Remote Work from Home and Employee Mental Well-being: A scoping review

Dr. Vicki Kristman, Lakehead University-Ontario Research Chair in Injury & Disability Prevention, Professor, Department of Health Sciences, Director & Senior Scientist, EPID@Work (Enhancing the Prevention of Injury & Disability @ Work) Research Institute.

Dr. Lynn Martin, Professor, Department of Health Sciences, Lakehead University.

Kara Polson, PhD Student, Department of Health Sciences, Lakehead University, EPID@Work Research Institute

Knowledge Synthesis Grant Final Report Prepared for the Social Sciences and Humanities Research Council of Canada

Nov 18, 2022

This research is funded by the Social Sciences and Humanities Research Council and Infrastructure Canada.Cette recherche est cofinancé par le Conseil de recherches en sciences humaines et Infrastructure Canada

To cite this report, please use: Polson, K., Kristman, VL., Martin, L (2022). *Remote Work from Home and Employee Mental Well-being: A scoping review*. Ontario, Canada: Lakehead University.

Table of Contents

List of Figures

List of Tables

Executive Summary

Background

Poor mental health is a risk factor for a number of chronic physical conditions and may impact one's ability to remain in the work force (1). Further, the workplace itself may pose a risk to mental health (2,3). The National Standard for Psychological Health and Safety has outlined risk factors for poor workplace mental health, including: psychological support; organizational culture; clear leadership and expectations; civility and respect; psychological job demands; growth and development; recognition and reward; involvement and influence; workload management; engagement; work-life balance; psychological protection from violence, bullying and harassment; protection of physical safety, and other chronic stressors (4). It is important to recognize that some of these risk factors may be more significant than others, depending on the work environment, and some may be more burdensome for employees who are working remotely from home (5–8).Working from a remote home office poses a number of challenges, including workplace isolation, increased job stress, decreased job satisfaction, and poor communication, to name a few (6,8).

With remote work from home being on the rise, in combination with the large-scale adoption of working from home due to the Covid-19 pandemic, the need to better understand the impacts of remote work from home is significant. As evidence on the topic has grown, so too has the need for synthesis of available knowledge. A structured scoping review has not been completed in this area, resulting in lack of readily available information on the various effects of remote home-based workplace outcomes as they relate to mental well-being.

Objectives

General Objective: To synthesize the literature on remote work from home and mental well-being that has been produced over the past 5 years.

Primary Objective: To synthesize all existing knowledge on the relationship between remote work from home and mental well-being, in order to develop a conceptual model.

Secondary Objective: To identify the various terms used to describe remote work in the literature, identify key characteristics of remote work that should be included in a common definition moving forward.

Results

A total of 2,311 research papers published between 2017 and 2022 were reviewed; 58 were eligible for in-depth analysis. The outcomes of remote work were categorized in a conceptual model, which included all the factors that may be associated with mental well-being. There was an international representation of countries where studies were conducted, including but not limited to UK, USA, Canada, Australia, India, and Japan. A number of constructs related to mental well-being were included: health, mental health, mental well-being, well-being, stress, strain, exhaustion, and loneliness, to name a few. The effects of remote work from as they relate to mental well-being appear to be both positive and negative: 21 studies reported both positive

and negative outcomes, 11 studies highlighted positive outcomes, while 17 discussed negative outcomes.

Key messages

Remote work from home has both positive and negative effects on mental well-being.

Positive effects include:

- Work-life and work-family balance is the most commonly reported favourable outcome of remote work from home.
- Reduced stress and strain due to reduced work-life/work-family conflict, more job control, and the lack of a commute to work.
- Opportunity for professional development, increased job satisfaction and less distractions.

Negative effects include:

- Poor sleep quality, anxiety, depression, and burnout.
- Increased work-life/work-family conflict.
- Increased experiences of stress and or strain; mental overload; time pressure, the lack of schedule and emotional exhaustion contribute to these experiences.
- Increased loneliness & social isolation.

Multiple terms are used in this field: Telecommuting, telework, remote work, distance work, and virtual office are different terms referring to the same concept. The most commonly used terms in the literature include telework, remote work, and work from home.

- Remote work from home and telework from home may provide the most accurate description of those working from home, away from the central organization.

Methodology (search methods, selection criteria, data collection and analysis)

To achieve the study objectives, we conducted a scoping review, conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews (9), drawing upon the framework proposed by Arksey and O'Malley (10) with enhancements by Level, Colquhoun & O'Brien (11). Firstly, a search strategy consisting of three phases was conducted. The first phase included identifying relevant databases, completing a preliminary limited search while developing and finalizing a full list of key words and index terms. Phase two involved searching all identified databases. Phase three involved searching the references lists of all articles to identify new articles. During the screening and selection of all studies, the same inclusion and exclusion criteria were applied to all articles. The identified articles were then reviewed and analyzed in detail.

1. Background

1.1. Overview

Poor mental health is a risk factor for a number of chronic physical conditions and may impact one's ability to remain in the work force (1). Further, the workplace itself may pose a risk to mental health (2,3,4). The National Standard for Psychological Health and Safety has outlined risk factors for poor workplace mental health, including: psychological support; organizational culture; clear leadership and expectations; civility and respect; psychological job demands; growth and development; recognition and reward; involvement and influence; workload management; engagement; work-life balance; psychological protection from violence, bullying and harassment; protection of physical safety, and other chronic stressors (4). It is important to recognize that some of these risk factors may be more significant than others, depending on the work environment, and some may be more burdensome for employees who are working remotely from home (5–8).Working from a remote home office poses a number of challenges, including workplace isolation, increased job stress, decreased job satisfaction, and poor communication, to name a few (6,8).

The relationship between remote work and mental health is particularly concerning today, as the Covid-19 pandemic changed the world of work for millions of Canadians. The pandemic had a profound effect on labour market activities, health and social activities of Canadians (12). In March 2020, 4.7 million Canadians who did not usually work from home, were ordered to do so (12). As of September 2020, 4.2 million Canadians continue to adapt to Covid-19 by working remotely (13) and as of September 2022, 16.3% of Canadian workers report that they exclusively work from home (14). Prior to Covid-19, working from home had been a growing trend in the work environment (15–17) with approximately 1.9 million Canadians already working from home (13).

With virtual work from home being on the rise, in combination with the large-scale adoption of working from home due to the present-day pandemic, the need to better understand the impacts of virtual work from home has become significant. The body of evidence on the implications of working from a virtual home office has grown and so too has the need for synthesis of the available knowledge. A mixed-methods systematic review of the literature examining the association between virtual work from home and mental health was recently completed by the research team (18). It was determined that conclusions regarding the outcomes of remote work as it relates to mental health cannot be made: there is inconsistent use of terminology (e.g., virtual work, remote work), the literature is primarily cross sectional (cannot infer causation), largely secondary data analysis (missing key variables related to participants and workplaces), and findings are conflicting.

1.2 Literature Review

The literature to date suggests that virtual workers may experience poor mental well-being for a number of reasons, including increased job stress (19–22) decreased job satisfaction (7,23), work-life balance challenges (8) and workplace isolation (17,24,25,25). Workplace isolation is particularly significant to the mental well-being of virtual workers at it leads to feelings of loneliness, exclusion and boredom, manifesting when a worker feels separated from co-workers, and the needs for casual interactions, friendship, and camaraderie are not met (17). From a social perspective, these employees experience less social capital, missing out on the social interaction of informal chats, spontaneous discussions, and 'casual meetings around the

water cooler' (24–26). Social capital impacts our sense of belonging, proactivity, feelings of trust and safety, participation and more (27). Higher social capital typically results in more access to the resources we need to feel supported, be productive and to have better flow in our work lives (27). Social capital is a strong predictor for work performance and employee health (28–31). Working from home is also associated with positive outcomes, including improved job satisfaction (32), and improved work-life balance (33). However, due to the narrow scope of the research question asked in our systematic review, the findings were limited, Further, we found a paucity of literature with conflicting evidence. A broad synthesis of the existing knowledge is required in order to better understand the concept of virtual work as it relates to mental well-being.

Although there are several studies exploring the implications of working remotely from a central organization, a structured scoping review has not been completed in this area. Further, a review focused on conceptualizing the effects of virtual work outcomes on mental well-being is not readily available. Our previous systematic review resulted in limited inclusion of studies given the proposed inclusion/exclusion criteria; therefore, a broader approach to capture all the available evidence, such as in a scoping review, is required. As a result, the proposed study aims to identify, and summarize the findings of all relevant individual quantitative and qualitative studies related to this topic. The overall goal of this study is to make the available evidence more accessible and to develop a conceptual model illustrating the relationships between virtual work outcomes and mental well-being. We proposed a broad-based scoping review of both the quantitative and qualitative literature on virtual work outcomes and mental well-being, with the general aim of synthesizing the literature produced over the past 5 years.

2. Objectives

General Objective: To synthesize the literature on remote work from home and mental well-being that has been produced over the past 5 years.

Primary Objective: To synthesize all existing knowledge on the relationship between remote work from home and mental well-being, in order to develop a conceptual model.

Secondary Objective: To identify the various terms used to describe remote work in the literature, identify key characteristics of remote work that should be included in a common definition moving forward.

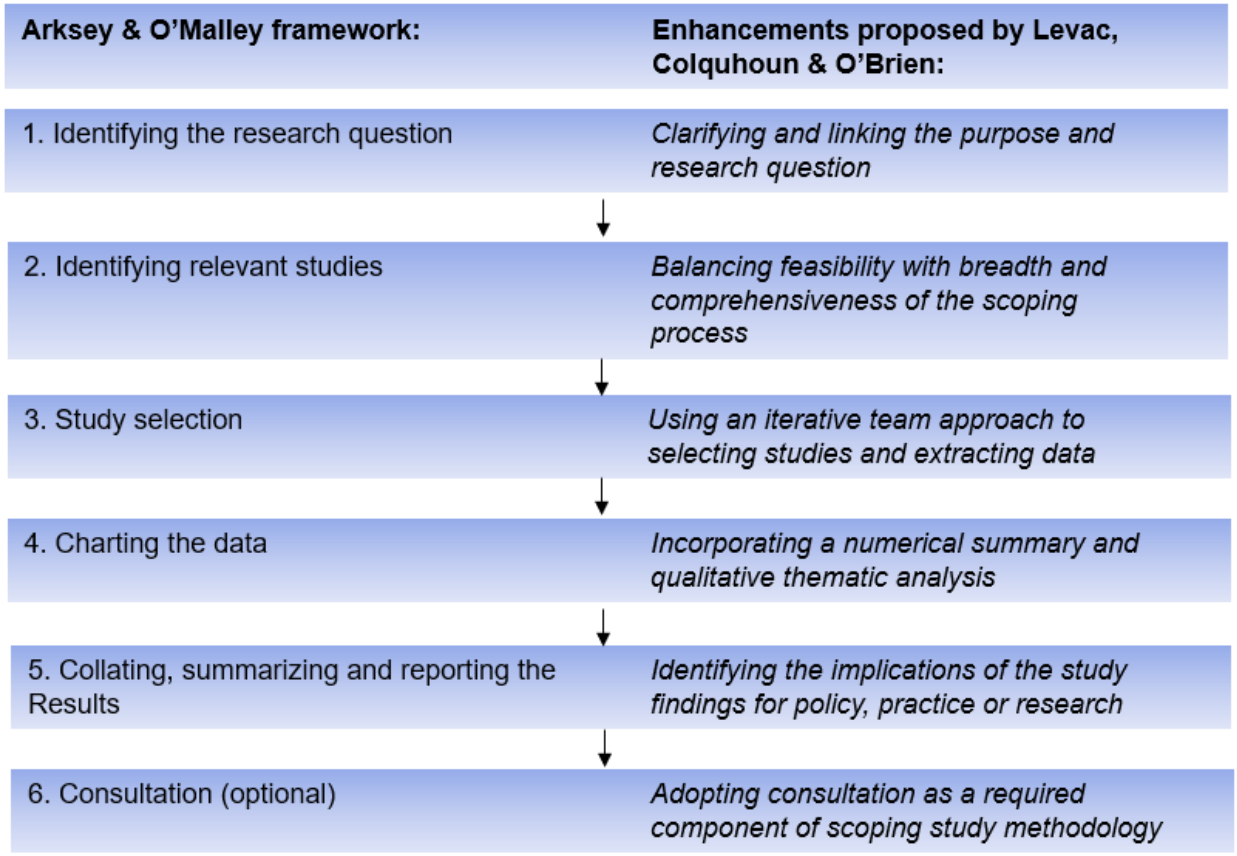
3. Methodology

The research question(s) aim to gain a broad understanding of the existing knowledge over the past five years. Therefore, we conducted a scoping review, to be conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews (9). A scoping review, historically also known as a "mapping review" is the ideal approach for this body of knowledge as we currently lack a clear understanding of the key concepts underpinning this particular field of research. A preliminary search was conducted and no scoping reviews on this topic were identified.

