid-19 crisis (Joshi et al. (2020), Dey et al. (2020), Fong et al. (2020), Shinde et al. (2020), Bhapkar et al. (2020), Hassanien et al. (2020), Singh et al. (2021)) has revealed several unexpected positives. This situation proved that many companies have concerned about the well-being of their employees and given high priority towards the value of employees. Helping the employees to cope up with the situation, companies provided health and safety measures with so many benefits. For maintaining flexible working arrangements during the Covid-19 crisis business organizations enhanced medical insurance, additional caregiver leaves, sickness benefits, medical facilities, etc. On the other hand, it also generates less achievable work-life balance than before as work from home practice omitted the boundaries between the time that is dedicated to working and the time that is reserved for oneself.

The pandemic is also opening the conversation on the mental health of the employees so that the firms are also provided mental health, support, and stress-free work practice, they are not only providing tangible benefits like 'mental health day off", but also showing a clear communication on this part by an effective messaging policy that people will be supported to manage their states.

The main objective of this study is to explore the state of the literature on work-life balance pre- and during the COVID-19 pandemic. The study focused on types of documents, subject areas, most productive and influential countries, and co-occurrence of keywords in titles, etc.

In segment II we will discuss the method used which will include ethical statement, study design, and data collection and visualization methods. The result and discussion will be discussed in segment III followed by the conclusion section (segment IV).

METHODS

Study Design

Current work is a descriptive and bibliometric analysis based study on a literature database (Handoko et al. (2021)).

Data Collection

Data were retrieved from Scopus in two phases (I) between January 1, 2010, and December 31, 2019, and (II) between January 1, 2020, and March 24, 2020. The search term in both cases was the keyword "Work-life Balance" in the title (search option "TITLE-ABS-KEY (Work-life balance)). The

data were analyzed using VOSviewer and CSV dataset format. The consistency and reliability of the data were checked (e.g. lack of consistency in country names and titles that sometimes abbreviations, acronyms, etc.) before Bibliometric analysis (Al-Zaman et al. (2021)).

Visualization

The data obtained from the Scopus database were analyzed using Excel and VOSviewer software.

RESULTS AND DISCUSSION

Based on a search with the keyword "Work-life balance" between January 1, 2010, and December 31, 2019, the results showed approximately 4,030 documents. It is interesting to note that in the area of work-life balance research a sharp increase has been observed in the last couple of years. Amongst 4,030 documents 2,938 documents published in the last 5 years (72.9% of the overall publications in the last 10 years) (Fig. 1).

Significant work has been reported from the US, UK, Australia, India, and Germany (64.36% of the overall reported work). Canada, Spain, Japan, Malaysia, and Sweden are contributed substantially to work-life balance research (Fig. 2).

72% of our studied documents are articles (not used any filtering using LIMIT-TO) and only 5% book chapter and1% books (Fig. 3). It is interesting to note that majority of the work has been carried out in the area of medicine, social science, and business management and accounting (60%) and the rest are in the area of psychology, engineering, nursing, etc. Only 3.7% of work has been reported on work-life balance in the area of computer science (Fig. 4).

In the second phase of our study, we have tried out to find out the research trend of work-life balance during the pandemic. Total 1,143 documents were published between January 1, 2020, and March 24, 2021 (Fig. 5). We have used VOSviewer software to analyze the database (bibliographic database files (Scopus)). We have chosen the option to create a term co-occurrence map based on text data (Fig 6.).

