The Impact of Telework Work-Family Conflict and Work Overload on Work Stress During the Covid-19 Pandemic 2020-2022 (Systematic Literature Review and Bibliometric Analysis)

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Abstract: This study investigates the outcomes of work-related stress resulting from a blend of WFC and increased workload amid the COVID-19 pandemic, particularly in teleworking. The study employed a SLR as a means of data exploration, incorporating literature bibliometrics for data processing and subsequently subjecting the data to analysis through the VOSviewer program. The investigator examined citations from the Scopus database, evaluating 334 articles, among which 62 were published from 2020 to 2022. The VOSviewer program was leveraged to evaluate co-authorship, co-accuracy, and citations, promoting a more nuanced understanding of the results. This review furnishes a focused bibliographic viewpoint for prospective researchers, assisting them in navigating the evolving dynamics of work-family conflicts, particularly accentuated among individuals managing multiple roles or shouldering caregiving responsibilities during the pandemic. The study underscores the merits and challenges of teleworking, highlighting the intricacies of establishing boundaries between work and caregiving roles. Neglecting these boundaries may precipitate job stress for remote workers. In essence, this research illuminates the characteristics of pertinent articles and the ramifications of teleworking, WFC and Excessive workload on work stress during the pandemic. It advocates for further investigation to deepen comprehension of the intricate interplay between these factors.

Keywords: Bibliometric, SLR, Teleworking, Work Family Conflict and Overload, Work Stress

A. Introduction

The worldwide impact of the COVID-19 pandemic has markedly and adversely influenced numerous workers, employers, and organizations. It has played a role in the deterioration of several nations’ overall health and economic conditions. Individually, people are compelled to make changes to their habits and lifestyles. Consequently, this situation requires particular attention from all stakeholders in the era of transformation and competition (Gunartin et al., 2021).
This is supported by the presentation of telework data during the Covid-19 pandemic, as follows:

![Teleworking Statistics Data](image)

**Figure 1. Teleworking Statistics Data**

From the picture above, virtual work has shown an increase during the Covid-19 pandemic. The significance of virtual work for organizational survival (Howe et al., 2021) the pandemic has given organizations the impetus to quickly adopt technology and make working remotely easier for individuals, regardless of their experience working remotely. This is accomplished using digital connection Zoom, Adobe Connect, and MS Teams (Biron et al., 2018). Social isolation is thought to contribute to the emergence of loneliness, leading to more severe psychological issues such as depression (Pietrabissa & Simpson, 2020). Despite this, symptoms of alienation emerge in the work environment, where employees have difficulty dialoguing with colleagues (Wulan Febriani et al., 2023), prompting a greater need for role models among employees.

The proposed job demands outlined by (Xanthopoulou et al., 2009) examined within the evaluated ties, this research is relevant in understanding situations where remote workers can lead to increased emotional exhaustion and decreased employee work. Adopting of work-from-home (WFH) arrangements may evoke perceived work-family conflict, particularly for individuals juggling dual roles when familial obligations encroach upon work responsibilities.

According to research (Karatepe, 2012), WFC can lead to physical and emotional fatigue in employees, adversely affecting their performance and overall productivity. Consequently, the authors aim to analyze research topics, employing a combination of two research methods, namely bibliometrics and SLR. This investigation aims to
support employees in the corporate and educational sectors so they can understand the influence of teleworking on their survival inclusively. Seeing the events above, researchers are interested in researching research entitled “The Impact of Teleworking on WFC and Work Overload”.

This investigation aims to thoroughly examine job opportunities in the 2020-2022 period amid the Covid-19 pandemic. More specifically, the focus is on identifying critical inquiries related to the subject of teleworking, including:

1. RQ1. How is the profile of the research article (number of article citations, country of origin of the article, author of the article, keywords, and year of research) related to work-family conflict and work overload to work stress
2. RQ2. How do you deal with work stress during the Covid-19 pandemic?
3. RQ3. How does workload affect work stress during the Covid-19 pandemic?

The point is to apply this analysis techniques by utilizing VOSviewer software to visualize data from the analysis of articles found to achieve research targets. This is so they can use teleworking to manage their work stress level. The point is to apply bibliometric analysis techniques by utilizing VOSviewer software to visualize data from the analysis of articles found to achieve research targets (Van Den Broeck et al., 2010).

