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Mapping the work-life balance research landscape in higher education: science mapping and thematic clustering

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Abstract: This research aims to synthesise the literature on the work-life balance research landscape in higher education using bibliometric analysis. This study looks at past, current, and future work-life balance research in higher education. The documents are extracted from the Scopus database, and 640 papers are chosen using the PRISMA technique for bibliometric analysis. Citation analysis is performed to identify the most influential document and authors. The most prolific writers and sources are identified using productivity analysis. The four thematic clusters of work-life balance research in higher education are discovered using bibliographic coupling. Co-citation analysis is employed to identify citation patterns and highly referenced texts. Additionally, co-occurrence analysis is employed to create thematic trends, and word cloud highlights the frequently used keywords in academic work-life balance research. The articles outline the directions for further study.

Keywords: work-life balance; WLB; higher education; bibliometric analysis; word cloud; co-occurrence analysis.

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1 Introduction

Although the job is a crucial component of professional life for any person, the balance between work and life is also equally vital to a happy life. Work-life balance (WLB) refers to maintaining a symmetry between the profession and other aspects of life, which is today a concern of many working people since the last decade. The talk on WLB started in the 1990s (Lewis et al., 2007), a significance progresses have been seen in society, workers, and demographics. These developments have taken place due to substantial shifts in the labour marketplace, changes in gender authority, augmented encouragement from females in the staff (Karkoulia et al., 2016; Amiri et al., 2023), a growing number of earning spouses, parents with children in the employees (Rashmi and Kataria, 2021), a while workday, 24/7 internet access blurring the boundaries across employment and non-work, and rising motivation for a better life (Shabir and Gani, 2020; Kushwaha et al., 2023).

Owing to the concurrent appearance of such events, the duties of workers in their job and family lives have grown, foremost to a favourable rise in work-life imbalance (Le et al., 2020). Due to this, the importance of balance between life and profession is increased in the present society (Akanji et al., 2020). In order to achieve an overall feeling of wellness, such as family enjoyment, mental wellness, and general happiness, people are increasingly concerned about conspicuous equilibrium between remunerated employment and family duties (Le et al., 2020; Pushparaj and Kushwaha, 2023). Similarly, other stakeholders have also shown comprehension of this phenomenon. WLB procedures and guidelines align with the organisational goals to enhance employees' well-being. Companies often search for strategies to boost workers' favourable opinions of their WLB (Williams et al., 2016). In order to help their staff members accomplish various work-related goals, such as professional success, dedication to the organisation, and satisfaction with their job. They also try to provide a positive atmosphere for work (Sirgy and Lee, 2017; Kushwaha et al., 2022).

Additionally, a literature review revealed the need for more research examining the tendencies of WLB investigations, notably in higher education. The assessments of WLB that are now accessible within the corpus of acquaintances from other sectors have mostly been completed using the conventional technique of investigations. One of the few assessments of WLB in academia is the research by Tijani et al. (2022). The research technique, factors contributing to subpar WLB, solutions, and efforts were the main areas of emphasis for this systematic evaluation of WLB in the education sector. Using a bibliometric review of the tendencies in WLB research and developing future research propositions, this study advances the discussion of WLB in the education sector. It also produced a narrative overview of the elements impacting WLB in academia. Additionally, Rashmi and Kataria's (2021) study, which entailed a bibliometric analysis of publications on WLB, merged the domains of psychology, business and management, and the social sciences. The research was not, however, created with building in mind.

In order to account for multiple related elements in the growth of the WLB, studies investigating the WLB of faculty members and other experts employed at educational institutions have focused more on factors like the level of stress (Smeltzer et al., 2016), load of assignments (Saltmarsh and Randell-Moon, 2015), and ability to produce academic (You, 2016) on their own than using an international perspective (Krueger et al., 2017; Kushwaha, 2021). With these facts and the benefits of WLB research in the

education sector, the topic has gotten researchers' attention from every country. Nevertheless, there needs to be more bibliometric studies, which have got lots of attention in various domains. Bibliometric analysis of any subject area provides an overall understanding of publications, trends, current positions, and future dimensions. Hence, the present study aims to conduct a bibliometric analysis of the documents of the WLB research in the education sector. This study synthesises the past literature, current trends, and future research area of WLB research in the education sector.