Figure 1. Documents by year in Scopus Database (2010-2019)

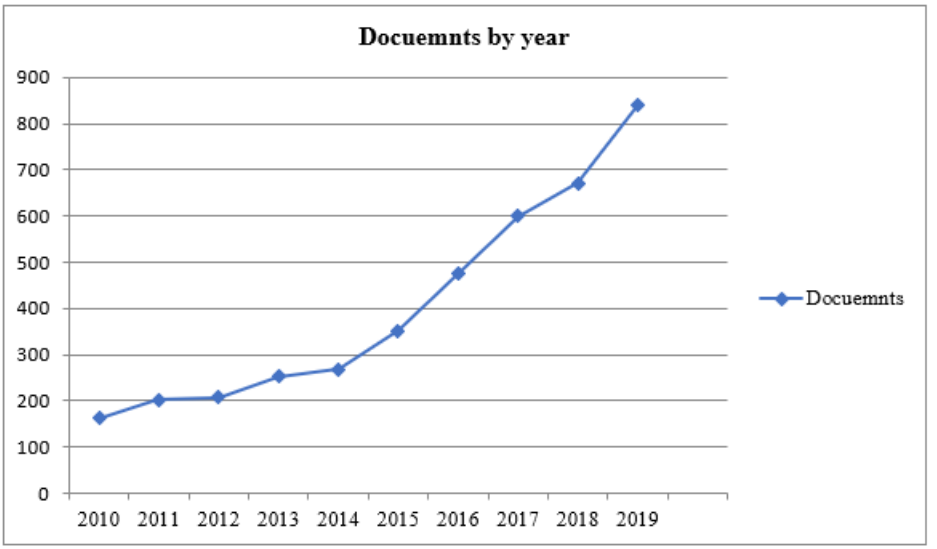


Figure 2. Documents by Country/Territory in Scopus Database (2010-2019)

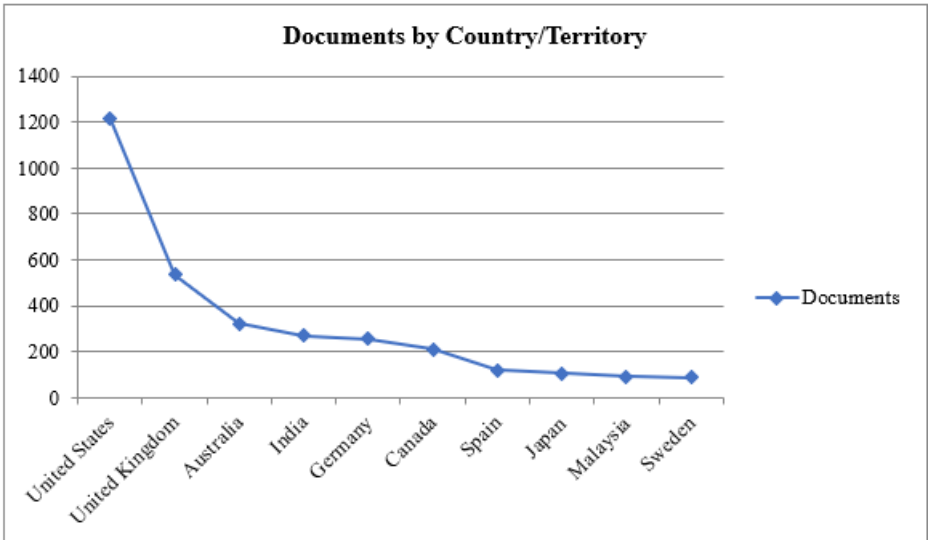


Figure 3. Documents by Type in Scopus Database (2010-2019)

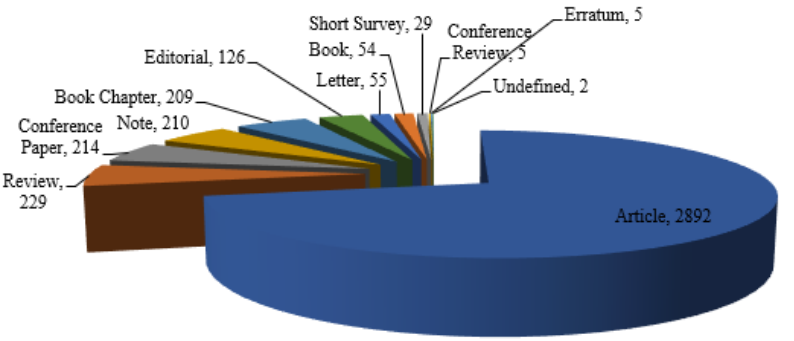


Figure 4. Documents by subject area in Scopus Database (2010-2019)