B. Methods

The research design was crafted to fulfil the research topic’s objectives, employing a combination of two approaches, namely qualitative and quantitative. A systematic literature review (SLR) utilizing PRISMA, as detailed by (Ismawati et al., 2023), was conducted. Data collection involved applying filters in the search process, following the methodology outlined by (Rejeb et al., 2022), as outlined below:
Subsequently, an additional procedure is conducted through a mechanism utilizing data that will be elaborated in the prism graph presented below, derived from Scopus. The data is subject to analysis, concluding that these findings are employed to transition into the exploration stage, encompassing three meticulous phases of research.

**Figure 2. Exploration Approach**

**Figure 3. Flowchart PRISMA**
Subsequently, the succeeding phase is subject to analysis employing bibliometrics, as advocated by (Garza-Reyes, 2015), and a method geared towards refining conceptual frameworks, emphasizing knowledge boundaries (Tranfield et al., 2003). The bibliometric analysis incorporates the application VOSviewer, following the methodology proposed by (Rosa et al., 2020), concentrate on elements related to teleworking, WFC, work overload, and occupational stress.

This research utilized a systematic literature review (SLR) as its primary data search tool. During the screening phase, keywords such as “work from home,” “remote work,” “teleworking,” “telecommuting,” and “work overload,” “conflict,” “work stress” were employed, following the approach outlined by (Rejeb et al., 2022). VOSviewer functionalities include the examination and visualization of networks in research.

The rationale behind selecting VOSviewer lies in its capacity to handle large datasets and offer a range of visually appealing and informative outputs, including Co-Authorship, Co-Accurrence, and Citation maps based on shared citations in the network (Nur et al., 2020). This study adheres to specific criteria for determining article methods up to the year of publication of citations, a methodology further scrutinized (Tamimi et al., 2022). The study follows a five-stage method borrowed from previous research findings (Setyaningsih et al., 2018), as depicted in Figure 3 below.

![Figure 4. Five Steps of the Method](image)

Identify keywords for searching

The phase involving the identification of keywords through database searches was executed in May 2023. The chosen keywords for this research encompassed “work from home” “remote work” “teleworking” “telecommuting” as well as “work overload,” “conflict” and “work stress.” Review data collection process relied on reputable sources, utilizing Google Scopus Web (www.scopus.com) and the PoP
application alongside the Google Scholar database, as recommended by (Baas et al., 2020).

Initial Search Results

The initial phase of this study involves concentrating exclusively on articles titled “SLR of Teleworking, Work Overload, and WFC on Work Stress duration the Covid-19 Pandemic.” The data, extracted in CSV and RIS formats, undergoes processing through VOSviewer. The article search is confined to the previously identified keywords, and database searches are restricted to the timeframe from 2020 to 2022, resulting in the retrieval of 284 articles (Mustapha et al., 2021).

Refinement of Search Results

The phase involving the fine-tuning of search results entails refining articles extracted from the Scopus website through the utilization of keywords, abstracts, titles, and year parameters. The PoP application is employed to categorize retrieved databases to align with the researchers’ requirements. Subsequently, from the combined data sources, a total of 284 articles were initially filtered down to 71 due to various considerations. Further refinement led to a final selection of 40 articles that are accessible.

Compile Preliminary Data Statistics

The phase involving the creation of an initial statistical database network in CSV and RIS formats, following the methodology outlined by Research et al. Researchers extract various pieces of information and subsequently utilize the Zotero platform to organize databases. This includes details such as author names, catchphrase, titles, abstracts, publication journals, publication years, publishers, volumes, and references. The data is then reanalyzed for further examination.

Review Data

Investigations involve depicting networks in research using VOSviewer due to its ability to produce data that offers a variety of exciting insights, thereby facilitating deeper exploration of information.

C. Results and Discussion

Measurements include qualitative and quantitative analysis by applying bibliometric analysis techniques combined between observations (SLR). The research initiation involves the identification of keywords aligned with the research theme. Exploration involves specific metadata parameters, including “article title, year, abstract, and
keywords. The chosen search keywords are “work from home” “remote work” “teleworking”, “telecommuting” as well as “work overload”, “conflict” and “work stress”. Extraction of metadata from the search database through the web, covering publications from the preceding two years, spanning 2020 to 2022.

Classification of Publications Per Year Based on Teleworking, Work-Family Conflict, and Work Overload

In 2020, a total of 12 articles were published on the topic, and the subsequent year, 2021, saw a surge in research activity, with 21 articles exploring the theme of Teleworking, WFC and Work Overload on Stress. The momentum continued to grow in 2023, witnessing a notable increase to 29 published articles, reflecting the heightened awareness among research experts regarding employee life patterns during the COVID-19 pandemic.