The framework proposed by Arksey and O'Malley has been influential in the conduct of scoping reviews for some time (10). Their framework has been further enhanced by the work of Levac, Colquhoun and O'Brien (11), summarised in Figure 1. Levac and colleagues provide more explicit detail regarding what occurs at each stage of the review process and this enhancement

increases both the clarity and rigor of the review process (11). Both of these frameworks have been drawn on in the development of the JBI approach to the conduct of scoping reviews which guides our review.

Figure 1. Scoping Review Framework including enhancements (10,11).



As with all JBI systematic reviews, an a-priori protocol was developed before undertaking this scoping review. A scoping review protocol is important as it pre-defines the objectives and methods of the scoping review. It is a systematic approach to the conduct and reporting of the review and allows for transparency of the process (9). The objectives, inclusion criteria and methods for this scoping review were specified in advance and documented in the protocol for this study.

Similar to primary research, methodology and reporting standards have been developed for systematic reviews: The PRISMA-Scr statement or Preferring Reporting Items for Scoping Reviews provides a checklist for authors on how to report a scoping review (9,34). The PRISMA-Scr checklist for this scoping review can be found in Appendix A.

3.1 Inclusion Criteria

This scoping review has a broad scope with correspondingly less restrictive inclusion criteria than our previous work (18). The following inclusion/exclusion criteria contribute to the replicability of the review: the eligibility criteria were developed according to the PCC (Population, Concept and Context) elements of scoping review inclusion criteria (9) summarized in Table 3.1 and described in detail below.

Table 1. Logic Grid: PCC elements of the research question.

Population	**C**oncept	**C**ontext
Employees working remotely from home	Core concept: Virtual home office Outcome concepts: Mental Well-being	cultural factors, geographic location, sociodemographic factors, gender, pandemic factors

Population - Works included in the review will have participants who are working virtually from home (Population). Full-time or part-time work has been included and all types of employment were considered, as long as the employee worked remotely from home.

Concept - The core concept is virtual work from home; therefore, any sources that did not contain this concept (and all related key terms) were excluded from the review. Mental well-being is also a component of this scoping review's concept. Therefore, outcomes that were previously identified in the literature as being related to mental well-being in remote workers were also included.

Context - The "context" element of this scoping review considered cultural factors, geographic location, sociodemographic factors, and gender, during data collection stage of the study. Given the limited literature in this area, there were no particular contextual factors that would result in exclusion, however, studies that were particularly focused on working from home during Covid-19 were carefully considered.

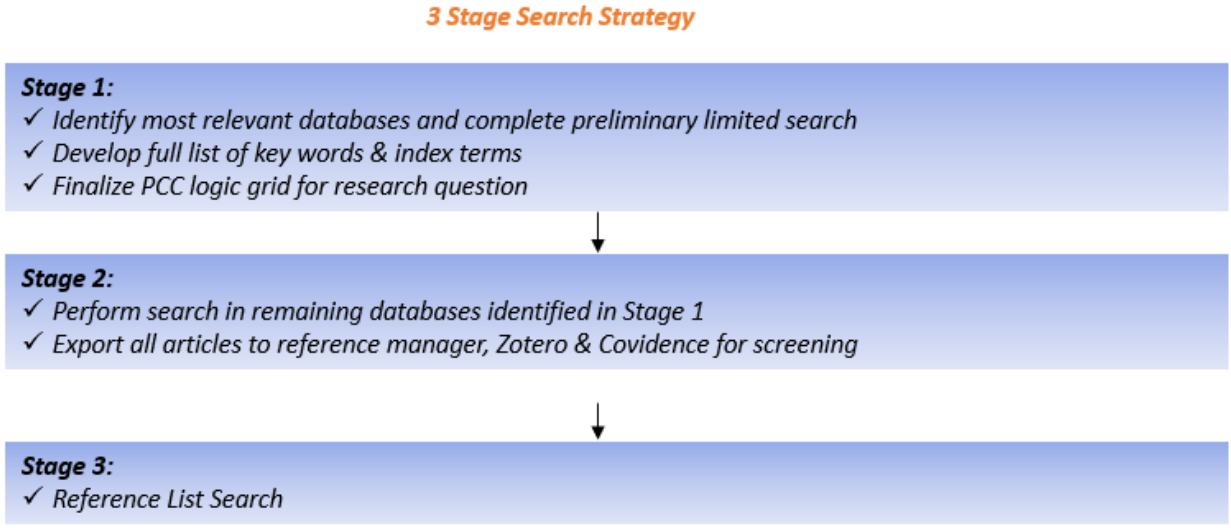
Type of sources -This scoping review considered both experimental and quasi-experimental study designs including randomized controlled trials, non-randomized controlled trials, before and after studies and interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case-control studies and analytical cross-sectional studies were considered for inclusion. Qualitative studies have also been considered that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research and feminist research. Finally, systematic reviews that meet the inclusion criteria were also be considered, depending on the research question.

Exclusion Criteria- Articles that were not in English were excluded. Finally, we excluded all articles prior to 2017: technology and virtual work has significantly evolved over the past five years, particularly due to the rapid adaptation to working from home during the 2020 Covid 19 pandemic and beyond. It is important that we present findings that are relevant to the present-day work from home landscape.

3.2 Search strategy

The search strategy for a scoping review aims to be comprehensive in order to identify both published and unpublished (grey literature) primary studies as well as reviews (9). As recommended in all JBI reviews, a three-step search strategy is used. The three Step approach is summarized in Figure 2 below and described in detail in the sections to follow.

Figure 2. Three stage search strategy for Scoping Reviews



Step 1: An initial limited search of two online databases was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy for the remaining databases. The search strategy, including all identified keywords and index terms, were adapted for each included database. The reference list of all included sources of evidence were screened for additional studies.

Initially, the reviewer identified relevant databases by using Ovid, seeking the guidance of an institutional librarian, and testing the various search terms identified in the initial logic grid for each research question. Six databases with the highest number of results were identified and used for the review. Initial key words of the primary concept included virtual work OR telework OR remote work OR electronic work OR electronic home work OR satellite work OR mobile work AND mental health OR mental illness OR mental well-being OR psychological health OR psychological well-being OR social well-being OR emotional well-being OR well-being. This initial search was expanded to include secondary concepts of interest that related to mental well-being. Each intermediate outcome identified in our literature search, with the following key words: "workplace isolation" "job stress"; "job satisfaction"; "social relationships"; "supervisor satisfaction"; and "negative communication". The literature reports several keywords that are associated with mental well-being in remote workers: workplace isolation, job stress and negative communication. These were included in our search and are detailed in the finalized logic grid, which resulted in no changes to our initial grid presented in Table 1. The search was completed for all databases, combining all identified terms.

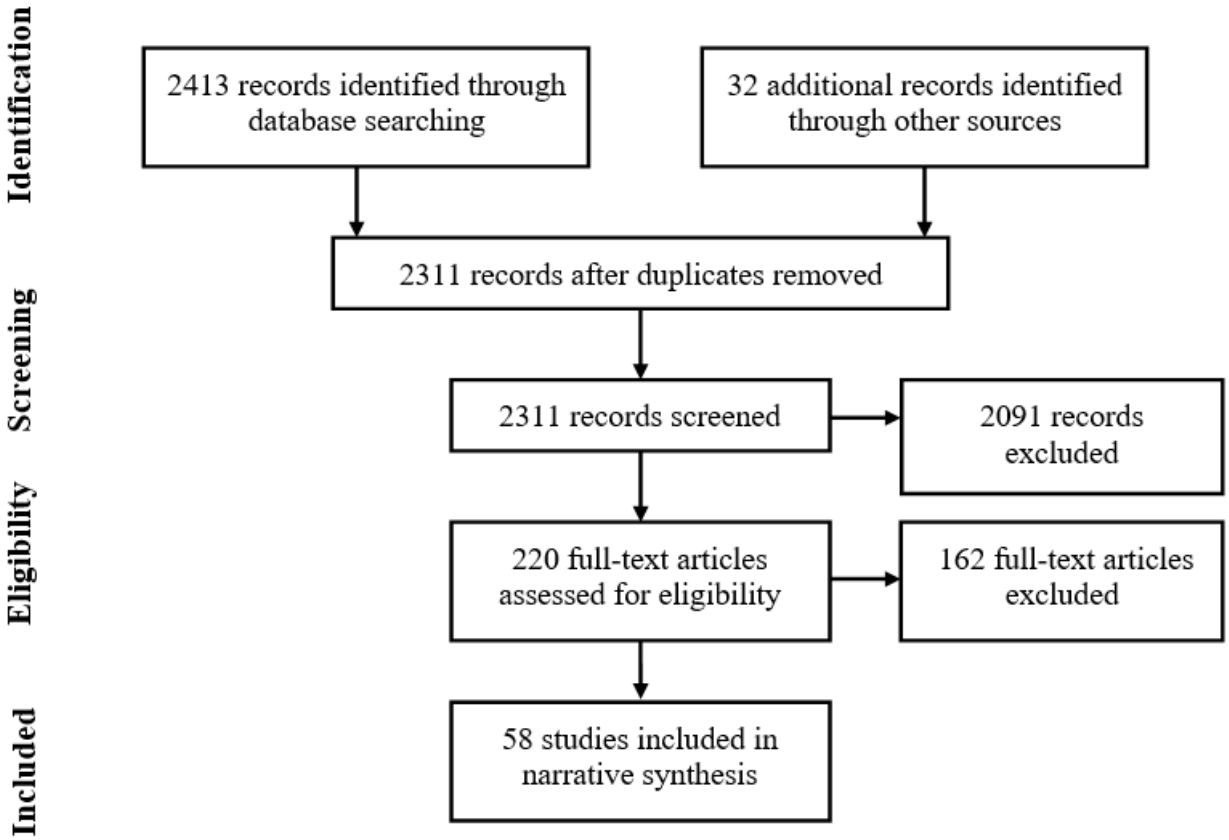
Stage 2: Stage 2 included performing the search in the six identified databases in stage one. Using the full list of keywords and index terms developed in Stage one, the search was completed across all selected citation databases identified. The structure of the search strategy remained the same regardless of the search platform used to search. Once the search was complete, results were exported to systematic review software, Covidence (35). This program was used for organizing the search results, removing duplicate citations, and selecting studies.