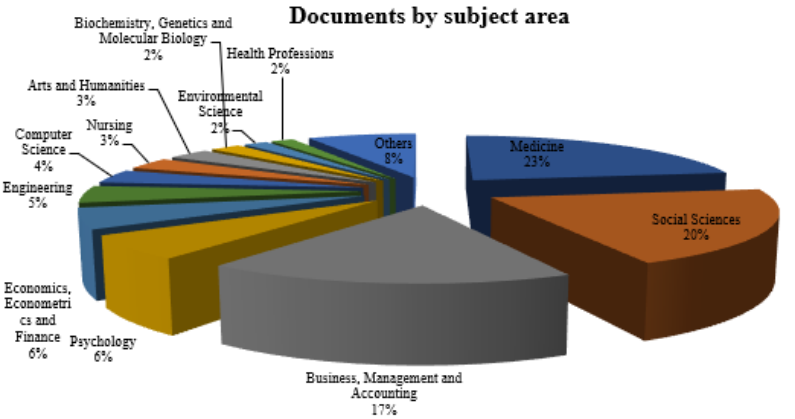


Figure 5. Documents by year in Scopus Database (Jan 1, 2020-March 24, 2021)

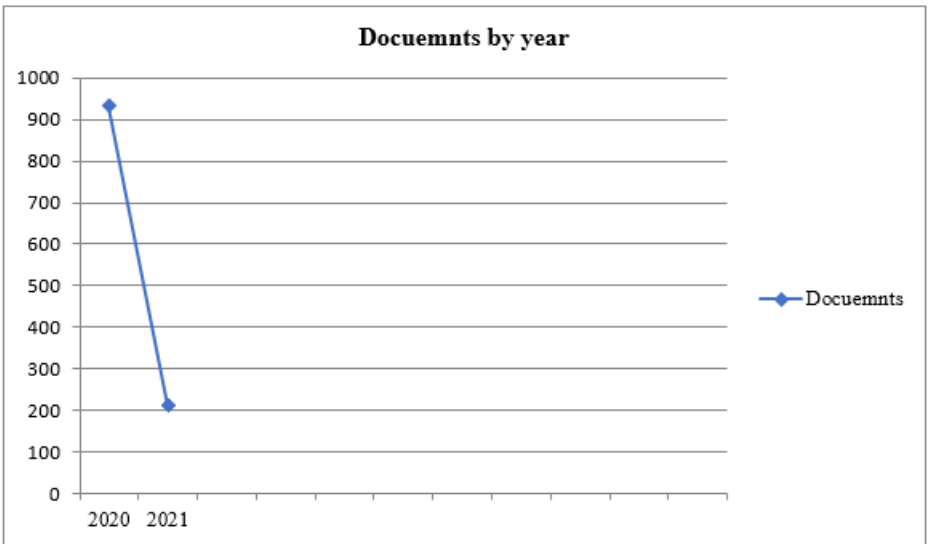
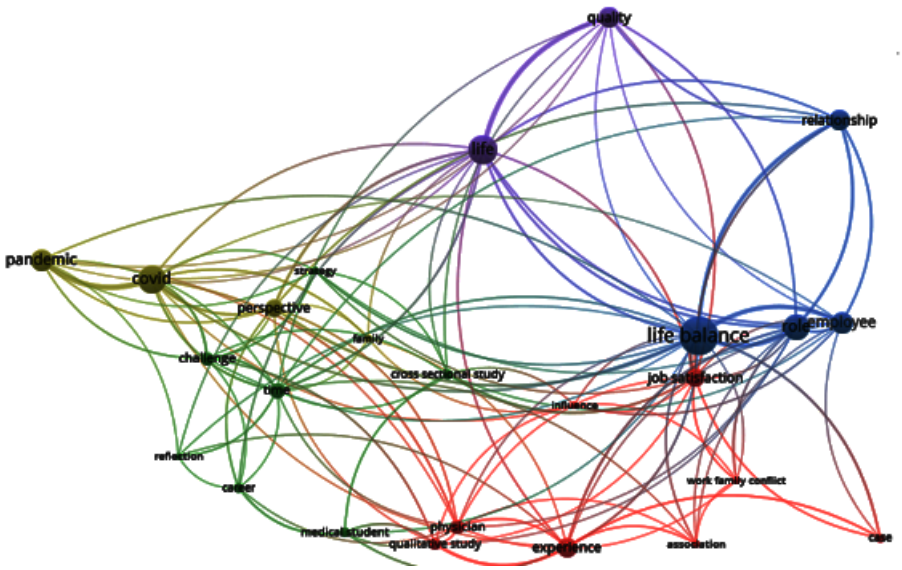