2 WLB in higher education

By managing, organising, and prioritising personal chores and job routines, WLB is a balance between one's professional and personal lives (Fazal et al., 2019). According to many studies, administrators in academia should create plans for preserving and improving the WLB for higher-education career instructors (Smith et al., 2019; Soni and Bakhru, 2019).

The educator is regarded as the most critical resource in colleges and universities, playing a representational role in accomplishing organisational goals and impacting academic instruction and the educational process. The aims of any education program (Johnson et al., 2019) directly interfere with outcomes (Gooding, 2018; Sethi et al., 2017). According to research, instructors demonstrated the most precarious balance between work and personal life compared to other occupations in the educational sector (Kang et al., 2020). Investigations examining teachers' WLB need help to identify the factors that cause this imbalance (Beer et al., 2015; Eberman et al., 2019). As the well-being of educators can affect their effective performance in instruction, study, and administration, eventually disrupting the calibre of educational institutions (Abramov et al., 2017), the comprehension of life and work indications is reflective of the investigation's people (Nilsson et al., 2005).

3 Article section and filtering

3.1 Search term definition

The articles for this investigation were accessed from the largest indexing database, i.e., Scopus. Scopus is one of the largest databases which contains the bibliographic information of indexed documents. The data was accessed on 18 July 2023, using the search term 'WLB' and 'higher education, academic, university, or educational institute'. We used 'WLB and WLB' are these terms are used alternatively by the researchers of this subject area. Further, the study is specific to the 'higher education, academic, university, or educational institute/institution', which is also used alternatively by different researchers.

3.2 Inclusion and exclusion criteria

We applied four steps of the searching and filtering approach suggested by Donthu et al. (2021):

- 1 defining search terms
- 2 searching documents in the database
- 3 applying filtering criteria
- 4 cleaning the erogenous documents.

Table 1 represents the document search and selection protocols applied. In the initial search using the search term, we found 1,618 documents in the Scopus database. We applied various criteria to research a precise number of documents that will be used for the final analysis. After applying the ‘subject area’ filtering criteria, 803 documents are eliminated, and 815 documents are retained.

Table 1 Document search and selection protocols applied

<i>Criteria</i>	<i>Reject</i>	<i>Accept</i>
Search Date: 18-07-2023	-	1,618
Database: Scopus		
Search term: (‘Work-life balance’ OR ‘Work-life balance’) AND (‘Higher Education’ OR ‘Academic’ OR ‘Universit*’ OR ‘Educational Institut*’)		
Subject area: social science, business, management and accounting, arts and humanities, economics, econometrics, and psychology.	803	815
Document TYPE: Articles and Review	237	678
Language: English	35	643
Erroneous records refinement:	3	640

Further, 237 documents were removed by applying document type as selection criteria, wherein we included the documents in the form of ‘articles and reviews’. Thirty-five documents were rejected, which were outside the English language. Finally, three documents with incomplete bibliographic data or duplicate records are removed. We retained 640 documents for final analysis in this investigation.

3.3 Bibliometric analysis technique

Bibliometric analysis analyses the publication and thematic trends, understanding of research development, and impactful contributors using the bibliographic data of indexed documents. This study uses *authorship analysis* to understand the social collaboration networks and *citation analysis* to know the impactful contributors in the area of WLB research in the education sector. *Bibliographic coupling* develops thematic clusters of WLB research in higher education. Further, *co-citation analysis* determines the WLB research’s citation pattern in higher education. *Co-occurrence* analysis is used to develop the thematic trends of WLB research in the education sector.

4 Bibliometric results and interpretation

4.1 Productivity analysis

Figure 1 indicates the publication trends of WLB research in higher education. The research journal began in the year of 2002. However, progress was plodding during the first eight years, with just 8–10 articles being published a year. After 2013, there was a noticeable increase in the number of publications related to this study. The most productive years are 2020, 2021, and 2022; however, there was a decline in the publication in 2015 and 2016. Furthermore, publications in 2023 also look higher, as it is 57 in the first six months.

