

# What do We Learn about Work-Life Balance during the Covid-19 Pandemic? : Insight from Bibliometric Analysis

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**Abstract.** COVID-19 has disrupted various aspects of life, including the achievement of work-life balance. As an important domain related to job satisfaction, motivation and organizational commitment, it is required study to look closely how phenomenon of work life balance occurred during COVID-19 pandemic. Bibliometric analysis by analysis performance technique and science mapping used to analyze the publication related to the topic. The data sources in this research is the relevant articles published on Scopus database. The result of this research shows 424 articles has work life balance topic during pandemic and published during 2020-2022. OECD nations with high index of work life balance becomes the biggest contributors in this research. This trend runs from topics related to the impact of COVID-19 toward the achievement of work life balance and gender disparity due to the work from home obligation. Moreover, the results also show that survey research design by using questionnaires is the most chosen method to study about work life balance during COVID-19. This research findings implicates to the research direction related to work life balance which could be directed on the HRM regulation to facilitate employees to enable them for effective long distance working model.

**Keywords:** Work Life Balance-1; Covid-19-2; Bibliometric Analysis-3

## 1 Introduction

Since its first introduction at the end of 1970s, the discussion about work-life balance is always attractive for academics and practitioners. It is proved the achievement of work-life balance can generate benefits and opportunities for the organization. Work life balance until now used to explain about the concept of balance between career and ambition in one side, compare with happiness, leisure, family and spiritual development on the other side. Work life balance is a wide concept than work-family balance. This concept covers various roles outside family matter such as community, leisure and religious role for individual [1]. In addition, work-life balance can involve a number of other concepts, such as; dual role equality, multiple role division, multiple role fulfillment, multiple role perception, and multiple role conflict [2].

Discussion of work-life balance becomes more interesting when COVID-19 outbreak and force millions of workers over the world to work from home (WFH) to prevent the further spread. When people with partner and children (mainly toddler) involved in workload, at the same time need to contribute to housework, how this situation impacted the work-life balance become an important issue. Does work-life balance become the key to equalize the work-life balance or the opposite? It is still a question for researchers and employer.

So far, researchers are still trapped in contradictory discourses related to this. On the other hand, studies show that WFH has positive impact on work-life balance which is triggered by the increasing frequency of meeting with the family members [3]. Meanwhile, some other studies show that WFH has negative impact of mental state and productivity [4] due to the increased role demands when working from home. Therefore, it needs a recommendation from researchers about how exactly work-life balance phenomenon occurred during COVID-19 outbreak. Besides WFH, some policies implemented to prevent the virus spread such as social and physical distancing, closing the entertainment areas seems also affect the world-life balance of the worker. Even though, how is the impact require more further research.

Looking at the gap above, this article aims at discussing about work-life balance phenomenon during COVID-19 pandemic by using bibliometric. Until now, according to initial study on Scopus database, topic study related to work-life balance during COVID-19 was popular. During period of 2020-2022 by using keyword “work-life balance” and “COVID-19” at least there are 643 documents discussed about it. Even though, bibliometric study about it has not founded. It is expected this study could provide broader picture to understand this phenomenon during the outbreak of COVID-19. Moreover, since the trend referred to long distance work, the estimation of research of it would be increased after the pandemic, this research could give important messages about the work consequences and long-distance work associated to work-life balance.

## **2 Research Methods**

This study uses bibliometric analysis to see the work-life balance during COVID-19. It used to clarify, explain and publication review toward work-life balance in COVID-19 era. The resources of corpus used in this study is from Scopus database. To obtain a high quality and relevant data with the research, the data collecting process on Scopus database conducted in three stages. The first stage is choosing the keywords. After that, the second stage is conducted by doing initial research. It was conducted by entering the keywords combination “work-life balance “OR“work-life imbalance“, AND“covid-19“ on searching feature on Scopus. In this stage, it found 643 relevant documents published within 2020 to 2022. In the third stage, it was refined by adding three exclusive criteria: 1) document published in Scientific Journal (not a conference paper, book chapter, review, note or letter); 2) document written in English; 3) final stage publication. The final result is 469 document which will be analyzed in Bibliometric.

## **3 Results and Discussion**

This part discusses about the main result of analysis related to performance analysis, citation analysis and network mapping analysis.

### **3.1 General Information and Performance Analysis**

According to the analysis result toward 424 documents, that research trend of work-life balance on COVID-19 pandemic has been begun in 2020 with 46 publications. With annual average growth 122.49%, it significantly increased in 2021 until reach 209 publication and steadily increase in 2022 with 214 publications. In accordance with article production level, the

number of citations in this field also shows significant development from 40 citation in 2020, the increase to 186 citations in 2021 and 198 citations in 2022.