Figure 6. Visualization of titles co-occurrences network



From 1,143 documents VOSviewer software extracted 25 keywords in titles (items) for network visualization. Those 25 items are grouped into 5 clusters (total link 122 and link strength 306) where each of the clusters contains a different number of items (Fig. 6).

A link means a co-occurrence connection between two items. According to the VOSviewer manual, each link has strength, represented by a positive numerical value. The higher this value, the stronger the link. The total link strength indicates the number of publications in which two items occur together.

In cluster 1 there are a total of 8 items (association, case, experience, influence, job satisfaction, physician, qualitative study, and work-family conflict) (Fig. 7)

In cluster 2, 7 items are career, challenge, cross-sectional study, medical student, reflection, strategy, and time respectively (Fig. 8). In cluster 3, there are 4 items namely: employee, life balance, relationship, and role (Fig. 9)

Figure 7. Visualization of item experience (from cluster 1) co-occurrences network

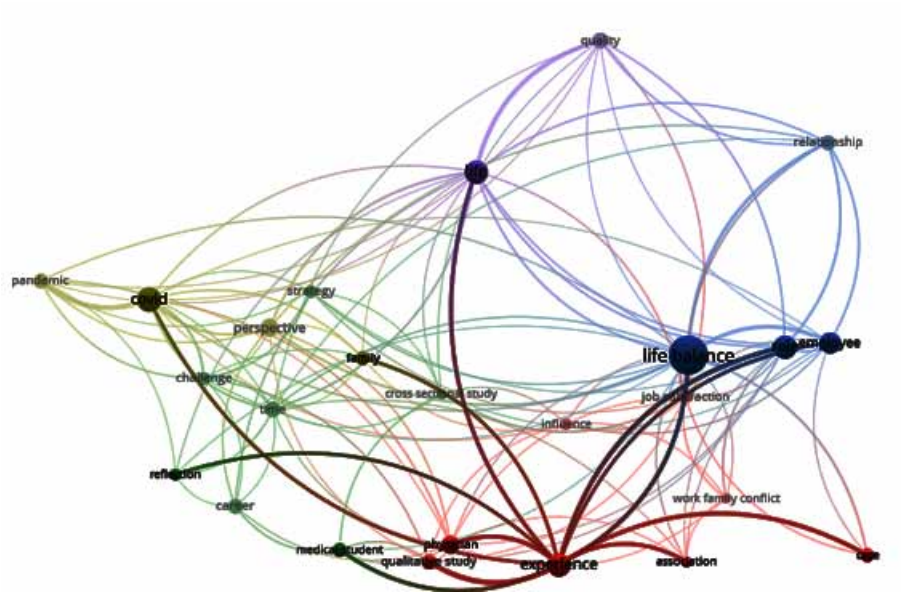


Figure 8. Visualization of item life balance (from cluster 2) co-occurrences network