Figure 1 Publication trends of WLB research in higher education

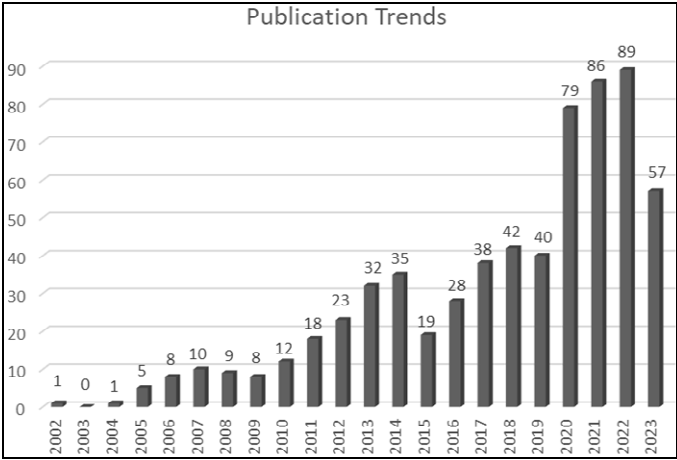


Figure 2 Subject area-wise publications of WLB research in higher education (see online version for colours)

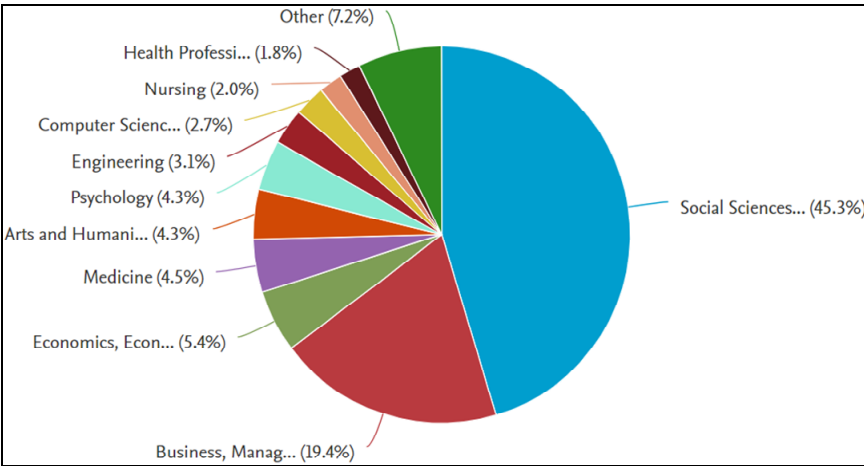


Figure 2 indicates the subject area-wise publications of WLB research in higher education. It indicates that 19.4% of publications are in business management, followed by 3.1% and 7.2% in engineering and other subject areas, respectively. Studies in medicine (4.5%), economics (5.4%), and social sciences (45.3%) have been done to a sufficient degree. Despite a 4.3% study in arts and humanities, there remains much potential for further research.

4.2 Citation analysis

Table 2 shows the top author, institution, and country of WLB research in higher education. The most impactful authors are D. Houston, with 222 citations from one publication, and G. Kinman, with 222 citations from two publications. G. Kinman is the most productive author also. The most impactful and productive institutions are Lancaster University, UK and the University of Plymouth, UK, with two publications and 253 citations. The United States is the most productive country with 202 publications and 3,631 citations, followed by the UK with 2,216 citations and 104 publications.