Stage 3: The final stage of our search strategy involved searching reference lists of review papers of peer reviewed academic literature not already identified in stages 1 and 2. It is worth mentioning that five review studies were screened for additional references (36–40), of which 32 articles were added to the review, however the review papers themselves were excluded from the final sample as results contained data prior to 2017.

3.3 Study Selection

As outlined in the PRISMA-Sc diagram in Figure 1, retrieved articles (N=2413) were collated and uploaded into Covidence (screening, selection, and extraction data management software) (35) and Zotero (citation management system) (41) and duplicates removed. Following a pilot test, titles and abstracts were screened utilizing two independent reviewers to minimize reporting bias. Once the first screening was complete, full texts of potentially relevant articles (N= 220) were retrieved, and inclusion and exclusion criteria were again reapplied. The articles that did not meet the inclusion criteria were excluded. Finally, a total number of 64 studies were set as eligible to be included. The results of the search and the study inclusion process are reported in full in the final scoping review and presented in the PRISMA extension for scoping review (PRISMA-ScR) flow diagram, Figure 3. The PRISMA-ScR checklist was also completed and found in Appendix A.

Figure 3: PRISMA Results Diagram



3.4 Data Extraction

Data was extracted from papers included in the scoping review and charted using a pre-defined data extraction tool developed by the reviewers during the protocol stage of the review. The data extracted includes specific details about the participants, concept, context, study methods and key findings relevant to the review question/s. The data extraction tool was neither modified nor revised during the process of extracting data from each included evidence source.

4. Data Analysis Results & Synthesis

Evidence was analyzed and organized to produce a narrative summary of the findings from the existing knowledge. The results presented below are a narrative synthesis of all included studies. The final sample is made up of 58 studies. There was an international representation of countries where studies were conducted, including but not limited to UK, USA, Canada, Australia, India and Japan. A number of constructs related to mental well-being were included in this review. Table 2 summaries the number of included studies that discuss these outcomes noting that many studies include multiple constructs and outcomes.

The majority of studies (N=25) explored the effects of remote work from home on mental health (including related concepts). Mental well-being, well-being and related concepts formed the next largest outcome concept included in this review, with 23 studies.

The outcomes of remote work from home as they relate to mental well-being appear to be both positive and negative: 21 studies report both positive and negative outcomes, 11 studies highlight positive outcomes while 17 discuss negative outcomes. Key findings, organized by positive and negative outcomes of remote work from home as they relate to mental well-being, are summarized below in Table 3.

Table 2: Summary of Mental Well-being constructs captured in synthesis

health, mental health, mental issues, anxiety, burnout, depression, psychosomatic health, psychological indicators, psychological distress	**N=25**
well-being, emotional well-being, psychological well-being, subjective well-being, mental well-being, psychosocial well-being	N= 23
strain, Stress, Occupational Stress, Job stress, work stress, stress related symptoms, psychological demands	N=22
exhaustion, emotional exhaustion	N=8
loneliness, psychosocial safety	N=2

Table 3. Summary of Outcomes of Virtual Work

Author/Year/Location	Study type/design/methods	Core Concept Terminology	Outcome Concept	Key Findings (+ve/-ve relationship with outcome concept)	Contextual Considerations
1. **Gazdecka & Sadlowska-Wrzesinskaska (2021); Poland.**	Quantitative; Cross-sectional	Telework	Psychosocial safety	-ve: Work-home balance; working outside designated hours; time pressure, professional communication, stress, technical supplies. +ve: sense of independence	Covid 19
2. Lange & Kayser (2022); Germany	Quantitative; cross-sectional	Home-based remote work	anxiety	+ve: self-efficacy as a personal resource to buffer work family conflict while promoting overall health	Covid 19
3 . Wohrmann & Ebner (2021); Germany.	Quantitative; cross-sectional	Telework	Psychosomatic health complaints	-ve: time control/pressure, boundaryless hours, relationships with co-workers; interruptions	Covid 19
4. Miron et al. (2021); Romania	Quantitative; cross-sectional	Telework	Emotional wellbeing; exhaustion	+ve: professional development and competencies job satisfaction, work-life balance, organizational climate -ve: emotional well-being, commitment, autonomy and well-being	Covid 19
5. Perry, Rubino & Hunter (2018); USA	Quantitative; Longitudinal	Remote work	Strain, stress	+ve: high emotional stability & autonomy protects from strain	
6. Franken et al. (2021); Australia	Qualitative	Remote work	Well-being	+ve better work-life balance; financial benefits; less distractions, -ve increased stress due to work-life conflicts; stress from sharing workspace with family	Covid 19
7. Carvalho et al, (2021); Portugal	Quantitative; cross-sectional	Telework	Burnout Well-being	+ve segmentation of work (maintaining work life boundaries) improves well-being, reduces burnout and promotes flourishing -ve work family conflict	Covid 19 Gender differences: Females have higher demands and more difficulties
8. Wang et al., (2020); China	Mixed-Methods	Remote Work	Emotional exhaustion Well-being	+ve social support at work, job autonomy improves well-being -ve workload monitoring, procrastination, loneliness predicts emotional exhaustion	Covid 19
9. Parent-Lamarche & Boulet (2021); Canada	Quantitative; cross-sectional	Telework	Well-being	+ve improved well-being -ve work-life imbalances, increased workload, marital tension associated with lower levels of well-being	Covid 19 Income – higher income was associated with higher levels of well-being Teleworking in public sector increase employee well-being
10. Prasad et al. (2020); India.	Quantitative; cross-sectional	Remote Work	Psychological well-being Occupational Stress	+ve reduced commute, more job control -ve workplace isolation, family disturbance, peer absence, working too much or not enough, role ambiguity, organization climate, and job satisfaction	Covid 19 No Gender or age differences
11. Giménez-Nadal, Molina & Velilla (2019); USA	Quantitative; cross-sectional	Telework	Well-being	+ve reduced stress, tiredness, sadness	Gender differences: Male teleworkers improved outcomes; females showed no differences

12. Afonso, Fonseca, Teodoro (2021); Portugal	Quantitative; cross-sectional	Telework	Mental health Anxiety Depression	-ve poor sleep quality, high levels of anxiety and depression	Covid 19
13. Niu et al. (2021); Japan.	Quantitative; cross-sectional	Telework	Mental Health Anxiety Depression	-ve those who telework for a long period show more severe anxiety and depression compared with those who worked for a short period; work-family conflict	Covid 19 Married people are more likely to work remotely and that sex has no effect on the choice of telework.
14. Molino et al. (2020); Italy	Quantitative; cross-sectional	Remote work	Well-being Stress	-ve workload, technostress, work-family conflict increase stress in remote workers	Covid 19
15. Ferreira et al. (2021); Portugal	Qualitative	Remote Work	Health Burnout Stress	+ve flexibility promotes work-life balance -ve communication, technical problems & management issues increase stress	Covid 19
16. Donati et al (2021); Italy	Quantitative; cross-sectional	Remote work	Well-being	+ve well-being may be positively associated with supportive social interactions with co-workers	Covid 19 Employees from larger companies experience better outcomes
17. Medina et al. (2020); Ecuador.	Quantitative; cross-sectional	Telework	Burnout	Telework overload did not have an effect on work-family conflict and burnout	Covid 19
18. Stankevia & Kunskaja(2021); Lithuania	Quantitative; cross-sectional	Working Remotely	Well-being & work-family balance	+ve improved work-life balance & well-being due to manager support, co-worker support; job autonomy and job control contribute to well-being -ve work and family demands increased work-family balance challenges	Covid 19
19. Garcia-Gonzalez et al. (2020); Spain	Mixed Methods	Online Work Telecommuting	Stress	-ve mental overload, time pressure, the lack of a schedule, and emotional exhaustion	Covid 19 Female experiences working remotely
20. Slavkokoa et al., (2021); Serbia	Quantitative; cross-sectional	Remote Work	Loneliness Burnout	-ve home-work imbalance and loneliness in remote workers were significant predictors of job performance and work engagement; social support may improve these outcomes	Covid 19
21: Filardi et al., (2020); Brazil	Mixed-Methods	Teleworkers	Psychological Indicators	+ve better concentration, work-family balance, greater productivity and flexibility, reduced stress, commuting time; less exposure to violence -ve lack of communication and connection with the company, psychological problems, lack of infrastructure and control, social isolation	
22. Bhumika (2020); India	Quantitative; cross-sectional	Working from home telework	Emotional exhaustion	-ve work interference with personal life results in emotional exhaustion; participative leadership can reduce work interference with personal life.	Covid 19 Gender - in comparison to men, women felt more emotional exhaustion due to personal life interference in work during work from home period

23. Sandoval-Reyes,Idrovo-Carlier & Duque-Oliva (2020) Latin America	Quantitative; cross-sectional	Remote Work	Work Stress	-ve increased perceived stress; reduced work-life balance	Covid 19 Gender- perceived stress affects men's productivity more acutely than women's productivity.
24. Juchnowicz & Kinowska (2021) Poland.	Quantitative; cross-sectional	Remote Work	Well-being	-ve decreased well-being due to reduced workplace relationships and work-life balance	Covid 19
25. Adamovic, Mladen (2022), Poland	Quantitative; cross-sectional	Telework	Job Stress	+ve telework reduces job stress when employees do not believe that teleworking will lead to social isolation	Covid 19 Cultural attitudes towards telework may predict well-being outcomes.
26. Becker et al (2020); USA	Quantitative; cross-sectional	Remote Work	Well-being	+ve greater perceptions of job control are beneficial emotional exhaustion and work-life balance	Covid 19
27. Wiitavaara et al. (2019); Sweden.	Quantitative; cross-sectional	Telework	Relaxation	+ve more relaxation during telework when compared to office work	
28. Niebuhr et al. (2022) Germany	Quantitative; Cross-sectional	Working from home telework	Stress related symptoms	-ve increased work from home was associated with more stress-related symptoms and negative job satisfaction	Covid 19
29. Pataki-Bitta et al (2022); Spain	Quantitative; Cross-sectional	Telework	Well-being	-ve teleworking during the pandemic increased irritability and tension for all teleworkers, but the stress levels and the overall subjective well-being were only affected in the case of those who raised small children	Covid 19
30.Song & Gao (2019). USA	Quantitative; Cross-sectional	Telework	Stress Subjective well-being	-ve increase stress; reduced subjective well-being	Gender differences between males and female with and without children
31. Windeler et al. (2017); USA	Mixed-Methods	Telework	Exhaustion	+ve telework can assist in balancing work exhaustion that may be caused by workplace social interaction	
32. Heiden et al (2021); Sweden	Quantitative; Cross-sectional	Telework	Stress	-ve stress may be higher in those that telework several times per week than those who telework less than once per month	
33. Ghislieri et al., (2021); Italy	Quantitative; Cross-sectional	Remote Work	Emotional Exhaustion	+ve reduced work family conflict -ve increased workaholism; increased emotional exhaustion; increased work family conflict	Covid 19 Gender – women report lower recovery and higher workload, and higher work family conflict than men
34. Raisiene et al (2021); Lithuania	Quantitative; Cross-sectional	Telework	Attitude	+ve younger generations have more positive attitudes towards telework -ve older generations have negative attitudes; millennial men concerned about recognition by employer	Age – employees' attitude towards telecommuting is age-related