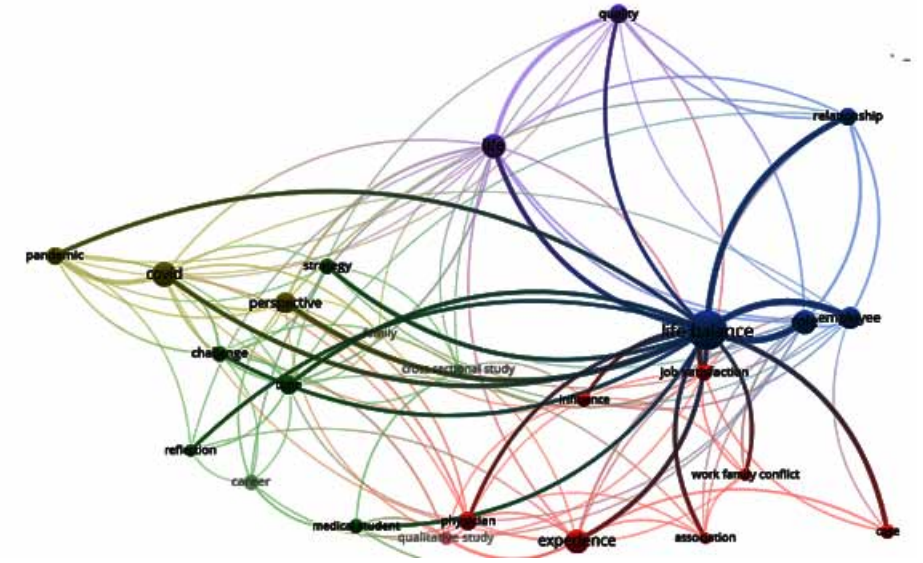
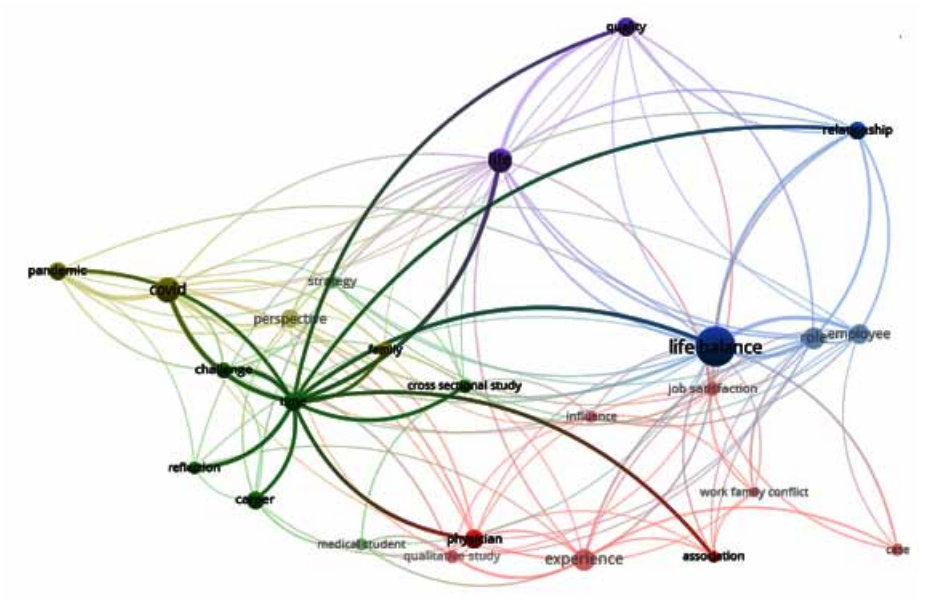


Figure 9. Visualization of item time (from cluster 3) co-occurrences network



Interestingly a new cluster formation is observed during pandemic (January 1, 2020 - March 24, 2021) which contents 4 items (covid, family, pandemic, and perspective) (Fig. 10). Lastly in the 5th cluster only 2 items are reported (life and quality) (Fig. 11).