Table 2 Top author, institution, and country of WLB research in higher education

<i>TC</i>	<i>Author</i>	<i>TP</i>	<i>TC</i>	<i>Institution</i>	<i>TP</i>	<i>TC</i>	<i>Country</i>	<i>TP</i>
222	Houston D.	1	253	Lancaster Uni., UK	2	3,631	USA	202
222	Kinman G.	2	253	Uni. of Plymouth, UK	2	2,216	UK	104
211	Tytherleigh M.Y.	1	222	Massey Uni., New Zealand	1	1,023	Australia	61
192	Deery M.	1	222	Massey Uni., New Zealand	1	732	Canada	43
189	Moqbel M.	1	192	Victoria Uni., Australia	1	439	Spain	24
169	Hill M.R.	1	189	Uni. At Albany, US	1	430	New Zealand	12
166	Michel A.	1	189	Texas A&M Int'l. Uni., US	1	387	Netherlands	17
161	Chung H.	1	189	Kansas City, US	1	301	Finland	7
160	Florida R.	1	169	Uni. of Florida Coll. of Med., US	1	245	India	38
154	Decastro R.	1	166	Uni. of Southern California, US	1	183	South Africa	27
128	Corbera E.	1	161	Utrecht Uni., Netherlands	1	179	Pakistan	12
128	Levine R.B.	1	161	Uni. of Kent, UK	1	130	Ireland	10
128	Ylijoki O.-H.	1	160	George Mason Uni., US	1	100	Sweden	9
117	Cech E.A.	1	160	Sas Institute, NC, US	1	96	Malaysia	28
109	Toffoletti K.	1	154	Uni. of Michigan, MI, US	1	82	Slovenia	5

Table 3 shows the most impactful sources of WLB research in higher education. *Academic Medicine* is the most impactful journal, with 967 citations and 22 publications, followed by 331 citations and eight publications from the *Studies in Higher Education*.

Most of the top listed journal are having H-index of more than 50 and an SJR of more than 0.90. All top journals are in the Q1 quartile, publishing more on WLB research in higher education.

Table 3 Most impactful sources of WLB research in higher education

Source	TC	TP	H-index	Quartile	SJR
<i>Academic Medicine</i>	967	22	173	Q1	1.58
<i>Studies In Higher Education</i>	331	8	120	Q1	1.72
<i>Higher Education Research and Development</i>	276	5	83	Q1	1.46
<i>J. of Higher Education Policy and Mngt.</i>	273	5	50	Q1	1.07
<i>Int'l J. of Stress Management</i>	256	4	68	Q1	1.34
<i>BMC Medical Education</i>	242	16	87	Q1	0.91
<i>Gender, Work and Organization</i>	194	4	88	Q1	2.24
<i>Int'l. J. of Contemporary Hospitality Mngt</i>	192	1	111	Q1	2.50
<i>Information Technology naand People</i>	189	1	71	Q1	1.08
<i>Higher Education</i>	173	7	118	Q1	1.95

Table 4 shows the most impactful publication in WLB research in higher education. The most impactful studies are Houston et al. (2006), Tytherleigh et al. (2005) and Deery (2008). The study conducted by Houston et al. (2006) on workloads and job satisfaction of academic staff is a highly cited article with 222 citations. They found the effect on professor workloads of greater demands for quantifiable results, adaptability to social and student requirements, and overall effectiveness responsibility. According to reports, greater workloads and accountability make it harder for faculty members driven by their primary discipline and academic pursuits. The increase in academic workload and the harmony between teaching and research, primarily since that governments have implemented performance financing for research budget elements for colleges and universities. Tytherleigh et al. (2005) studied occupational stress in higher education. They found that Employees expressed a considerably lower degree of dedication to and dedication to their business and considerably higher anxiety related to work associations, authority, and funds.

Nevertheless, they expressed much fewer instances of mental ill well-being and stress related to balancing work and personal life, overwork, and working environment. The study conducted by Deery (2008) on talent management and retention strategies. They found that Individual traits like positive and negative affectivity, work attitudes like job fulfilment and dedication to the organisation, the impact of WLB in resignations, and the measures offered to reduce turnover. The study of Chung and Van der Lippe (2020) has got highest per year citations (i.e., 54 citations per year). They have focused on flexible working hours and WLB.