35. Petcu et al, (2021); Romania	Quantitative; Cross-sectional	Telework	Emotional Exhaustion	-ve increased emotional exhaustion; constant access to work; lack of relationships and mentoring	Covid 19 Age – older generations appreciate telework less Women teleworkers- lower job satisfaction than men
36. Oakman et al., (2020); Australia	Quantitative; Cross-sectional	Work from Home	Mental Health	-ve Stress, increased work family conflict, decreased recognition for work, concerns about job security	Covid 19 Gender- men report increased levels of work family conflict, lower levels of recognition; Women report increased stress and increased job security concerns.
37. Gillet et al., (2021) USA	Quantitative; Cross-sectional	Remote Work	Professional well-being	+ve improves the negative effects of work centrality (employees' beliefs regarding the importance of work in their own identify)on family satisfaction and personal well-being -ve telework limits the positive effects of work centrality on work engagement and professional well-being	Covid 19
38. Chafi et al., (2021) Sweden	Qualitative	Remote Work		+ve increased flexibility, autonomy, work life-balance and performance -ve lost comradery and isolation	Covid 19
39. Chu et al., (2022); China	Quantitative; Cross-sectional	Remote Work	Stress	+ve improved work-life balance -ve increased stress promotes non-work-related activities but no change to productivity	Covid 19
40. Shamsi, et al., (2021); Norway	Quantitative; Cross-sectional	Remote Work	Well-being; mental load	+ve technology acceptance improves perceived usefulness and mental load and ultimately well-being	Covid 19
41. Mihalca et al., (2021); Romania	Quantitative; Cross-sectional	Remote Work	Well-being Emotional exhaustion Burnout	-ve work overload linked to burnout and emotional exhaustion;	Covid 19
42. Darouei & Pluut (2021); Netherlands	Quantitative; Cross-sectional	Remote Work	Well-being Exhaustion	+ve less time pressure, lower levels of work-family conflict, improve exhaustion levels	
43. Perelman et al., (2021); Portugal	Quantitative; Cross-sectional	Working at home	Mental Health	Working at home was not associated mental health deterioration	Covid 19
44. Otsuka et al., (2021); Japan	Quantitative; Cross-sectional	Telecommuting	Psychological distress	The association between telecommuting and psychological distress differs depending on telecommuting preference	Covid 19
45. Martin (2022); Luxembourg	Quantitative; Cross-sectional	Home office	Job stress	-ve Use of digital tools may generate too much information flow and increased stress	Covid 19

46. Magnavita et al., (2021); Italy	Quantitative; Cross-sectional	Telecommuting	Well-being Stress Mental issues	-ve intrusive leadership style can result in occupational stress, low happiness, and common mental issues (anxiety and depression); demand for after-hours work performance associated with increased stress	
47. Russo et al., (2021); Denmark	Quantitative-Longitudinal	Remote Work	Well-being	+ve improved well-being over time; saving of time otherwise allocated to daily commuting, a higher degree of flexibility	Covid 19
48. Kitagawa et al., (2021); Japan	Quantitative; Cross-sectional	Work from Home (WFH)	Mental Health	+ve mental health of workers who work from home is better than that of workers who are unable to work from home	Covid 19
49. Fukumura et al., (2021); USA	Quantitative; Cross-sectional	Work from Home (WFH)	Well-being	-ve participation in both work and home roles, work performance, and well-being	Covid 19
50. Shimura et al., (2021); Japan	Quantitative; Cross-sectional	Remote Work	Psychological Stress	+ve reduced psychological stress response	Covid 19
51. Pordelan et al., (2022) Iran	Mixed-Methods	Telework	Stress	+ve less stress having to commute to a workplace -ve role conflict, lack of face-to-face interaction	Covid 19 Gender – Mothers working in Iran experience less stress
52. Azentadkj (2021); Turkey	Quantitative; Cross-sectional	Remote Work	Depression Anxiety Stress	-ve prevalence of depression, anxiety, and stress was 17.9%, 19.6%, and 19.6%; workplace loneliness, low levels of control over working hours	Covid 19 Gender – being female was a predictor of anxiety and stress; increased in both housework and working hours compared to men
53. Xiao et al., (2021); USA	Quantitative; Cross-sectional	Work from Home (WFH)	Mental Well-being	-ve Decreased mental well-being associated with physical exercise, food intake, communication with coworkers, children at home, distractions while working, adjusted work hours, workstation set-up and satisfaction with workspace indoor environmental factors.	Covid 19
54. Wang, Bin et al. (2021) ;China	Mixed-Methods	Remote Work	Well-being	-ve work-home interference, ineffective communication, procrastination, and loneliness	Covid 19
55. Camacho & Barrios (2022); Columbia	Quantitative; Cross-sectional & longitudinal	Telework	Strain	-ve work-home conflict and work overload generate strain	Covid 19
56. Yang et al., (2022); Pakistan	Quantitative; Cross-sectional	Remote Work	Mental well-being	-ve work-home interference has a significant negative impact on employee mental well-being	Covid 19
57. Moretti et al. (2020); Italy	Quantitative; Cross-sectional	Home working	Mental health	+ve less stress -ve home environment increases risk for mental health problems	Covid 19

58. Biron et al., (2021); Canada	Quantitative; Cross-sectional & longitudinal	Telework	Psychological demands	-ve increased psychological demands over time	Covid 19

4.1 Synthesis of Findings: Primary Objective

The primary objective of this review was to synthesise all existing knowledge in order to develop a conceptual model, to illustrate the connection between remote work from home, and mental well-being. Our analysis found that remote work from home has both positive and negative effects on mental well-being. This is not surprising given that most of the studies were cross-sectional designs, which are unable to discern causal effects.

4.1.1 Positive effects on mental well-being while working remotely from home

A large body of literature suggests that mental well-being, well-being, and mental health, including, burnout, is positively influenced by working remotely from home (42–55,55,55–65).

Work-life/Work-family balance- Improved work-life and work-family balance is the most commonly reported factor associated with improved mental-well-being in the literature (44,44–46,51,59,66–72) The frequency of remote work significantly impacts work-family balance (73), with a pre-pandemic meta-analysis showing that remote work is positively associated with job satisfaction and productivity and negatively associated with work-family conflict. Yet, there are conflicting results in other studies showing no association between work-family conflict or burnout (74).

Stress/Strain- Reduced stress and or strain was positively associated with remote work in some studies, suggesting an improvement in mental well-being (47,54,64,71,75–80) with one particular study noting more relaxation during telework when compared to office work (81). Reducing the need to commute to a job (54,80,82) and more job control (54) is associated with a reduced stress in remote workers. Reductions in work-family conflict was noted as a factor associated with reduced stress levels (68,71,72,77). Working remotely was also associated with reduced exhaustion levels that may be caused by to high levels of workplace social interaction (83) less time pressure (72), and overall an increase in autonomy and control over ones work (78). Shimura and colleagues noted reduced psychological and physical stress responses in remote workers (79).

Additional positive outcomes of remote work from home associated with improved mental well-being included opportunity for professional development (51), increased job satisfaction (51) and less distractions (45).

4.1.2. Negative effects on mental well-being while working remotely from home

As with the positive effects of remote work from home, the literature also presents a large body of evidence indicating that mental well-being, well-being, and mental health are negatively associated with working remotely (45,46,48,49,51–55,58–60,60,66,67,70,71,77,78,80,84–103).

Mental Health- Some studies found a negative association with working from home an mental health, including poor sleep quality, and high levels of anxiety and depression (49,87,99). Remote workers report feelings of sadness, with those who work remotely for longer periods showing more severe anxiety and depression compared with those who worked for a short period

(89). Burnout was reported in the literature on more than one occasion (55,66,90), with work life/work-family balance challenges being the primary contributing factor.

Overall, the home environment can increase the risk for poor mental health outcomes (64) and the relationship between remote work and psychological distress may be enhanced when the employee would prefer to work from within the organization (96). In one study, organizational support and reducing demands for after-hours work were associated with improved anxiety and depression (49).

Work-life/Work-family balance- A number of studies indicated a negative association between work from home work-family/work life balance (45,48,54,55,59,60,65,68,85,90–92,95,98,102). Overall well-being in remote workers may be improved with supportive social interactions with co-workers (44). A participative leadership style may help reduce work interferences with personal life and improve work-family and work-life conflicts (91) and family supportive supervisor behaviours (FSSB) can improve work-family relationship and well-being (43). A sense of independence, autonomy and control over ones job has been found to improve work-life/work-family balance challenges, improving mental well-being outcomes (42,54,59,70,78,88,94). Self-efficacy can buffer work-family conflict and promote overall health in remote workers (61). Organizational climate, job characteristics, social support, participation in decision making, professional development opportunities, supervisor and co-worker support, and job satisfaction have also been found to improve wellbeing in remote workers (51,59,88)

Stress/Strain- Heiden and colleagues suggest that increased stress may be associated with working remotely several times per week when compared to those who telework less than once per month (93). Increased experiences of stress and or strain was reported in remote workers (47,52,58,83,92,93,104). Mental and work overload (65,101,103), time pressure (85,86), lack of a schedule or structure (78,105) and work-life balance challenges are associated with increased stress. Poor communication with co-workers (60,66,67,100), technical problems and management issues also increase stress in remote workers (66). Stress during the pandemic increased irritability and tension for all remote workers, however, one study noted that in the case of stress levels and subjective well-being outcomes were only affected in the case of those who raised small children (53). Intrusive leadership style and demands for after-hours work can exacerbate and even cause stress in remote workers (49). High emotional stability and autonomy may protect from strain (75,78,94).

Isolation & Loneliness- Workplace and social isolation reduces mental well-being. Relationships with co-workers suffer when individuals work remotely (48,54,70,86,94) with employees experiencing workplace isolation, social isolation, and loneliness (54,60,67,70,90,99). Loneliness may then contribute to feelings of emotional exhaustion (60). Social supports may improve these outcomes (90).

Additional negative outcomes include decreased recognition for work (95), concerns about job security (95), increased use of digital tools (106), loss of direction (78), role conflict (80), and challenges with procrastination (60).

4.1.3 Contextual Considerations

A number of studies took notice of contextual considerations and provide insight into differences among these difference contexts (e.g. culture, income differences, gender, etc). These findings are noted in Table 3 and summarized below.