Classification of Citations Per Year Based on Teleworking, Work-Family Conflict, and Work Overload

In 2020, a total of 809 citations were recorded, increasing to 564 in 2021. By 2022, the number of citations reached 212, indicating a growing interest and impact in the field.
According to Figure 5, there is a decline in citations each year, particularly in 2022, for the teleworking theme, which registered 212 citations. In Figure 6, the WFC subject received 143 citations in 2022, while no articles were browsed. Moving on to Figure 7, the theme of work overload experienced a decrease in citations in 2022, totaling ten.

Classification of Author Names Based on Bibliometric Analysis

Every cluster maintains a connection with the others through research publications. The purple cluster signifies that the network of authors delving into teleworking, work-family conflict, and work overload plays a role in influencing work stress. Simultaneously, the yellow cluster demonstrates that the author’s network influences the subject matter explored by the author. The study suggests that remote employees
contribute to work stress concerning both work and family aspects. This is attributed to the dual responsibilities that employees must navigate, leading to challenges in managing time effectively and resulting in potential conflicts within the household.

**Keyword Classification Based on Bibliometric Analysis**

Figure 10. Illustrates the (Keywords)

Figure 10 illustrates the emergence and development of research topics related to the application of Teleworking, WFC and Excessive Workload in the condition Work Stress, Since the beginning of the COVID-19 pandemic spread. This indicates that this domain is relatively fresh and holds significant potential for further exploration. The figure indicates a clear trend of growing research interest in this field, particularly following the adoption of remote work practices.

Figure 11. Co-Occurrence (Overlay Visualization) Metadata (Keywords)
In Figure 11, the evolution of the watchword is depicted each year. The intensity of the yellow color in the watchword group describes the freshness of the research being studied. Conversely, the further the research group, the longer the researcher investigated.

![Figure 12. Co-Occurrence (Density Visualization)](image)

Table 1. Top 10 Articles that Match Research Topics Based on Research Titles and Keywords

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>Keywords</th>
<th>Cite</th>
<th>Publication</th>
<th>Country</th>
<th>Software</th>
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<tbody>
<tr>
<td>1</td>
<td>Wellbeing Costs of Technology Use during Covid-19 Remote Working:</td>
<td>Covid-19, technostress, stress, technostress creators, work-family conflict, remote working, smart working, technology use; scale validation</td>
<td>352</td>
<td>Sustainability</td>
<td>Italy</td>
<td>SPSS 26</td>
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<td></td>
<td>An Investigation Using the Italian Translation of the Technostress</td>
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<td></td>
<td>Creators Scale</td>
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<td>2</td>
<td>Couple and Family Relations Early in the State-regulated Lockdown</td>
<td>Family Relations Early, regulated Lockdown during the COVID-19 Pandemic in Spain</td>
<td>171</td>
<td>Family Process</td>
<td>Spain</td>
<td>SPSS 26</td>
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<td></td>
<td>during the COVID-19 Pandemic in Spain: An Exploratory Mixed-methods</td>
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<td></td>
<td>Study</td>
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<tr>
<td>No</td>
<td>Title</td>
<td>Keywords</td>
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<td>3</td>
<td>Remote Work, Work Stress, and Work-Life during Pandemic Times: A Latin America Situation</td>
<td>Remote work; perceived stress; work-life; COVID-19; Latin America</td>
<td>153</td>
<td>International Journal of Environmental Research and Public Health</td>
<td>Switzerland</td>
<td>PLS-SEM</td>
</tr>
<tr>
<td>4</td>
<td>Workload, Techno Overload, and Behavioral Stress During COVID-19 Emergency: The Role of Job Crafting in Remote Workers</td>
<td>Job demands-resources model, job crafting, techno-overload, behavioral stress, remote working, COVID-19</td>
<td>138</td>
<td>Frontiers in Psychology</td>
<td>Italy</td>
<td>SPSS 26</td>
</tr>
<tr>
<td>5</td>
<td>Telework in academia: associations with health and well-being among staff</td>
<td>Flexible work, Boundless work, Autonomy, Competence, Relatedness</td>
<td>121</td>
<td>Higher Education</td>
<td>Sweden</td>
<td>IBM SPSS</td>
</tr>
<tr>
<td>6</td>
<td>Teacher Teleworking during the COVID-19 Pandemic: Association between Work Hours, Work-Family Balance and Quality of Life</td>
<td>Pandemic; COVID-19; schoolteachers; teleworking; mental health</td>
<td>121</td>
<td>International Journal of Environmental Research and Public Health</td>
<td>Switzerland</td>
<td>STATA 16</td>
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<tr>
<td>7</td>
<td>A work-life conflict perspective on teleworks</td>
<td>A work-life conflict perspective on teleworks</td>
<td>109</td>
<td>Transportation Research Part A: Policy and Practice</td>
<td>China</td>
<td>Regression zero-inflated order probity (ZIOP)</td>
</tr>
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<td></td>
<td>Telework Work-life balance Work-life conflict Family life stages Zero-inflated ordered probity regression German Micro census 2010</td>
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<td>8</td>
<td>The Influence of Work-Family Conflict on Burnout during the COVID-19 Pandemic: The Effect of Teleworking Overload</td>
<td>Work-family conflict; family-work conflict; burnout; teleworking; work overload; COVID-19</td>
<td>91</td>
<td>International Journal of Environmental Research and Public Health</td>
<td>Switzerland</td>
<td>SEM</td>
</tr>
<tr>
<td>9</td>
<td>Telework and Work-Family Conflict during COVID-19 Lockdown in</td>
<td>Telework; work-family conflict; COVID-19</td>
<td>86</td>
<td>Administrative Sciences</td>
<td>Switzerland</td>
<td>SPSS 25</td>
</tr>
</tbody>
</table>
As per the details provided in Table 4.5, 10 scholarly articles demonstrate a prevailing pattern consistent with the subjects explored by the respective authors. The foremost article, authored by (Molino et al., 2020), holds the highest position with 352 citations. Published in Sustainability from Italy, the paper employs keywords such as “Covid-19, technostress, stress, technostress creators, work-family conflict, remote working, smart working, technology use; scale validation”. The impact of this research highlights striking changes in personal living habits distancing social.