4.3 Co-citation analysis

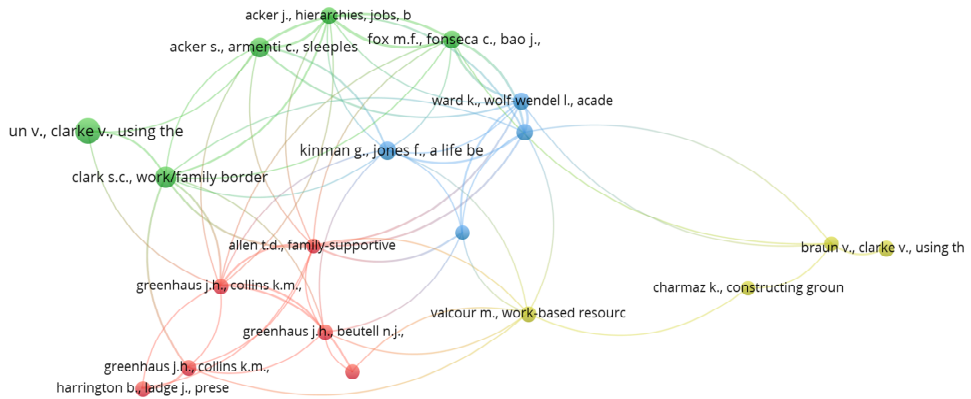
Figure 3 shows the co-citation analysis of reference of WLB research in higher education. It indicates four clusters of commonly referenced documents. The curves between the nodes represent their co-citation within each author. The short distance between the two nodes indicates much co-citation between the two authors. The cluster with green nodes

indicates highly referred documents of WLB are Acker (1990), Fox et al. (2011) and Clark (2000), focusing the topic such as hierarchy, gendered organisation, work and family conflict, and work/family border theory.

Table 4 Top cited articles of WLB research in higher education

<i>Author (s)</i>	<i>Title</i>	<i>TC</i>	<i>CPY</i>
Houston et al. (2006)	Academic staff workloads and job satisfaction: Expectations and values in academe	222	13
Tytherleigh et al. (2005)	Occupational stress in UK higher education institutions: A comparative study of all staff categories	211	12
Deery (2008)	Talent management, work-life balance and retention strategies	192	13
Moqbel et al. (2013)	Organizational members' use of social networking sites and job performance: an exploratory study	189	19
Hill et al. (2018)	In their own words: stressors facing medical students in the millennial generation	169	34
Michel (2011)	Transcending socialization: a nine-year ethnography of the body's role in organizational control and knowledge workers' transformation	166	14
Chung and van der Lippe (2020)	Flexible working, work-life balance, and gender equality: introduction	161	54
Florida and Goodnight (2005)	Managing for creativity	160	9
Decastro et al. (2014)	Mentoring and the career satisfaction of male and female academic medical faculty	154	17
Kinman and Jones (2008)	A life beyond work? job demands, work-life balance, and well-being in UK academics	133	9
Corbera et al. (2020)	Academia in the Time of COVID-19: towards an ethics of care	128	43
Levine et al. (2011)	Stories from early-career women physicians who have left academic medicine: a qualitative study at a single institution	128	11
Ylijoki and Ursin (2013)	The construction of academic identity in the changes of Finnish higher education	128	13
Cech and Blair-Loy (2014)	Consequences of flexibility stigma among academic scientists and engineers	117	13
Toffoletti and Starr (2016)	Women academics and work-life balance: gendered discourses of work and care	109	16
Rochon et al. (2016)	Women in academic medicine leadership: has anything changed in 25 years	105	15
Ylijoki (2013)	Boundary-work between work and life in the high-speed university	102	10
Grawitch et al. (2007)	Healthy workplace practices and employee outcomes	102	6
Currie and Eveline (2011)	E-technology and work/life balance for academics with young children	96	8
Kinman and Jones (2008)	Effort-reward imbalance, over-commitment and work-life conflict: Testing an expanded model	89	6

Notes: TC = total citations, TP = total publications, and CPY = citations per year.

Figure 3 Co-citation network of WLB research in higher education (see online version for colours)

Similarly, the red nodes indicate the high references such as Greenhaus et al. (2012) and Lambert and Harrington (1990), focusing their studies on family-supportive supervision and non-response bias. Yellow nodes represent the works on work-based resources, constructing ground for human resources. Blue node studies have concentrated on life behaviour and academic work environment.

4.4 Bibliographic coupling

The WLB research in higher education themes analysis is shown in Table 5. The five main subject clusters are provided with the aid of bibliographic coupling and are based on previously published works in the area. Workload and job satisfaction, burnout and retention, flexibility and freedom, work-family conflict, and occupational stress are the five groupings mentioned.