Covid-19- The primary body of literature is made up studies that were during the COVID-19 Pandemic. Some researchers argue that remote work during is different from remote work during crises, such as the Covid-19 pandemic (73). Forced remote work from home due to the pandemic possibly resulted in slightly different outcomes. For instance, lack of proper equipment and technology, inaccessibility to a high-speed internet connection, inappropriate office space at home locations and interference of parental responsibilities with work, such as homeschooling, were among the issues reported by many remote workers, especially in the first days or weeks of the pandemic. The forced remote work situation also did not happen in a continuous manner. As community transmission differed in many communities across the globe, the emergency lockdown resulted in a variety of rules and restrictions. Accordingly, businesses switched between sometimes working at their work premises and sometimes remotely, while some to continue to allow remote work from home. This inconsistency is unlikely to allow a reliable measurement of organisational outcome and mental well-being outcomes. It may have intensified stress and affected workers differently than consistent remote work would have.

Gender- Gender has not been adequately studied to provide a thorough narrative of the literature, however there are a few points noted that should be highlighted. Being female was a predictor of anxiety and stress, with increases in both housework and working hours when compared to men (99). Interestingly, mothers working in Iran experience less stress than those who did not work (80). Women working remotely also noted lower job satisfaction than men (94). Generally speaking, women report higher workload and higher work-family conflict than men, resulting in increased feelings of emotional exhaustion (55,68,91). It is important to note that some studies indicated no differences between gender (47,54) and men have reported increased levels of work-family conflict as well (95). When considering gender, it's important to also consider the personal circumstances of the individual, including marital status, family status, and individual and personal characteristics that may influence these outcomes.

Age- One study noted that younger adults had more positive attitudes towards telework, while older adults had negative attitudes (93, 106).

Income- One study took into consideration income levels of remote workers and found the higher household income was associated with higher levels of well-being (65).

Organisational- Interestingly, employees from larger companies experience better well-being outcomes than those working for smaller companies (44). Remote work in the public sector seems to increase employee wellbeing vs the private sector (84)

Cultural- Attitudes and beliefs about remote work have been founds to impact outcomes of mental well-being and therefore, it is important to consider cultural attitudes may differ and impact outcomes either positively or negatively (76).

4.1.4. Theoretical framework

Our proposed conceptual frameworks in Figures 4 and 5 below, reflect the evidence found in this review, and illustrate the pathways that link remote work to both positive and negative mental well-being outcomes. The proposed frameworks are intended to highlight the benefits and challenges of remote work and to aid in the guidance of targeted supports and intervention in both organizational practice and future research.

Figure 4. Hypothesized Framework conceptualizing the positive relationship between remote work from home and mental well-being.

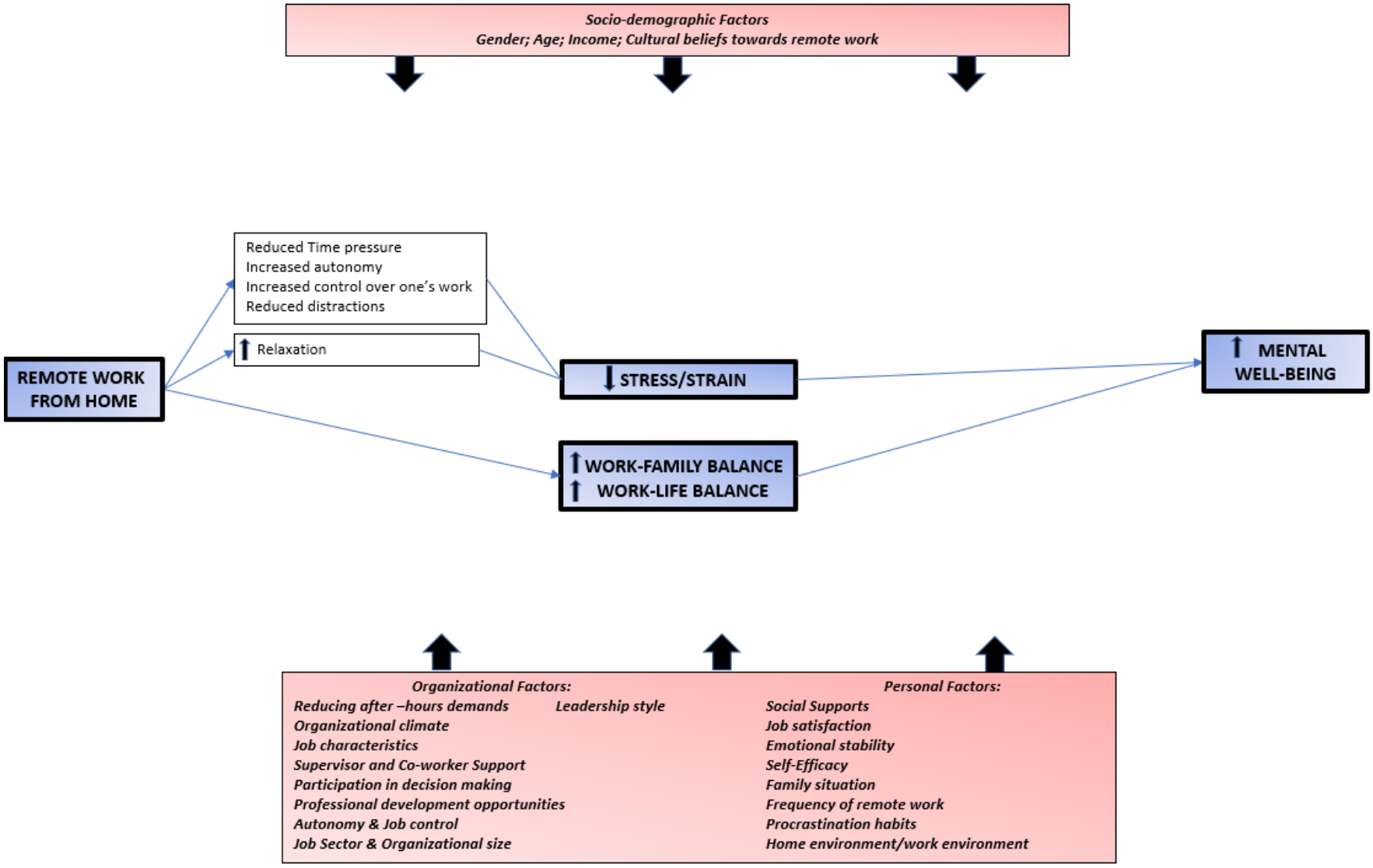
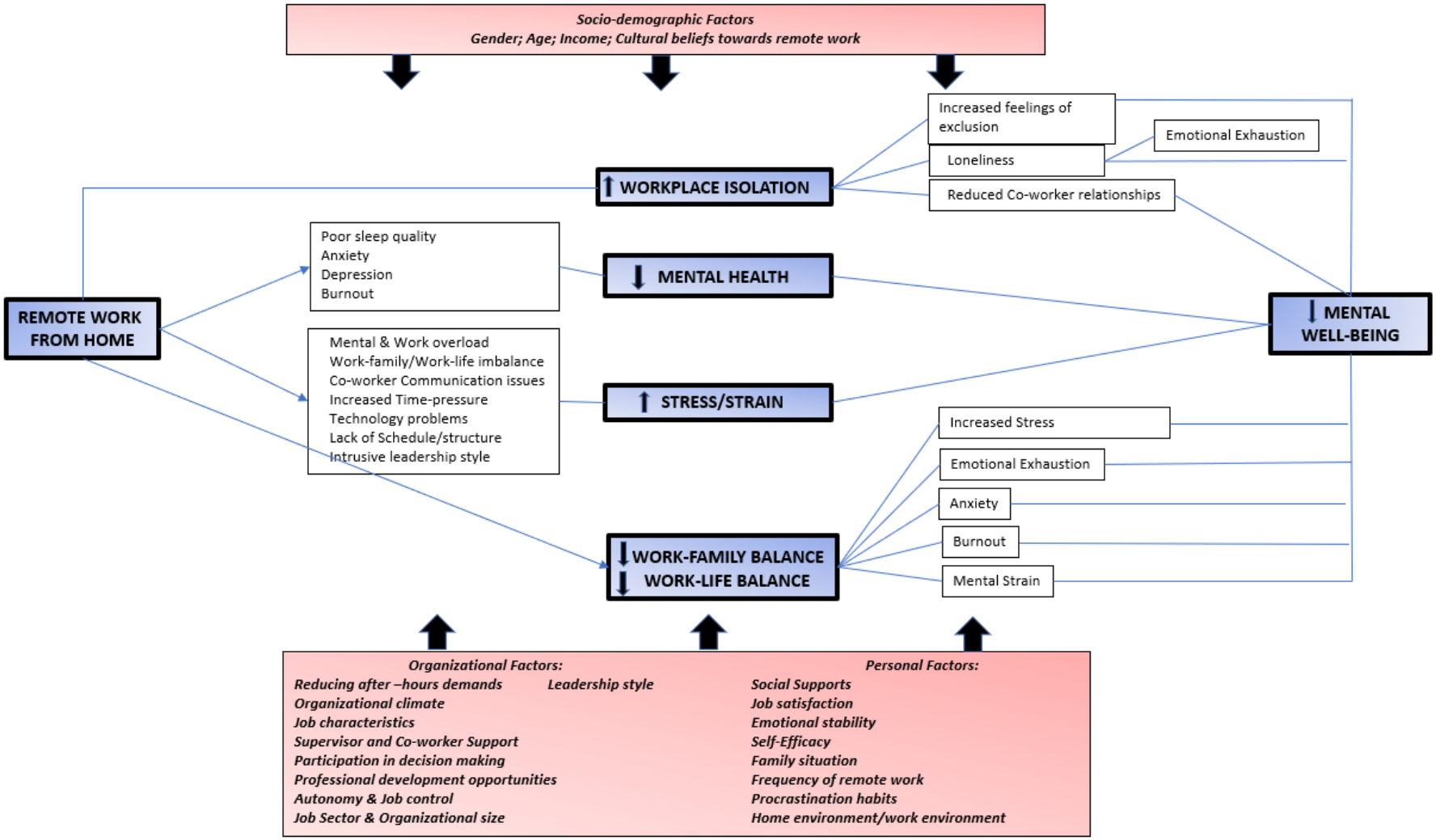


Figure 5. Hypothesized Framework conceptualizing the negative relationship between remote work from home and mental well-being.



4.2 Synthesis of Findings: Secondary Objective

A secondary objective of this review was to identify the various terms used to describe remote work in the literature, identify key characteristics of remote work that should be included in a common definition moving forward.

The concept of remote work from home has been studied under many different terms, including work from home (WFH), remote e-work, remote work, telework, telecommute and virtual work. The various terms can be found in Table 3, with remote work and telework being the two most commonly used definitions in the literature.

Telework refers to all types of work performed outside of a head office, but still linked to it (108,109). Although home-based telework has traditionally been the most common type of remote working (110). Telework has also been defined as a work practice that involves members of an organization substituting a portion of their typical work hours (ranging from a few hours per week to nearly full-time) to work away from a central workplace—typically principally from home—using technology to interact with others as needed to conduct work tasks" (109). The concern with this definition is the potential for the employee to be working elsewhere than their home. As we move to understand the impact of working remotely from home, it is important there is clarity surrounding the location of remote workers.

Remote work takes place outside a designated work location, such as corporate offices, and is often associated with working from home or working (home-based remote work) at a client's location (17). As we are interested in the challenges that accompany working remote from the home, it is important researchers are clear in their terminology, stipulating that the population they are studying is working from home.