We have studied density visualization. The size of the circles represents the occurrences of items. Based on the size of the circle from each cluster we have studied the circles which are having the highest area. From cluster 1, experience, cluster 2, life balance, cluster 3, time, cluster 4, covid and cluster 5, life respectively (Table 1).

Figure 10. Visualization of item covid (from cluster 4) co-occurrences network

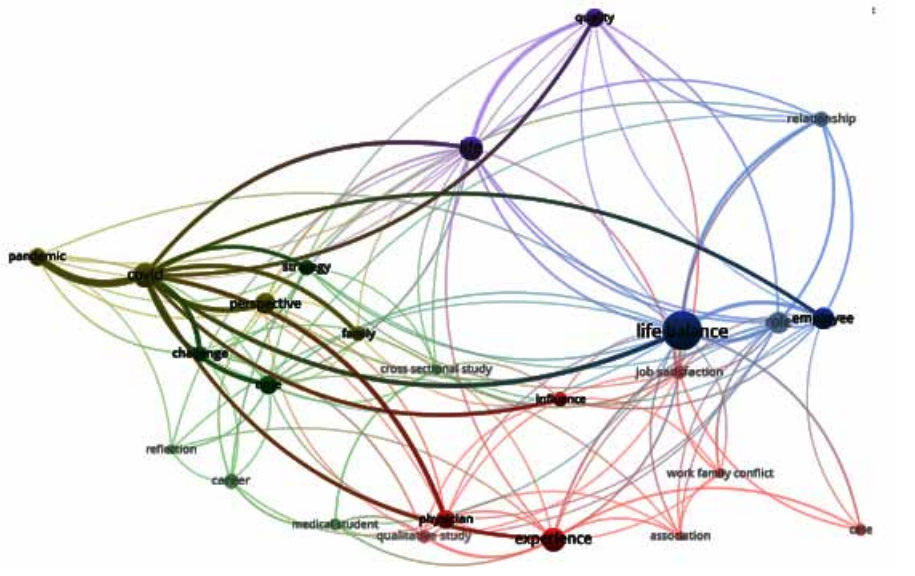


Figure 11. Visualization of item life (from cluster 5) co-occurrences network

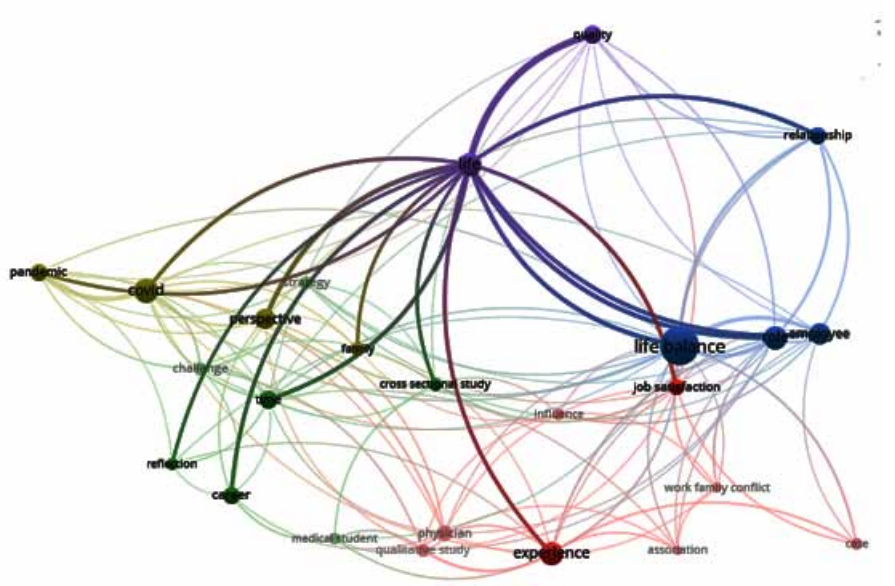


Table 1. Link, strength, and occurrence count of items

Items	Links	Total link strength	Occurrences
experience	12	29	53
life balance	20	**80**	162
time	13	22	32
covid	13	**51**	59
life	15	**52**	53