In the *workload and job satisfaction* cluster, the most cited works of Houston et al. (2006) and Melin et al. (2014) fall with 222 and 32 citations, respectively. A study on academic staff workload and job satisfaction was undertaken by Houston et al. in 2006. Expectations and values affect how well faculty members perform in higher education. They discovered that university professors, driven by their main disciplinary and academic interests, are increasingly challenged by rising expectations and workloads. The association between high workload demands, coping mechanisms, and academic health has been researched by Melin et al. (2014). They discovered that having a managerial position, a high level of education, and much latitude in how work is scheduled in terms of time and space are all potential contributors to a poor WLB.

In the *burnout and retention* cluster, the most cited works of Deery (2008) and Holmes et al. (2017) with 192 and 64 citations, respectively. Deery's (2008) work focuses on WLB in the education sector and talent retention techniques. He discovered the importance of WLB in staff turnover, as well as individual traits like favourable and adverse affectivity, dedication to the company, and work attitudes like fulfilment with work and dedication, as well as the methods to reduce high turnover rates. Burnout and possible solutions have been investigated by Holmes et al. (2017) as factors in turnover in higher education. They discovered that stress is frequent among instructors and is most likely brought on by a lack of appreciation and a disparity between work and personal

life. Professors and directors of programs generally agreed that the absence of WLB and a sense of under-appreciation were the leading causes.

Table 5 Thematic clusters of WLB research in higher education

<i>Cluster</i>	<i>Author(s)</i>	<i>Title</i>	<i>TC</i>
Workloads and job satisfaction	Houston et al. (2006)	Academic staff workloads and job satisfaction: expectations and values in academe	222
	Melin et al. (2014)	New work demands in higher education. A study of the relationship between excessive workload, coping strategies and subsequent health among academic staff	32
Burnout and retention	Deery (2008)	Talent management, work-life balance and retention strategies	192
	Holmes et al. (2017)	Taking care of our own: a multispecialty study of resident and program director perspectives on contributors to burnout and potential interventions	64
Flexibility	Cech and Blair-Loy (2014)	Consequences of flexibility stigma among academic scientists and engineers	117
	Nikunen (2012)	Changing university work, freedom, flexibility and family	55
Work-family conflict	Soomro et al. (2018)	Relation of work-life balance, work-family conflict, and family-work conflict with the employee performance-moderating role of job satisfaction	62
	McCutcheon and Morrison (2018)	It's 'like walking on broken glass': Pan-Canadian reflections on work-family conflict from psychology women faculty and graduate students	17
Occupational stress	Tytherleigh et al. (2005)	Occupational stress in UK higher education institutions: a comparative study of all staff categories	211
	Hill et al. (2018).	Occupational stress in Canadian universities: a national survey	86

In the *flexibility and freedom* cluster, the most cited works of Cech and Blair-Loy (2014) and Nikunen (2012) with 117 and 55 citations, respectively. Cech and Blair-Loy (2014) researched the effects of academic members' stigma towards flexibility. They discovered that the effects are independent of gender and parental status, indicating that stigma against flexibility generates an unfavourable work atmosphere for many academicians, including those not personally at stigmatisation risk. University scientists' evolving work cultures and policies on flexible scheduling have been examined by Nikunen (2012). He discovered that when the conversation turns to jobs, the informant's initial portrayal of a democratic and friendly work environment changes into one of a competing aristocracy with expectations that remain difficult to satisfy and uneven in gender.

In the *occupational stress* cluster, the most cited works of Tytherleigh et al. (2005) and Hill et al. (2018), with 211 and 86 citations, respectively. Tytherleigh et al. (2005) researched workplace stress among different categories of academic personnel. They discovered that job instability was the primary cause of stress for all higher education personnel (regardless of employment type). Staff also reported a considerably lower degree of dedication to and dedication to their company and substantially higher stress

related to work relationships, control, assets, and interaction than the standard data. In their 2018 study, Hill et al. looked at a nationwide survey on job stress in higher education. They discovered the effects of many stresses that were previously studied. The most frequent causes include an extreme workload, problems with reviewing and time organisation problems, partnerships and WLB disputes, peer dynamics in school, health issues, and monetary constraints on colleges and universities.