4.3 Analysis of Research Gaps

A significant limitation of this body of literature is the use of cross-sectional research designs to study remote work in work samples within a short period. As a result, the possibility of reverse causation cannot be ruled out. There is also very limited qualitative data that specifically examines full-time remote workers, resulting in limited qualitative literature providing context to quantitative knowledge. While these studies often investigated remote work and its impact on mental well-being or related concept, the result of a specific work context, a culture, and an area of work may or may not be necessarily reproducible or applicable to another work sample.

5. Implications of Findings

5.1 Policy Implications

As leadership approaches and supervisor support improves outcomes for the remote employee, training is needed at that level to promote balance between the positive and negative effects of working from home. In particular, awareness of the challenges helps to anticipate the needs of their employees and foster open communication. Such training for newly remote workers may serve as a preventative intervention. Further, organizational communication strategies must be adapted to mitigate feelings of isolation, loneliness, and lack of supervisor and social support

among remote workers.

Given that the evidence in this area includes both negative and positive outcomes, mental well-being among remote workers is likely also affected by individual characteristics, personal situation, and organizational traits. Further research should be dedicated to understanding the individual and organizational factors that may impact mental well-being outcomes in those working remotely from home.

5.2 Implications for practice

It is clear that there are mixed findings in the literature, with both positive and negative relationships for the same outcome(s). We have identified key themes that may target areas that negatively impact mental well-being and provide them here as considerations to assist with developing optimal working conditions for remote employees, including organisational support, co-worker support, technical support & resources, boundary, and work-load management support. With the current lack of evidence, the recommended approach would be to increase communication with remote workers in an effort to better understand their individual needs related to mental health while working from home.

Organisational & Supervisor support- Working remotely may create some uncertainty for employees including concerns around role expectations, recognition for work, and lack of structure, and unrealistic workloads/expectations. Communication to ensure clarity around role expectations, clearly defined performance measures, appropriate workloads, and access to human resources support are key to targeting these areas of concern. Systems which optimise regular, reliable, and consistent communication, will target perceptions of workplace isolation, loneliness, and feels of low organizational and supervisor support when working remotely. In addition, organisations need to provide training and assistance for managers supervising remote employees.

Co-worker support- Remote work from home can be isolating with employees feeling disconnected from their managers and colleagues. Systems which facilitate effective formal and informal co-worker support are needed. Formal co-worker support that occurs in teams when people are collated, such as sharing of tasks and incidental problem solving. The facilitation of regular face-face online contact opportunities and social support could replace the day in the. In situations where remote becomes voluntary, employees may benefit from selected days in the office, to attend meetings etc., in order to maintain relationships and networks.

Work-life/Work-family balance support- To facilitate work-life and work-family balance, clear of working hours to prevent employees feeling as though they are always accessible should be reviewed. Strategies to facilitate this could include education of employees and managers on how to develop boundaries more formally between work and family.

Addressing individual inequities (age, gender, demographic barriers etc.)- A key priority to support remote work should be targeted at the development of strategies to ensure they meet the needs of different employees, irrespective of gender or life course stage, cultural background etc. Strategies also need to ensure those who choose or are mandated to work at home do not

experience negative career consequences, such as not being offered career advancement or training opportunities.

5.2 Implications for Research

The results of this review demonstrate the complex relationship between remote work and several outcomes that relate to mental-well-being. To further understand the body of knowledge related to remote work, longitudinal data over a period of time is required. When it comes to future experimental research, studies should continue to focus on mental well-being. To better understand the causal relationship between remote work and mental well-being, future experimental research is needed. A multi-dimensional approach that includes all intermediate outcomes related to mental health is suggested, as this review points to the complex relationships between mental health and a number of intermediate factors.

Finally, future observational research may also provide further insight into the outcomes of remote work. Observational cohort design would be ideal, to determine the directions of the association between remote work and mental well-being. Since the existing cross-sectional literature is primarily secondary data analysis lacking robust collection of potential confounding variables, any additional studies of this design should be done as primary data collection in order to include a wide range of confounding variables, including access to technology and organizational factors including workplace climate, and personal factors as well. We strongly recommend more focus on the impact on socio demographic factors including age, income levels, gender and culture in future studies as well.

5.3 Strengths and limitations of this review:

Strengths and limitations of this review should also be considered. Despite being a scoping review with limited time constraints, a systematic procedure for searching and selection of articles was retained and strengthened this review. A further strong point was the use of two independent reviewers throughout the screening and selection phase of the study limiting the chance for bias to occur. We excluded studies which did not contain a mental well-being outcome as a separate measure or consideration, therefore some studies which were in the domain of remote work but examined other outcomes perhaps related to mental well-being, such as work-family balance, were excluded. This review makes several recommendations to support employees working remotely, based on the reviewed literature; however, caution is warranted in relation to the unknown impact of the mandatory remote work during the COVID-19 pandemic, which is a unique situation.

Finally, as scoping reviews aim at providing an overview of the evidence instead of answers to questions from a narrow range of publications, a systematic assessment of the quality of the included studies as well as a risk of bias assessment were not carried out, as suggested by Munn et al. (111).

6. Conclusion

Mental health is an important indicator of overall health (1) which is costly to the Canadian economy on an annual basis. One in five Canadians will experience a psychological health problem in any given year, with $20 billion in costs resulting specifically from work-

related causes (4). With the average Canadian spending 30-40 hours per week working (4)the importance of understanding work-related mental health outcomes is significant.

Our review of the literature suggests that employees working from home are faced with added challenges that may further impact mental health, including impact to well-being, and workplace isolation. However, the literature suggests that remote workers are more satisfied than their office counterparts in areas of work-life and work family balance, and experience improved stress outcomes. Overall, the literature is conflicting, and we conclude that more rigorous methodology be applied to future observational studies, and opportunities for experimental research be explored.

The findings of this review are particularly concerning today, as Covid-19 has changed the world of work for many Canadians. Interestingly, Canadians who were working from home during the pandemic reported that they were just as likely to report having good, very good, or excellent mental health as those who usually from work from home and those who continued to work at locations outside of the home (13). This review indicates that the between remote work and well-being is still unclear, and perhaps points to the idea that there are a considerable number of external organizational, personal, and sociodemographic factors that influence these relationships. Taking into consideration the experiences reported by Canadians, and the inconsistencies reported in the literature, it is critical that we continue address this particular field of research. Sytch and Greer (2020) argued that the post pandemic work will be hybrid, that is, remote work will be more prevalent in the future. Indeed, Facebook and Twitter have announced that their employees can choose to work from home "forever" after the pandemic (112). The changing world of work resulting from the COVID-19 pandemic makes this subject area even more significant today.

7. Knowledge mobilization activities:

The most appropriate mode of interaction with primary end users (researchers) is threefold: written (peer reviewed publication); oral (conference proceedings and speaking engagements), and informal (via networking). As we aim to provide findings that can be used to direct future research, the end users will expect significant detail in the methodology and conceptual model illustrating the relationships. While we aim to provide a broad overview of the literature, detail will be provided for end users to access resources as they require. Both written and oral information to be shared will provide insight into the rigor of methods, and summarized findings with reference to literature to be utilized by researchers as needed. The information is intended to serve as a resource for users as they continue to create knowledge in this area.

Our secondary end users, employers, workers, healthcare providers, insurance systems, and the general public will also be interested in understanding how virtual work from home outcomes may impact mental well-being. Dissemination to this audience will include a simplified summary of methodology, and visual infographics to illustrate the resulting conceptual model, and findings. We are interested in gaining the feedback from this audience, with the aim of understanding what areas of our model are of most interest to this audience. A summary of our knowledge mobilization activities can be found in Table 5 below.

Table 4: Timeline of Knowledge Synthesis Activities

Date	Activity
Manuscript in Progress – early 2023 publication	Peer reviewed publications: Primary and Secondary Objectives
Presentations to research community:	
Early 2023 (TBD)	Institute for Work & Health Speakers Series
Nov 8, 2022	SSHRC Knowledge Mobilization Forum
Feb 10, 2023	Conference abstract presentation, abstract to be submitted to Centre for Applied Health Research, St. Joseph's Care Group, Nov 30th
November 14, 2022	Present finding to EPID@Work Management Committee
Presentation targeting community employers and the general public:	
Nov 24,22	EPID@Work Quarterly EPID Talks Session
Dec 6, 2022	Share findings with EPID@Work Advisory Board, to share with community at large
2023	Sharing findings with key community groups to assist with dissemination: The Thunder Bay Chamber of Commerce, Thunder Bay District Health Unit: Superior Mental Wellness @ Work
November 2022	Development of knowledge synthesis products (e.g., infographics) for the EPID@work website

Appendix A: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	0
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	5-6
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	7-8
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	8
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	9
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	9-10
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	10
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	10-11
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	12

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	13
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	13
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	n/a
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	13
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	12
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	14
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	14
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	20-25
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	24-28
Limitations	20	Discuss the limitations of the scoping review process.	28

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	28-29
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	0

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.
* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.
† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).
‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.
§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi: 10.7326/M18-0850.

References

1. Organization WH. Promoting Mental Health. [Internet]. Geneva: World Health Organization; 2004. Available from: https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=4978588

2. Burton J. WHO Health Workplace Framework and Model: Background and Supporting Literature and Practices. 2010;

3. Jnaneswar K, Sulphey MM. A study on the relationship between workplace spirituality, mental wellbeing and mindfulness. Manag Sci Lett. 2020;1045–54.

4. Mental Health Commission of Canada, Standards Council of Canada. The National Standard of Canada: Psychological health and safety in the workplace - Prevention, promotion, and guidance to staged implementation. Canadian Standards Association & Bureau de normalisation du Quebec; 2018.

5. Marshall GW, Michaels CE, Mulki JP. Workplace isolation: Exploring the construct and its measurement. Psychol Mark. 2007 Mar;24(3):195–223.

6. Mulki JP, Jaramillo F. Workplace isolation: salespeople and supervisors in USA. Int J Hum Resour Manag. 2011;22(4):902–23.

7. Orhan MA, Rijsman JB, van Dijk GM. Invisible, therefore isolated: Comparative effects of team virtuality with task virtuality on workplace isolation and work outcomes. Rev Psicol Trab Las Organ. 2016 08;32(2):109–22.

8. Stich J. A review of workplace stress in the virtual office. Intell Build Int. 2020 07-02;12(3):208–20.

9. The Joanna Briggs Institute. The Joanna Briggs Institute Reviewer's Manual 2015 Methodlogy for JBI Scoping Reviews. The Joanna Briggs Institute; 2015.

10. Arksey H, O'Malley LH. Scoping studies: towards a methodological framework. Int J Soc Res Methodol. 2005;8(1):18–32.

11. Levac D, Colquhoun H, O'Brien K. Scoping studies: advancing the methodology. Implement Sci. 2010;5(1):1–9.

12. Government of Canada SC. The Daily — Canadian Perspectives Survey Series 1: COVID-19 and working from home, 2020 [Internet]. 2020 [cited 2020 Oct 26]. Available from: https://www150.statcan.gc.ca/n1/daily-quotidien/200417/dq200417a-eng.htm

13. Government of Canada SC. The Daily — Labour Force Survey, September 2020 [Internet]. 2020 [cited 2020 Oct 26]. Available from: https://www150.statcan.gc.ca/n1/daily-quotidien/201009/dq201009a-eng.htm

14. Government of Canada SC. The Daily — Labour Force Survey, September 2022 [Internet]. 2022. Available from: https://www150.statcan.gc.ca/n1/en/daily-quotidien/221007/dq221007a-eng.pdf?st=JhNjNV6Y

15. Anderson RE. Personal Selling and Sales Management in the New Millennium. J Pers Sell Sales Manag. 1996 Jan 1;16(4):17–32.