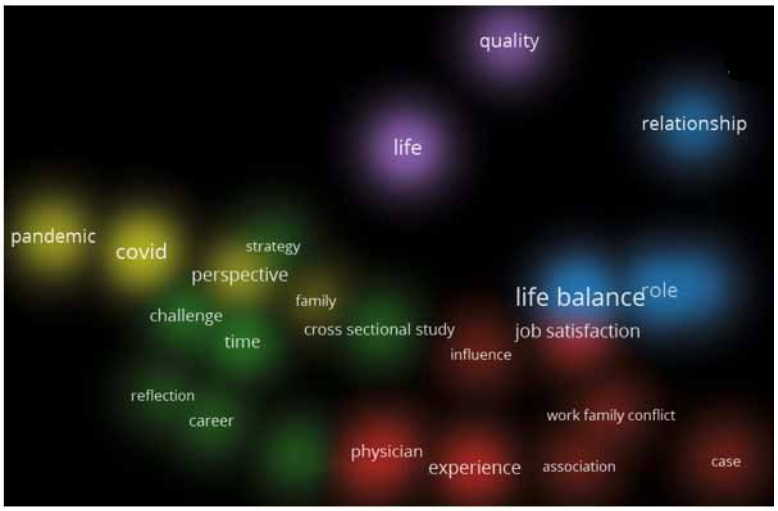
As we know that the total link (co-occurrence connection between two items) strength indicates the number of publications in which two items occur together. In our study, we have observed that apart from life and life balance (related terminology with search term: work-life balance) covid having higher link strength than the rest of the items. Fig 12. shows the density visualization based on the total link strength (Mu et al. (2019), Mas-Tur et al (2021), Du et al. (2021), Baier Fuentes et al. (2018), Sengupta et al. (2020), Ashour et al. (2018), Tuan et al. (2018), Li et al. (2017), Hore et al. (2016), Majumder et al. (2021)).

The current study focused on a document published in pre-pandemic and during pandemic work-life balance-related works. A sharp increase in the number of total document publications is reported in this study. Besides this analyzed results clearly show that in work-life balance research COVID-19 (Majumder et al. (2021), Shinde et al. (2021), Shinde et al. (2020), Acharjya et al. (2017), Khadse et al. (2020)) impacted significantly.

CONCLUSION

Under human resource management calling work-life balance is a strategic priority; it is the responsibility of entrepreneurs to help teams in both ways physically and mentally. Work-life balance is

Figure 12. Density Visualization of title co-occurrences network



an important factor of organizational culture which follows a top-down approach. In work-life balance, leaders focus on impending burnout and unhealthy equilibrium between personal life and career work to take meaningful actions. During a pandemic work and life both become blurred together. As people save their time on their commute rather than putting it to their professional work, an unhappy trend of life is observed throughout the globe. Working hours might be longer from one to four hours daily as employees need to spend additional time in meetings and check-ins. The work from home practice has no time boundaries to work in a day and most of the time they lose track of time due to an attempt to prove their productivity and potentiality. Some business leaders have become worried about the negative impact of the novel Coronavirus on employees. HR leaders are also trying to play prime roles spontaneously in this situation by encouraging employees to maintain the new trend of work and also guide people when they need to stop working to manage work-life balance better. It is reported that a significant number of documents related to work-life balance during the COVID-19 pandemic were published. This study was an attempt to analyze those documents to identify related research trends.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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