4.5 Occurrence analysis

Figure 4 represents the occurrence analysis of WLB research in higher education. There are five clusters for the most occurred keywords in the period. The size of nodes shows the occurrence of keywords. The straight line between the nodes signifies their frequency in similar papers. The short distance between the two nodes indicates many co-occurrences of the two keywords. The frequently occurring keyword is WLB research from the red node, i.e., coping strategies and work engagement. Furthermore, the most relevant themes represented in the green nodes are mentorship, learning environment, career choice, burnout, and motivation.

Figure 4 Occurrence analysis of WLB research in higher education (see online version for colours)

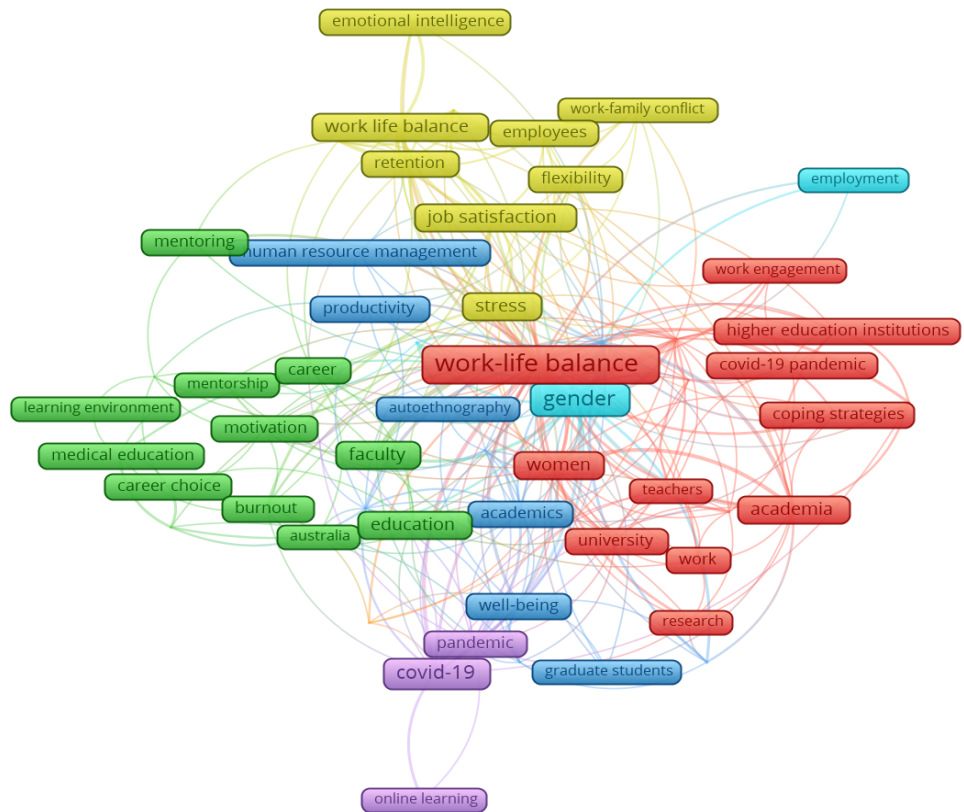
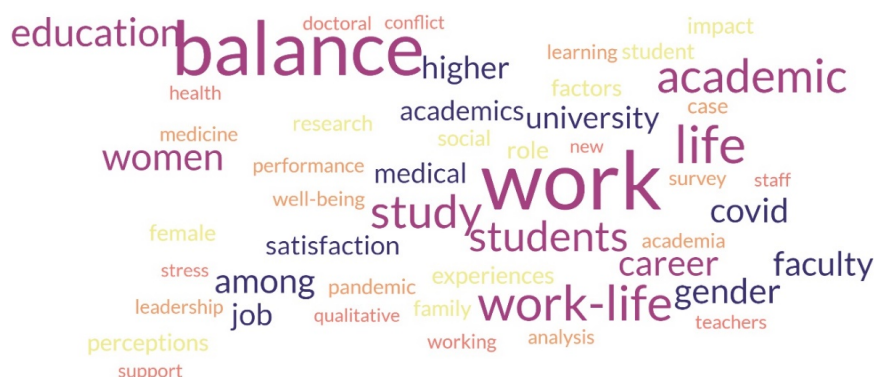