16. Cascio WF. Managing a Virtual Workplace. Acad Manag Exec 1993-2005. 2000;14(3):81–90.

17. Marshall GW, Michaels CE, Mulki JP. Workplace isolation: Exploring the construct and its measurement. Psychol Mark. 2007 03;24(3):195–223.

18. Polson K. Virtual work from home and mental health:: A mixed-methods systematic review. [Unpublished Master's thesis]. [Internet]. Lakehead University; 2021. Available from: https://knowledgecommons.lakeheadu.ca/handle/2453/4852

19. Cooper C, Dewe PJ, O'Driscoll MP. Organizational Stress: A review and Critique of Theory, Research, and Applications. Thousand Oaks, CA: SAGE Publications; 2001.

20. Keller AC, Meier LL, Elfering A, Semmer NK. Please Wait Until I am Done! Longitudinal Effects of Work Interruptions on Employee Well-being. Work Stress. 2019;34(2):1–20.

21. Barley SR, Meyerson DE, Santuzzi AM. E-mail as a Source and Symbol of Stress. Organ Sci. 2011;22(4):887–906.

22. Stich JF, Tarafdar M. E-mail Load, Workload Stress and Desired E-mail Load: A cybernetic Approach. Inf Technol People. 2019;32(2):430–52.

23. Morrison R. Informal relationships in the workplace: Associations with job satisfaction, organizational commitment and turnover intentions. N Z J Psychol. 2004;33(3):114–28.

24. Cooper CD, Kurland NB. Telecommuting, professional isolation, and employee development in public and private organizations. J Organ Behav. 2002;23:511–32.

25. Wiesenfeld BM, Raghuram S, Garud R. Communication patterns as determinants of organizational identification in a virtual organization. Organ Sci. 1999;10:777–90.

26. Wiesenfeld BM, Raghuram S, Garud R. Organizational identification among virtual workers: The role of need for affiliation and perceived work-based social support. J Manag. 2001;27:213–29.

27. Kawachi I, Berkman L. Social capital, social cohesion, and health. In: Berkman LF LF, Kawachi I, Glymour MM, editors. Social Epidemiology. 2nd ed. New York: Oxford University Press; 2000. p. 290–319.

28. Kouvonen A, Oksanen T, Vahtera J. Low workplace social capital as a predictor of depression: The Finnish Public Sector study. Am J Epidemiol. 2008;167:1143–51.

29. Oksanen A, Mäkikangas A. Loneliness and Well-Being during the COVID-19 Pandemic: The Moderating Roles of Personal, Social and Organizational Resources on Perceived Stress and Exhaustion among Finnish University Employees. Int J Environ Res Public Health. 2021;18(13):7146.

30. Rugulies R, Hasle P, Pejtersen JH. Workplace social capital and risk of long-term sickness absence. Are associations modified by occupational grade? Eur J Public Health. 2016;26:328–33.

31. Tsuboya T, A T, Kawachi I. Change in psychological distress following change in workplace social capital: Results from the panel surveys of the J-HOPE study. Occup Env Med. 2015;72:188–94.

32. Morganson VJ, Major DA, Oborn KL, Verive JM, Heelan MP. Comparing telework locations and traditional work arrangements: Differences in work-life balance support, job satisfaction, and inclusion. J Manag Psychol. 2010 Aug 17;25(6):578–95.

33. Klopotek M. The advantages and disadvantages of remote working from the perspective of young employees. Organ Manag. 2017;4(40):11.

34. Moher D, Liberati A, Tetzlaff J, Altman DG, Group TP. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLOS Med. 2009 07-21;6(7):e1000097.

35. Covidence systematic review software [Internet]. Melbourne, Australia: Veritas Health Innovation; 2014. Available from: www.covidence.org

36. Gorjifard R, Crawford J. Working from Home: Impact on Wellbeing and Work-Life Balance. N Z J Employ Relat Online. 2021;46(2):64–78.

37. Charalampous M, Grant CA, Tramontano C, Michailidis E. Systematically reviewing remote e-workers' well-being at work: A multidimensional approach. Eur J Work Organ Psychol. 2019 Feb;28(1):51–73.

38. Beckel JLO, Fisher GG. Telework and Worker Health and Well-Being: A Review and Recommendations for Research and Practice. Int J Environ Res Public Health. 2022 Mar 24;19(7):3879.

39. Oakman J, Kinsman N, Stuckey R, Graham M, Weale V. A rapid review of mental and physical health effects of working at home: how do we optimise health? BMC Public Health. 2020;20:1.

40. Lunde LK, Fløvik L, Christensen JO, Johannessen HA, Live Bakke Finne, Ingrid Løken Jørgensen, et al. The relationship between telework from home and employee health: a systematic review. BMC Public Health. 2022;22:1.

41. Roy Rosenzweig Center for History and New Media. Zotero [Internet]. 2016. Available from: www.zotero.org/download

42. Becker WJ, Belkin LY, Tuskey SE, Conroy SA. Surviving remotely: How job control and loneliness during a forced shift to remote work impacted employee work behaviors and well-being. Hum Resour Manage [Internet]. 2022 Feb 1; Available from: http://ezproxy.lakeheadu.ca/login?url=https://www.proquest.com/docview/2625004101?accountid=11956&bdid=17217&_bd=UhoctgFmQZFqeWsqCLdnDU4GxaM%3D

43. Chambel MJ, Castanheira F, Santos A. Teleworking in times of covid-19: The role of family-supportive supervisor behaviors in workers' work-family management, exhaustion, and work engagement. Int J Hum Resour Manag [Internet]. 2022 Apr 6; Available from: http://ezproxy.lakeheadu.ca/login?url=https://www.proquest.com/docview/2650022096?accountid=11956&bdid=17217&_bd=b9FnnNiqeRrTjJKObFXQZhq10wo%3D

44. Donati S, Viola G, Toscano F, Zappalà S, Zappalà S. Not All Remote Workers Are Similar: Technology Acceptance, Remote Work Beliefs, and Wellbeing of Remote Workers during the Second Wave of the COVID-19 Pandemic. Int J Environ Res Public Health. 2021;18(22):12095.

45. Franken E, Bentley T, Shafaei A, Farr-Wharton B, Leigh-ann Onnis, Omari M. Forced flexibility and remote working: opportunities and challenges in the new normal. J Manag Organ. 2021 Nov;27(6):1131–49.

46. Gillet N, Huyghebaert-Zouaghi T, Austin S, Fernet C, Morin AJS. Remote working: a double-edged sword for workers' personal and professional well-being. J Manag Organ. 2021 Nov;27(6):1060–82.

47. Giménez-Nadal JI, Molina JA, Velilla J. Work time and well-being for workers at home: evidence from the American Time Use Survey. Int J Manpow. 2019 Oct 25;41(2):184–206.

48. Juchnowicz M, Kinowska H. Employee Well-Being and Digital Work during the COVID-19 Pandemic. Information. 2021;12(8):293.

49. Magnavita N, Tripepi G, Chiorri C. Telecommuting, Off-Time Work, and Intrusive Leadership in Workers' Well-Being. Int J Environ Res Public Health. 2021;18(7):3330.

50. Mihalca L, Ratiu LL, Brendea G, Metz D, Dragan M, Dobre F. Exhaustion while teleworking during COVID-19: a moderated-mediation model of role clarity, self-efficacy, and task interdependence. Oeconomia Copernic. 2021;12(2):269–306.

51. Miron D, Petcu MA, David-Sobolevschi MI, Cojocariu RC. A MULDIMENSIONAL APPROACH OF THE RELATIONSHIP BETWEEN TELEWORKING AND EMPLOYEES WELL-BEING - ROMANIA DURING THE PANDEMIC GENERATED BY THE SARS-CoV-2 VIRUS. Amfiteatru Econ. 2021 Aug;23(58):586–600.

52. Molino M, Ingusci E, Signore F, Manuti A, Giancaspro ML, Russo V, et al. Wellbeing Costs of Technology Use during Covid-19 Remote Working: An Investigation Using the Italian Translation of the Technostress Creators Scale. Sustainability. 2020;12(15):5911.

53. Pataki-Bittó F, Ágota Kun. Exploring differences in the subjective well-being of teleworkers prior to and during the pandemic. Int J Workplace Health Manag. 2022;15(3):320–38.

54. Prasad KDV, Vaidya RW, Mangipudi MR. Effect of occupational stress and remote working on psychological well-being of employees: an empirical analysis during covid-19 pandemic concerning information technology industry in hyderabad. Indian J Commer Manag Stud. 2020 May;11(2):1–13.

55. Santos A, Ribeiro MT. Please, Do Not Interrupt Me: Work–Family Balance and Segmentation Behavior as Mediators of Boundary Violations and Teleworkers' Burnout and Flourishing. Sustainability. 2021;13(13):7339.

56. Santos A, Ribeiro MT. Please, Do Not Interrupt Me: Work–Family Balance and Segmentation Behavior as Mediators of Boundary Violations and Teleworkers' Burnout and Flourishing. Sustainability. 2021;13(13):7339.

57. Shamsi M, Shamsi M, Iakovleva T, Olsen E, Bagozzi RP. Employees' Work-Related Well-Being during COVID-19 Pandemic: An Integrated Perspective of Technology Acceptance Model and JD-R Theory. Int J Environ Res Public Health. 2021;18(22):11888.

58. Song Y, Gao J. Does Telework Stress Employees Out? A Study on Working at Home and Subjective Well-Being for Wage/Salary Workers. J Happiness Stud. 2020 Oct;21(7):2649–68.

59. Stankevičiūtė Ž, Kunskaja S. Strengthening of work-life balance while working remotely in the context of COVID-19 pandemic. Hum Syst Manag. 2022;41(2):221.

60. Wang B, Liu Y, Qian J, Parker SK. Achieving effective remote working during the COVID-19 pandemic: A work design perspective. Appl Psychol Int Rev. 2021 Jan;70(1):16–59.

61. Lange M, Lange M, Kayser I. The Role of Self-Efficacy, Work-Related Autonomy and Work-Family Conflict on Employee's Stress Level during Home-Based Remote Work in Germany. Int J Environ Res Public Health. 2022;19(9):4955.

62. Perelman J, Serranheira F, Pedro Pita Barros, Laires P. Does working at home compromise mental health? A study on European mature adults in COVID times. J Occup Health [Internet]. 2021 Jan;63(1). Available from: http://ezproxy.lakeheadu.ca/login?url=https://www.proquest.com/docview/2609735812?accountid=11956&bdid=17217&_bd=AH%2Fm8m7SzEkuZFhHrdNrWydcxB0%3D

63. Kitagawa R, Kuroda S, Okudaira H, Owan H. Working from home and productivity under the COVID-19 pandemic: Using survey data of four manufacturing firms. PLoS One. 2021 Dec;16(12):e0261761.

64. Moretti A, Menna F, Aulicino M, Paoletta M, Liguori S, Iolascon G. Characterization of Home Working Population during COVID-19 Emergency: A Cross-Sectional Analysis. Int J Environ Res Public Health. 2020;17(17):6284.