The analysis then conducted to see most relevant sources on basis data analysis. It is well known that International Journal of Environmental Research and Public Health is the most relevant source in this field with 33 article and 253 citations. The second position is Plos One with 14 publications and 218 citations. The third place is Frontiers In Psychology with 13 articles and 198 citations. After further review, there is a fact that all of most relevant sources on are published in Quartile 1 journal with higher possibility to be cited than other journal in below quartile, although it discussed about relevant topic.

After the analysis is directed into analyze most relevant affiliations by production. In this analysis, it is known that University of Messina, Italy is in the first place with 18 articles, followed by University of Toronto in second place with 16 articles and Yale School of Medicine in the third place with 14 articles. Looking at the detail list of the most relevant affiliations by production shows the involvement of institutions from any country worldwide. It shows that work-life balance phenomenon during COVID-19 attracts many researchers from many countries. It is reinforced by the analysis findings on number of article production according to the country. Nevertheless, USA is the most productive country in this research field with 525 frequencies. Based on this fact, the research gap is far between USA with other countries, so it possibly generates failure on generalization due to different dynamics between those countries. The other interesting fact for analysis, related to the China productivity as the first country with first case of COVID-19, it is insufficiently producing than other country. The top leading country is dominated with countries with high Index Work-Life Balance in OECD version such as USA, UK, Canada Italy, Spain, Australia, Netherlands, dan Switzerland. Even though, India and Romania are uncounted as country with high index of Work-Life Balance, surprisingly it is quite productive in this field in sixth place (n=72) and tenth place (n=40). Since the analyzed data is the study of multinational, it is possible that the same article is counted several times.

## **3.2 Science Mapping and Network Analysis**

### **3.2.1 Citation Analysis**

This analysis will discuss about the most influential publication and most-cited authors in the field. Document written by Del Boca et.al entitled *Women's and men's work, housework and childcare, before and during COVID-19* is the most contribution article after cited 198 times since its publication in 2020. Del Boca et.al on that document analyzed the impact of work arrangement due to COVID-19 toward the housework, childcare and school among couples than the housework. The second most impactful documents written by Galanti et.al. in 2021 entitled *“Work from home during the COVID-19 outbreak: The impact on employees' remote work productivity, engagement, and stress”* published in *Journal of Occupational and Environmental Medicine* with 123 citations. It focus on the impact of conflict of family-work, social isolation, interfering environment, occupational autonomy and self-leadership toward employee productivity, work-involvement and stress during the WFH due to COVID-19.

On the third position of the most impactful document written by Hjálmsdóttir dan Bjarnadóttir in 2021 entitled *I Have Turned Into A Foreman Here At Home”: Families And Work–Life Balance In Times Of Covid-19 In A Gender Equality Paradise*. It explored about gender reality It explored about gender reality in work-life balance in Ireland during COVID-19, particularly on how this social change reflects and influence the unpaid work delegation according to gender such as childcare and housework. The analysis also reveals that articles

discussing gender relations in working from home arrangements in relation to achieving work-life balance and the impact of Covid-19 on achieving work-life balance are frequently cited.

During the pandemic, it is thought to be important to re-establish a balance between work and everyday life. As a result, the research that has been conducted is expected to gain undertand in the search for a better balance in work-from-home policies by encouraging better, more flexible, and supportive practices. Moreover, in line with the findings of the analysis results in the performance analysis section, the most influential articles were also influenced by researchers from countries with a high work life balance desire index such as Italy, Russia, Spain, Iceland, England and the Netherlands.

### **3.3 Co-occurrence Analysis**

This analysis used to visualize the relation among keywords. This analysis is presented the most used keywords related to the topic of work life balance during COVID-19. It uses VOSviewer to visualize the co-occurrence by using all related keywords including author's keywords and the keywords assigned by the database. The minimum number of keywords occurrence is 40 and use thesaurus which manually arranged by the researcher to merge the same meaning keywords. Based on that procedure, it obtains 24 keywords divided into three different cluster which relate to the phenomenon during COVID-19 . From the 24 identified keywords and divided into three clusters, there are several keywords interpreted the impact of COVID-19 to work life balance such as "burnout", "mental health", "professional burnout", "job satisfaction", and "well being". These 5 keywords has high frequency, the average number of occurrence is 51 and total link strength 481. It indicates these keywords has strong association between work life balance and COVID-19. The occurrence of these keywords is based on the overlay visualization often occur at the end of 2021. The regulation of long-distance work has made workers take their tasks to the non-occupational domain. It could generate numbers of negative consequences.