Figure 5 indicates the word cloud of the topic of WLB research in higher education. Using word cloud for the paper under discussion aims to examine the most frequent terms in the article's title and provide visually summarised text documents. Font size represents the frequency of occurrence. There are five clusters formed in cloud analysis. The most frequently used title in keywords is represented in violet colour. Keywords such as women, students, career, education, academic, well-being, and conflict are the most popular research topic in this period.



The bibliometric reviews have identified several dimensions wherein studies are still insufficient or lacking, especially in the context of higher education. Based on the thematic clusters, the future research dimensions are presented:

The future studies can be self-sufficiency, workload, WLB and performance of academicians, changing nature of WLB. Excessive work impact on subsequent health, the role of technologies in handling academicians workload, gendered dissertations on workload and attention, workload policy and practice moderated by moral barriers, WLB and academicians well-being, workload, supervisory support and impact on WLB of academicians are the further area wherein future studies may be conducted.

The future research propositions in the burnout and retention themes of WLB are role person-job-fit and academician retention, work intensification on turnover intention, job satisfaction and burnout as a predictor. Additionally, work and play impacts turnover intention, career satisfaction and faculty turnover intention, talent management and

retention strategies, work-life fit and interference impact on burnout and turnover, stress at the workplace and turnover intention.

5.3 Flexibility and freedom

The future research propositions in the freedom and flexibility themes of WLB, work freedom flexibility, and family on academician performance and job satisfaction. Temporal gaze impact on WLB of academicians, the tightrope between job and non-job time of academicians, gendered organisation and flexible working policies in academic, relationship with institutional pride and job gratification, work-life integration and academicians' affairs.

5.4 Work-family conflict

The future research propositions in the work-family conflict themes of WLB are work and family boundaries of academicians and the impact of perceived work flexibility on the balance between job and personal life. Additionally, perspectives of WLB of academicians, work and family conflict sources, institutional commitment and culture of benefit utilisation, and social roles on work-family conflicts are future research dimensions.

5.5 Occupational stress

The future research propositions in the WLB occupational stress themes are stress, conflict, and WLB of academicians and job stress and satisfaction of teachers. Furthermore, occupational stress and work environment in educational institutions, job strengthening and job uncertainty as job stressors, life beyond work and well-being of academicians, colleague support and position anticipation conflict, occupational stress and organisational commitment are future research areas.

6 Implications of the study

In numerous respects, this research contributes to the field of WLB research in academics. In order to capitalise on possible synergies of WLB research in higher education, the future research directions and findings of this study help scholars and researchers of WLB research in academics to conduct various studies in the future. Further, it also helps them draw a clear roadmap for studying WLB research in the education sector. The results of this research show the impactful contributors and trending themes that could help researchers to identify better resources that could help them to understand various phenomena of WLB research in the education sector. As a result, this research underlines the significance of bibliometric analysis as a crucial and significant point in investigating the global business environment of WLB research in academia.

7 Conclusions

Despite a significant increase in WLB research in higher education in recent years, the burnout cases of academicians have increased. The primary cause of this is extreme assignments, problems with studying and time management, disputes in partnerships and WLB, peer dynamics in school, health issues, and monetary constraints on colleges and universities. The fragmentation of the literature, which has impeded the construction of a comprehensive theory on WLB research, attests to the complexity of the phenomena. The majority of the previous research on WLB research concentrating on HRM has been a-theoretical and dispersed across several fields. Rarely have overarching comprehensive models been offered, nor has it been systematically connected to any comprehensive theory.

The difficulty of identifying the area of study is another factor contributing to the diversity of academic contributions in this area. WLB research in higher education may refer to flexibility, work distribution, promotion, job satisfaction, people's behaviour, and organisational work culture. These factors, however, can only partly account for the literature's excessive fragmentation. Performance assessment is a recurring subject in the diverse and fragmented academic literature on WLB research in education.

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