65. Parent-Lamarche A, Boulet M. Employee well-being in the COVID-19 pandemic: The moderating role of teleworking during the first lockdown in the province of Quebec, Canada. Work Read Mass. 2021;70(3):763–75.

66. Ferreira R, Pereira R, Isaías Scalabrin Bianchi, Isaías Scalabrin Bianchi, Miguel Mira da Silva. Decision Factors for Remote Work Adoption: Advantages, Disadvantages, Driving Forces and Challenges. J Open Innov Technol Mark Complex. 2021;7(1):70.

67. Filardi F, Castro RMPD, Zanini MTF. Advantages and disadvantages of teleworking in Brazilian public administration: analysis of SERPRO and Federal Revenue experiences. Cad EBAPEBR. 2020 Jan;18(1):28–46.

68. Ghislieri C, Sanseverino D, Sanseverino D, Addabbo T, Bochicchio V, Musumeci R, et al. The Show Must Go On: A Snapshot of Italian Academic Working Life during Mandatory Work from Home through the Results of a National Survey. Soc Sci. 2022;11(3):111.

69. Geldart S. Remote Work in a Changing World: A Nod to Personal Space, Self-Regulation and Other Health and Wellness Strategies. Int J Environ Res Public Health. 2022;19(8):4873.

70. Chafi MB, Chafi MB, Hultberg A, Nina Bozic Yams. Post-Pandemic Office Work: Perceived Challenges and Opportunities for a Sustainable Work Environment. Sustainability. 2022;14(1):294.

71. Chu AMY, Chan TWC, So MKP. Learning from work-from-home issues during the COVID-19 pandemic: Balance speaks louder than words. PLoS One. 2022 Jan;17(1):e0261969.

72. Darouei M, Pluut H. Work from home today for a better tomorrow! How working from home influences work-family conflict and employees' start of the next workday. Stress Health. 2021 Dec;37(5):986–99.

73. Green N, Tappin D, Bentley T. Working from home before, during and after the Covid-19 pandemic: implications for workers and organisations. N Z J Employ Relat Online. 2020;45(2):5–16.

74. Barriga Medina HR, Campoverde Aguirre R, Coello-Montecel D, Ochoa Pacheco P, Paredes-Aguirre MI. The Influence of Work–Family Conflict on Burnout during the COVID-19 Pandemic: The Effect of Teleworking Overload. Int J Environ Res Public Health. 2021 Sep 30;18(19):10302.

75. Perry SJ, Rubino C, Hunter EM. Stress in remote work: two studies testing the Demand-Control-Person model. Eur J Work Organ Psychol. 2018;27(5):577–93.

76. Adamovic M. How does employee cultural background influence the effects of telework on job stress? The roles of power distance, individualism, and beliefs about telework. Int J Inf Manag. 2022 Feb;62:1.

77. Geldart S. Remote Work in a Changing World: A Nod to Personal Space, Self-Regulation and Other Health and Wellness Strategies. Int J Environ Res Public Health. 2022;19(8):4873.

78. Terry PE. Well-Being and Evolving Work Autonomy: The Locus of Control Construct Revisited. Am J Health Promot AJHP. 2022 May;36(4):593–6.

79. Shimura A, Yokoi K, Ishibashi Y, Akatsuka Y, Inoue T. Remote Work Decreases Psychological and Physical Stress Responses, but Full-Remote Work Increases Presenteeism. Front Psychol. 2021 Sep 30;12:730969.

80. Pordelan N, Hosseinian S, Heydari H, Khalijian S, Khorrami M. Consequences of teleworking using the internet among married working women: Educational careers investigation. Educ Inf Technol. 2022 Apr;27(3):4277–99.

81. Wiitavaara B, Boman E, Heiden M. Psychophysiological Reactivity, Postures and Movements among Academic Staff: A Comparison between Teleworking Days and Office Days. Int J Environ Res Public Health. 2021;18(18):9537.

82. Russo D, Hanel PHP, Altnickel S, van Berkel N. Predictors of well-being and productivity among software professionals during the COVID-19 pandemic – a longitudinal study. Empir Softw Eng. 2021 Jul;26(4):62.

83. Windeler JB, Chudoba KM, Sundrup RZ. Getting away from them all: Managing exhaustion from social interaction with telework. J Organ Behav. 2017 Sep;38(7):977–95.

84. Parent-Lamarche A. Teleworking, Work Engagement, and Intention to Quit during the COVID-19 Pandemic: Same Storm, Different Boats? Int J Environ Res Public Health. 2022;19(3):1267.

85. Gazdecka A, Sadłowska-Wrzesińska J. Identification of Key Psychosocial Safety Factors when Working Remotely: A Three-Step Research Methodology Proposal. Eur Res Stud. 2021;24:597–609.

86. Wöhrmann AM, Ebner C. Understanding the bright side and the dark side of telework: An empirical analysis of working conditions and psychosomatic health complaints. New Technol Work Employ. 2021 Nov;36(3):348–70.

87. Afonso P, Fonseca M, Teodoro T. Evaluation of anxiety, depression and sleep quality in full-time teleworkers. J Public Health. 2021 May 25;fdab164.

88. Vander Elst T, Verhoogen R, Godderis L. Teleworking and Employee Well-Being in Corona Times: The Importance of Optimal Psychosocial Work Conditions. J Occup Environ Med. 2020 Dec;62(12):e776–7.

89. Niu Q, Nagata T, Fukutani N, Tezuka M, Shimoura K, Nagai-Tanima M, et al. Health effects of immediate telework introduction during the COVID-19 era in Japan: A cross-sectional study. PLoS One. 2021 Oct;16(10):e0256530.

90. Slavković M, Slavković M, Sretenović S, Bugarčić M. Remote Working for Sustainability of Organization during the COVID-19 Pandemic: The Mediator-Moderator Role of Social Support. Sustainability. 2022;14(1):70.

91. Bhumika. Challenges for work–life balance during COVID-19 induced nationwide lockdown: exploring gender difference in emotional exhaustion in the Indian setting. Gend Manag. 2020;35(7/8):705–18.

92. Sandoval-Reyes J, Acosta-Prado JC, Sanchís-Pedregosa C. Relationship Amongst Technology Use, Work Overload, and Psychological Detachment from Work. Int J Environ Res Public Health. 2019;16(23):n/a.

93. Heiden M, Widar Linda, Wiitavaara Birgitta, Boman E. Telework in academia: associations with health and well-being among staff. High Educ. 2021;81(4):707–22.

94. Petcu MA, Sobolevschi-David MI, Anica-Popa A, Curea SC, Motofei C, Popescu AM. Multidimensional Assessment of Job Satisfaction in Telework Conditions. Case Study: Romania in the COVID-19 Pandemic. Sustainability. 2021;13(16):8965.

95. Oakman J, Kinsman N, Lambert K, Stuckey R, Graham M, Weale V. Working from home in Australia during the COVID-19 pandemic: cross-sectional results from the Employees Working From Home (EWFH) study. BMJ Open [Internet]. 2022;12(4). Available from: http://ezproxy.lakeheadu.ca/login?url=https://www.proquest.com/docview/2646969308?accountid=11956&bdid=17217&_bd=IN91Szn5O7LkQAKaU4bSt532Wbg%3D

96. Otsuka S, Ishimaru T, Nagata M, Tateishi S, Eguchi H, Tsuji M, et al. A Cross-Sectional Study of the Mismatch Between Telecommuting Preference and Frequency Associated With Psychological Distress Among Japanese Workers in the COVID-19 Pandemic. J Occup Environ Med. 2021 Sep;63(9):e636–40.

97. Chapman DG, Thamrin C. Scientists in pyjamas: characterising the working arrangements and productivity of Australian medical researchers during the COVID-19 pandemic. Med J Aust. 2020 Dec 2;213(11):516–20.

98. Fukumura YE, Schott JM, Lucas GM, Becerik-Gerber B, Roll SC. Negotiating Time and Space When Working From Home: Experiences During COVID-19. OTJR Occup Particip Health. 2021 Oct;41(4):223–31.

99. Şentürk E, Sağaltıcı E, Geniş B, Günday Toker Ö. Predictors of depression, anxiety and stress among remote workers during the COVID-19 pandemic. Work. 2021 Sep 28;70(1):41–51.

100. Xiao Y, Becerik-Gerber B, Lucas G, Roll SC. Impacts of Working From Home During COVID-19 Pandemic on Physical and Mental Well-Being of Office Workstation Users. J Occup Environ Med. 2021 Mar;63(3):181–90.

101. Camacho S, Barrios A. Teleworking and technostress: Early consequences of a covid-19 lockdown. Cogn Technol Work [Internet]. 2022 Jan 22; Available from: http://ezproxy.lakeheadu.ca/login?url=https://www.proquest.com/docview/2623029807?accountid=11956&bdid=17217&_bd=H294SdvXGCnNt%2FAo4oewurgpoLs%3D

102. Yang L, Murad M, Mirza F, Chaudhary NI, Saeed M. Shadow of cyber ostracism over remote environment: Implication on remote work challenges, virtual work environment and employee mental well-being during a Covid-19 pandemic. Acta Psychol (Amst). 2022 May;225:103552.

103. Biron C, Karanika-Murray M, Ivers H, Salvoni S, Fernet C. Teleworking While Sick: A Three-Wave Study of Psychosocial Safety Climate, Psychological Demands, and Presenteeism. Front Psychol. 2021 Oct 28;12:734245.

104. Niebuhr F, Borle P, Börner-Zobel F, Voelter-Mahlknecht S. Healthy and Happy Working from Home? Effects of Working from Home on Employee Health and Job Satisfaction. Int J Environ Res Public Health. 2022;19(3):1122.

105. García-González MA, Torrano F, García-González G. Analysis of Stress Factors for Female Professors at Online Universities. Int J Environ Res Public Health. 2020;17(8):2958.

106. Martin L, Hauret L, Fuhrer C. Digitally transformed home office impacts on job satisfaction, job stress and job productivity. COVID-19 findings. PLoS One. 2022 Mar;17(3):e0265131.

107. Raišienė AG, Rapuano V, Varkulevičiūtė K. Sensitive Men and Hardy Women: How Do Millennials, Xennials and Gen X Manage to Work from Home? J Open Innov Technol Mark Complex. 2021;7(2):106.

108. Bailey DE, Kurland NB. A review of telework research: Findings, new directions, and lessons for the study of modern work. J Organ Behav. 2002;23:383–400.

109. Allen TD, Golden TD, Shockley KM. How Effective Is Telecommuting? Assessing the Status of Our Scientific Findings. Psychol Sci Public Interest. 2015 Oct 1;16(2):40–68.

110. Halford S. Hybrid Workspace: Re-Spatialisations of Work, Organisation and Management. New Technol Work Employ. 2005 Mar 24;20.

111. Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil, H. Chapter 11: Scoping Reviews (2020 version). In: Aromataris E, Munn Z (Editors). JBI Manual for Evidence Synthesis, JBI, 2020. Available from https://synthesismanual.jbi.global. https://doi.org/10.46658/JBIMES-20-12.

112. Sytch M, Greer lindred I. Is your organization ready for permanent WFH? Harv Bus Rev [Internet]. 2020; Available from: https://hbr.org/2020/08/is-your-organization