The second article, authored by (Günther-Bel et al., 2020), has garnered 171 citations. Published in Family Process from Spain, the paper employs keywords like “Family Relations Early, regulated Lockdown during the Pandemic in Spain”. The study suggests that quarantine significantly affects work-family dynamics, especially in the lives of adults with families and individual children.

The third article (Sandoval-Reyes et al., 2021) received 147 references. The document published in Switzerland “International Journal of Environmental Research and Public Health”. This creation underlines the transition from the traditional to the modern era during Covid-19. This design illustrates the change from conventional work to contemporary work in COVID-19, which is why WFH is experiencing pressure.

This study enables the mapping of titles, keywords, publication years, publication countries, and software used. The analysis includes Overlay Visualization, Density Visualization, tags, and citations. The research findings amalgamate the keywords Teleworking, WFC, and Work Overload, revealing that they lack a significant association within a single cluster group in work stress. However, remote work practices have significantly impacted occupational stress levels during the COVID-19. Employees who work remotely must balance work and personal life to prevent adverse impacts on emotional aspects, which could hinder the implementation of professional responsibilities. Failure to achieve this equilibrium between work-family and excessive work may lead to heightened work stress.
The work stress married couples encounter, particularly women engaged in remote work during the pandemic, stems from their dual role juggling childcare responsibilities and the pressures experienced in their professional parts, acting as stress triggers. Working women facing challenges in caring for children may encounter difficulties actively engaging with their colleagues in the remote work setting. Childless women face less WFC.

Influence between Variables

The Effect of Teleworking on Work Stress of the Covid-19

Introducing WFH has revealed various challenges, particularly during employee adaptation to new daily routines amid lockdown (Bouziri et al., 2020). Consequently, this practice has become a standard for thousands of workers, necessitating technology for communication to ease the burden of remote work. Moreover, the pre-existing isolation inherent in typical remote working conditions (Mann & Holdsworth, 2003) It is necessary to follow up on the more complex COVID-19 pandemic.

Although accepting transformation takes time, some workers may welcome and enjoy new challenges, and others may resist. Hence, swift technological advancements, as seen today, can introduce new workplace issues and necessitate adjustments in individuals’ lifestyles (Ghislieri et al., 2021). Effectively managing work stress increases employee enthusiasm (Wahyuningsih et al., 2021).

Other research highlights the correlation between lockdown equality and increased stress and depression (Xiao et al., 2020). Employees experiencing isolation during lockdown may encounter stress and depression, notably impacting their work life.