Study by Shirmohammadi et.al [5] identified at least there are two different domains that can be the stressors when work from home. The first domain is related to work, covers working intensity, limited workspace, technostress, work interdependence and professional isolation. The non-occupational domain related to housework intensity, care work intensity, emotional desire. The combination of these two domains would be correlated and possible to generate burnout, mental health issue due to stress, decreasing job satisfaction, professional burnout and interfering well-being. Finally, forced work from home mode make it hard to achieve work life balance. Some studies show keyword "burnout", "mental health", "professional burnout", "job satisfaction", and "well being" related to the difficulties in achieving work life balance by health workers. The health workers as high risk groups toward COVID-19 during pandemic, they experience work addiction that affect work-life balance and their mental health.

Another interesting fact, related to the high number of occurrences and total link strength for keywords related to gender such as "female" and "male". These two occur with average total link strength about 1.421. It is often discussed at the beginning period of 2021 it shows that work life balance during COVID-19 has strong relation with gender. Numbers of study conducted to explore more about impact of long distance work or work from home during COVID-19 to women and gender equality. Study by Ramos et.al [6] found that it teleworking mode during COVID-19 has no contribution toward the development of gender equality. It based on the fact that bad mechanism to gender equality in domestics area. Most of woman could find opportunities in long distance working since the time management and task organization can eb more efficient and could help them to equalize the work balance and household [7]. On the other hand, men who spend more time at home due to work from home

has no impact to gender equality, mainly about the distribution of gender role. If women have taken the risk and overcome the work balance and their life when entering industry which is dominated by men, men have no risk to take more roles and responsibilities to do housework when they are forced to stay at home.

In accordance with the finding above, survey of Boca et.al [8] toward representatives of Italian woman also said that most of additional housework and childcare related to COVID-19 is on woman. All women that have surveyed spend more their time for housework than before. Meanwhile, it is opposite with the men it depends on the partner work delegation: men with “in office worker” wife/partner tend to spend their time to do housework more than before. Meanwhile, it is opposite with the men it depends on the partner work delegation: men with “in office worker” wife/partner tend to spend their time to do housework more than before. Therefore, the achievement of work-life balance becomes more difficult for woman, moreover for the female worker with has 0-5 years old children. The other result shows that work life balance is difficult due to have a full-time office worker husband during difficult time. The hard condition for woman to achieve work life balance during covid-19 is not only experienced by woman with children. Study by Franca shows that childfree woman also experienced the same [9]. Study for female academics show that they experience many challenges related to emotional well-being and availability for work. Therefore, studies conducted so far show that women as the hardest experienced party to achieve work life balance during work from home regulation during COVID-19.

Numbers of identified keyword also show its research design. The keywords such as “cross-sectional study“, “controlled study“, dan “survey and questionnaire“. Keywords “survey and questionnaire” has total link strength (n=697) higher than other keywords related to research design. The keywords such as “cross-sectional study“, “controlled study“, dan “survey and questionnaire“ has total link strength (n=697) higher than other keywords related to research design. This research design, seems to offer many choices for researchers. Due to the condition during COVID-19 with high risk and also social distancing regulation from government through direct physical contact with the informants, it make it harder to do the research. Besides survey and questionnaires, “cross-sectional study”, and “controlled study“ could be a good choice for the researcher to conduct the research.

## **4 Conclusion**

This bibliometric study used to give systematical analysis related to work life balance during COVID-19. It gives information about 424 scientific articles related to work life balance topic during pandemic within 2020-2022 which are published in 280 different sources. The interest to study is dominated by nations with high index of work life balance according to OECD such as US, UK, Canada, Italy, Spain, Australia, Netherlands and Switzerland, where among those countries US become the biggest contributor in term of publication number. Even though, according to analysis citation, it found that the most impactful research written by researcher with Italian University affiliations with 198 citations. Furthermore, related to the trend of research topic related to work life balance during COVID-19, through co-occurrence analysis, show that the achievement of work life balance during pandemic are something hard to do, especially for women. Managing many roles and balancing the work on the same time and space with minimum resources at home caused them experiencing stress which led it to interfere their work life balance. Particularly, those keywords at least discover three things: 1)

impact of COVID-19 affect the achievement of work life balance of the general workers and health workers such as burnout, job satisfaction, mental health, and well-being; 2) gender disparity on role delegation during work from home which put woman as the party with hard position to achieve work life balance; 3) research design used in studying this topic during pandemic (survey and questionnaires, cross sectional study, and controlled study).

Even though, recently the condition is getting better and back to normal in accordance with decreasing number of COVID-19 case, however the findings of this research show important aspects related to work life balance which is considered in regulating long distance working in the future by the Human Resources Manager. It also related to how HRM could generate regulation that can guarantee the productivity and high-quality worker, even working long distance. Therefore, the future research related to work life balance can be focused on how the needs of worker could be fulfilling by the HRM in long distance working mode and its implications to the company.

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