The Effect of WFC on Work Stress when the Covid-19

This creation illustrates that COVID-19 significantly impacts a person’s psychology, with individuals becoming more susceptible to stress, anxiety, and even severe depression. Some people face challenges adapting to changes in lifestyle and circumstances, particularly in managing stress, especially within marital life. Implementing more flexible work arrangements can impact the personal lives of employees, especially for employees who have families who can review work arrangements and WFC participation (Sa’adah & Sopiah, 2022).

The widespread adoption of teleworking is evident in government and educational institutions worldwide and has introduced new challenges for family couples, especially those with children. Parents navigate dual roles simultaneously-fulfilling work responsibilities and caring for children during the COVID-19 pandemic. This
A perspective is further supported by (Amalia & Nugraha, 2021), indicating that the application of online learning highlights the need for appropriate mentoring, with some students thriving in online learning environments. Workers engaged in remote work, particularly work-from-home (WFH) arrangements, are susceptible to conflicts within the family environment experiencing stress and disappointment (Hasibuan & Sopiah, 2021). This occurs because individuals feel compelled to meet organizational demands outside regular working hours, leading to job strain associated with using technology beyond typical work hours (Andrade & Matias, 2022).

The forced remote work experience during lockdown presents a challenging situation for workers, especially concerning managing work-family relationships. The desire to respond to work calls outside of work time can interfere with a person’s ability to manage work and personal life and trigger WFC (Andrade & Petiz Lousã, 2021).

**Effect of Work Overload on Work Stress of Covid-19**

Workload is known for completing tasks quickly, providing quick responses, managing large amounts of work simultaneously, and fulfilling multiple responsibilities simultaneously. Alongside big responsibility, recent years have seen job demands associated with using digital media. While technology in organizations can positively enhance work processes’ efficiency, it also poses a challenge, bringing about demands and pressures that can impact workers’ health (Sandoval-Reyes et al., 2021). Mitigating such challenges involves employing problem-solving techniques, seeking information, and garnering support focused on addressing the issue and engaging with the surrounding environment (Lalu Yulhaidir, 2023).

Employee access to technology facilitates the retrieval of information connected to coworkers and family at any time. Consequently, technological progress amid the COVID-19 pandemic has introduced fresh Transfiguration for individuals in their work settings and lifestyles (Ghislieri et al., 2018). A person who experiences feelings of insecurity and inability experiences stress in the face of new knowledge that is digital innovation (Ragu-Nathan et al., 2008). Workloads that are too heavy are recognized as stress-related conditions that force a person to work faster than before.

Earlier research underscores that performing tasks from distinct locations, particularly during the COVID-19 crisis, has heightened job duties (Wang et al., 2023) and technostress (Molino et al., 2020) from the employees’ perspective. From the viewpoint of individuals experiencing stress at work, this substantial responsibility is connected to the capacity of digital technology to prompt users to work rapidly, for extended durations, and even alter their work routines (Ragu-Nathan et al., 2008).
D. Conclusion

In conclusion, the COVID-19 pandemic has profoundly impacted work dynamics, introducing challenges and opportunities associated with remote work, work-family balance, and technological advancements. The transition to remote work, initially prompted by lockdown measures, has become a standard practice for many workers, necessitating the adoption of communication technologies to ease the burden of remote collaboration. While some individuals may welcome this transformation, others may resist, highlighting the need for swift technological adjustments and effective stress management strategies.

The pandemic has exacerbated psychological stressors, making individuals more susceptible to stress, anxiety, and depression. Adapting to changes in lifestyle and work arrangements, particularly within marital and family contexts, has posed significant challenges. Implementing flexible work arrangements has impacted personal lives, especially for employees with families, necessitating a review of work arrangements to mitigate work-family conflict.

The widespread adoption of teleworking has introduced new challenges for families, particularly for parents balancing work responsibilities and childcare. This shift to remote work has also highlighted the need for appropriate mentoring and support in online learning environments. However, remote work arrangements have also led to conflicts within the family environment, as individuals feel compelled to meet organizational demands outside regular working hours, leading to job strain and work-family conflict.

Furthermore, work overload, compounded by the use of digital technology, has posed significant challenges to employees' health and well-being. Technological progress amid the pandemic has introduced new demands and pressures, prompting individuals to work rapidly and alter their work routines, leading to heightened job duties and technostress.

Mitigating these challenges involves employing problem-solving techniques, seeking support, and engaging with the surrounding environment. Overall, the COVID-19 pandemic has reshaped work settings and lifestyles, underscoring the importance of effective stress management strategies and technological adaptability in promoting employee well-being and productivity in the face of unprecedented change.

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References


